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The Effects of ELL Instructional Strategies on Low Socioeconomic Students' Acquisition of Semantic and Sentence Syntax in Academic Vocabulary

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THE EFFECTS OF ELL INSTRUCTIONAL STRATEGIES ON LOW SOCIOECONOMIC
STUDENTS' ACQUISITION OF SEMANTIC AND SENTENCE SYNTAX IN ACADEMIC
VOCABULARY

By

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University of Nebraska, 2020

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Abstract

The achievement gap is ever growing in the United States educational system. Low socioeconomic students is one demographic group who is targeted for educators to evaluate teaching and learning. Academic vocabulary is a targeted piece of language that is integrated into all content areas in school that makes content comprehensible. Low socioeconomic students begin schools with simplistic language and often few personal experiences. Therefore, focusing on low socioeconomic students' vocabulary acquisition and language development could improve their academic success for the future. ELL instructional methods such as the SIOP model scaffolds students learning while embedding language structures to support academic vocabulary acquisition.

This quantitative study analyzed the effects of general education teachers' implementation of Sheltered Instruction Observation Protocol (SIOP) ELL instructional strategies and low socioeconomic students' development of lexical semantics and syntactic relationships with academic vocabulary words. The research design was experimental in nature while using retrospective data. In this study, participants of 3-5th

grade students were in experimental and control groups. The experimental variable in this study was ELL instructional strategies of the SIOP (Sheltered Instruction Operation Protocol) model. Student data was collected in the form of a unit vocabulary assessment by all groups of participants. A *t*-test was used to analyze statistical data to determine the significance of ELL instructional strategies among students' acquisition of lexical semantic and sentence syntax in academic vocabulary. The study provided further research and future implications that could lead educational leaders to evaluate ELL effective teaching strategies to provide linguistic support for low socioeconomic students in vocabulary.

Dedication

There are several people in my life that have impacted my education and writing. My mother has always pushed me to be an educated individual to make strides towards improving my life as well as the life of others. Thank you for continuing to be an inspiration to me as a mother, a learner, and a strong individual. Both of my parents have impacted this journey by proving that with hard work, patience, and perseverance anything can be achieved that you set your mind to. With both of their support I have been able to reach unimaginable heights in my life. I would also like to thank my husband, who has always stuck beside me through the tiring nights and gave me strength.

Foremost, I dedicate this journey to my daughter, Ava Ann. She has taught me so much about the development of learning and the innate capabilities we have within even as a small child. I believe we should all look at the world through the eyes of a child which can lead us to create a long lasting desire of learning about the world around us. I hope this milestone has set footprints for my daughter, Ava, as well as my sister, Alexie, to walk through in reaching their dreams and pursue the talents that God has blessed them with. We are all created with greatness within us. It is us to decide what we will do with that greatness and how we will impact the lives around us.

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CHAPTER ONE

INTRODUCTION

The background of students' education and language acquisition has been identified as one of the hardships that is strongly associated with academic achievement in low socioeconomic students (Hoff, 2013). A person's exposure to language from birth to adulthood is translated into the varying sophistication of vocabulary that is produced through speaking and writing. Moreover, the pre-exposure of a person to vocabulary will also determine their overall academic ability to comprehend reading passages, understand semantics of new vocabulary terms, and create syntactic sentences (Koutsoftas, 2013; Goldstien, Ziolkowski, Bojczyk, Marty, Schneider, Harping, & Haring, 2017).

With language at the center of a child's upbringing, it is no wonder why researchers continue to evaluate the linguistic skills students acquire throughout their educational journey. As babies through their early years, children listen to vocabulary and syntactic structures that their parents use to communicate with them. In turn, this repetition of language that children hear leads to the very basic understanding of meanings of objects, people, and environments in which help them construct new vocabulary they will use in their early productions of language (Fledman, 2017). As language develops it is represented in four domains: speaking, listening, reading, and writing (Short Echevarria, & Vogt, 2000; Koutsoftas, 2013). In the school setting, children are asked to respond academically through the four language domains. Students must use several linguistic skills in order to produce and receive academic information.

Academic vocabulary is one of the most important linguistic components students learn and use in order to comprehend academic content. Therefore, Academic vocabulary is integrated in linguistic categories of morphology, syntax, and semantics (Koutsoftas, 2013). Students are first exposed to academic vocabulary through lexicon, or written word. As they construct meaning they associate the word through its lexical representation. Next, students evaluate the lexical semantics of the word through multiple contexts such as reading texts, teacher production of new sentences, written samples (Mok & Kipka, 2009; Echevarria, Vogt & Short, 2000). Students hear patterns of words that make up a sentence that create context and meaning. These representations of sentence patterns create syntactic properties for a child to then speak and write while utilizing a vocabulary word correctly (Koutsoftas, 2013). Therefore, relationships between lexical semantics and syntax is evident in a child's process of understanding a new vocabulary term as well as their production in sharing knowledge with others (Mok & Kipka, 2009). In fact, several studies suggest that a student's semantic ability and vocabulary will be demonstrated in their writing ability (Koutsoftas, 2013). Furthermore many researchers such as Berwick, Pietroski, Yankama, & Chomsky (2011) continue to study linguistic relationships to students' success in academics, noting poverty to be one influential factor to language constructs (p. 1209).

Socioeconomics has been identified as a targeted group for creating an achievement gap since the mid 1960s. Coleman et al. (1966) conducted a study on equality of educational opportunity. This study observed differing socioeconomic students and its impact on student success. Coleman et al. (1966) found that low

socioeconomic students were put at a disadvantage which could not be overcome by a school's environment. Therefore, a student's socioeconomic background is to be the greatest determining factor of educational outcome no matter what school environment a student will be immersed in.

Several poverty factors remain at the core of the repercussions of the achievement gap in academics. However, it is undeniable that children of poverty become disadvantaged due to their production in language (Hoff, 2013). Chomsky in 1959 began studying the connection of children and language. Chomsky believed the Language Acquisition Theory unlocked the gradual language development children experience through their innate capabilities as well as linguistic role models, such as parents and/or other adults, that mimic representations of linguistic semantic and syntactic structures and meanings. In other words, parents and other adults at an early age of a child's life have the greatest impact on a child's language development. These adult role models, and more specifically the primary caregiver will be the greatest predictor of a child's linguistic capabilities (Bornstein, & Baumwell, 2001). Children born into poverty at the age of 22 months are considered to be behind their peers in language development (Sime & Sheridan, 2013). Hart & Risley (2003) reported within their study that children of poverty learned about 153,000 less words than higher socioeconomic children at grade school age.

Undoubtedly, due to the impoverished conditions of a child's home environment, students who have an underdeveloped academic vocabulary will begin to fall behind their grade-level peers in individualized reading progress (Aydin, 2016). Also, children who

remain in low socioeconomic status have a significant concern in their vocabulary development and reading ability in the early and later stages of their education (Sylva, 2014). Vocabulary is considered to be one of the linguistic links that unlocks literacy knowledge and capabilities (Scarborough, 2001).

Like, low socioeconomic students who are native speakers, ELL (English Language Learners) students have similar challenges through their upbringing and language development that cause difficulties in acquiring academic vocabulary. According to Grantmakers for Education (2013), the majority of ELL students live in poverty, with family income that falls below 185% of the federal poverty line. ELL students' parents are partly identified as immigrant workers who have acquired little to no education (Disability N. C., 2018). Also, ELL students are more likely to be enrolled into a school with a higher demographic of low socioeconomic students (Disability N.C., 2018). Therefore, ELL students' generally have an upbringing that is closely related to a low socioeconomic environment which entails little exposure to academic enrichment in early childhood.

In addition to ELL students' home environments taking effect into their academic language needs, they struggle with becoming proficient in a second language while learning new cultural backgrounds and academic content (Echevarria, Short, & Vogt, 2000). In school, ELL students learn a second language (English) while learning several modes of curricular content. Students are expected to decode and use receptive and productive academic language in order to acquire grade level content. Learning academic language in a second language across content areas can be difficult for ELL students

especially when they do not have prior experiences to draw from or primary language to transverse over (Echevarria, Short, & Vogt, 2000). ELL students heavily rely upon semantics in order to receive and produce language in the second language (Bos, Hollebrandse, & Sleeman, 2004). Without the basic understanding of tier 1 vocabulary words they struggle to move forward in acquiring tier 2 and 3 vocabulary words (Sibold, 2011). In addition, through progression of language they must have acquired semantics before developing syntax (Bos, Hollebrandse, & Sleeman, 2004). This demographic of students is also considered to be in a high-risk population for reading difficulties related to the development skills of language (Lonigan, Farver, Nakamoto, et al., 2013). According to Beck, McKeown, and Kucan, “there are profound differences in vocabulary knowledge among learners from different ability or socioeconomic (SES) groups” (2002, p. 1).

This leads educational leaders and teachers to reflect on their teaching skills, teaching strategies, and content for providing students with vocabulary and language skills needed to be successful in the classroom. Educational leaders and teachers know research-based instructional strategies are strongly recommended during direct instruction. There have been multiple studies conducted on vocabulary instruction that will help students retain new vocabulary words. Strategies such as learning morphology, utilization of categorization through antonyms and synonyms, utilizing and understanding grammatical structure of words, as well as use of representations (Koutsofta, 2013). Contrary to these strategies that suggest syntactic and semantic structure of words, they

do not consider a child may have not yet been exposed to the academic contexts in which the new academic vocabulary is placed in (Koutsoftas, 2013).

Curriculum designs entail several reading strategies and genres that focus on creating a grade level reader. Reading curriculum is heavily focused on reading comprehension while strengthening readers' capabilities of understanding the world around them. However, several researchers have expressed the lack of rigorous vocabulary teaching that curriculums have for students to learn. Due to the constraints of formatted lesson designs created by various curriculums, there is not enough emphasis on vocabulary development (Beck & McKeown, 2005). Critically, this impacts students' ability in reading comprehension and decoding. Thus, native English speaking students are affected by the lack of emphasis in vocabulary teaching. In fact, Nagy (2012) states that students who are native English speakers, do not have the quality and intensity word depth to have ownership and utilize new academic language (p.92).

Today, school days are filled with multiple rigorous academic standards and activities. Compacted schedules can lead to minimize instruction in content areas. Nelson, Dole, Hosp, & Hosp (2015), evaluated the amount of time teachers deliver vocabulary instruction to students during reading block time. They reported that 5% of the reading block was dedicated towards word-learning strategies and vocabulary building. Therefore, the type of direct instruction that is given within this small time frame must be robust with the intent of comprehensibility by all students.

As mentioned, low socioeconomic students engage in classroom curriculum with a lower academic vocabulary. Furthermore, understanding the differentiated instruction

that is needed for vocabulary acquisition is necessary. A study conducted by Jalongo & Sobolak (2011) sought to find how much instruction was needed in order for low socioeconomic students to make gains in their vocabulary. They concluded in finding that robust vocabulary instruction was needed through a variety of strategies. Yet, interpreting what robust instructional vocabulary strategies promoted student vocabulary acquisition growth is not defined. Therefore, educators need specific instructional strategies that will develop meaningful vocabulary connections to text and real life situations.

The SIOP model developed by Echevarria, Vogt & Short (2000) created a plan for implementing language instruction to support language learners, more specifically ELL students, to create comprehensible content in all classrooms. Students are learning the English language through a variety of educational contexts and genres. Eschevarria, Vogt & Short believed in order for ELL students to unlock the challenges of their language barrier, a variety of instructional strategies must be used to create comprehensible content. Language strategies teachers use will help students think deeply about word meanings, construct new knowledge for unknown words, and create syntactic structures in order to produce language in a variety of ways. The SIOP model supports academic vocabulary which includes semantic and syntactic knowledge along with functional language use (Short, Echevarria, Powers, & 2008). Furthermore, it creates instruction for students to use their emerging knowledge with the content knowledge they are studying in order to complete academic tasks (Short, Echevarria, Powers, & 2008). Most importantly, this model uses strategies such as metalinguistic skills, building prior knowledge, language scaffolds, and others to target linguistic skills students need in order

to make content comprehensible (Echevarria, Vogt & Short, 2000). Lastly, this model supports students through language scaffolds in which connects with prior knowledge and creates a gateway for performing at grade level along with native English speaking peers (Echevarria, Vogt & Short, 2000).

The SIOP model has gone through several research studies conducted by Echevarria, Short, and Vogt starting in the early 1990s. In 1996 the researchers worked with the Center of Research on Education, Diversity and Excellence (CREDE) to distinguish and refine effective strategies for beginner, intermediate and advanced English learners. This work defined critical and unique sheltered teaching strategies. A substudy by Guariono et. al (2001) confirmed SIOP to be a valid and reliable measure of sheltered instruction (Echevarria, Vogt & Short, 2000).

In a study conducted by Echevarria & Short (2011), a group of native English speaking students and English language learning students at a middle school were taught using the SIOP Model in a science classroom for use of a language intervention. The results of this study had shown that teachers who implemented the model with higher fidelity had greater impact on student success in criterion referenced vocabulary, science, and social studies measures. Results indicated that English-speaking students are not disadvantaged when they are in SIOP classes with English learners and they also benefit from SIOP practices (Echevarria, Vogt & Short, 2000).

All in all, there is a foreseeable connection between low socioeconomic students and ELL students in their loss of academic enriched environments at an early age. Early in these students' lives there is a barrier to academic vocabulary due to poverty.

Consequently, both populations of students are showing underperformance in reading comprehension and decoding as well as written expression through various genres (Echevarria, Vogt & Short, 2000; Koutsoftas, 2013; Goldstien, Ziolkowski, Bojczyk, Marty, Schneider, Harping, & Haring, 2017). Educators must consider the lack of academic language and experiences students have acquired throughout their early age in order to further support their growth in semantics and sentence syntax production. Undoubtedly, there is a need to examine the effects of applying language-based ELL instructional strategies to promote growth in vocabulary acquisition in low-performing low socioeconomic students.

Purpose Statement

The purpose of this quantitative study is to analyze the effects of general education teachers' implementation of Sheltered Instruction Observation Protocol (SIOP) ELL instructional strategies and low socioeconomic students' development of lexical semantics and syntactic relationships with academic vocabulary words. To further investigate the lexical semantic and syntactic relationships of academic vocabulary words and low socioeconomic students, a series of questions must be attained and examined for consideration to make progress in closing this achievement gap.

Overarching Question: What is the effect of SIOP ELL instructional strategies for low socioeconomic students on lexical semantic and sentence syntax of academic vocabulary words?

Question 1: What is the effect of implementing SIOP ELL instructional strategies for low socioeconomic students on lexical semantics?

Question 2: What is the effect of implementing SIOP ELL instructional strategies for low socioeconomic students on sentence syntax?

Operational Definitions

SIOP Model- Sheltered Instruction Operation Protocol, Curriculum. For this study we will be using Instructional Strategies. (Echevarria, Vogt, & Short, 2000).

Lexical Semantics- Lexical Semantics includes the study of word meaning within lexicon (Geerates, 2015). For the purpose of this study lexical semantics will be measured by the school district's Unit Vocabulary Assessment in section 1 of the assessment.

Sentence Syntax- A pattern of words that creates a sentence structure which ultimately leads to meaning in a language which often entails grammatical structure. Semantics is always identified with syntax because meaning is constructed by creating sentences (Scheffler & Butzkamm, 2019). For the purpose of this study sentence syntax will be measured by the school district's Unit Vocabulary Assessment in section 2 of the assessment.

Reading Definitions

Conceptual Semantics- Word meanings are represented in the mind as assemblies of basic concepts in the language of thought (Kuznetsov, 2015).

ELL Instructional Strategies- strategies that are influential to language accessibility and production through linguistic capabilities.

English Learners (EL)- English Learners who are children or adults learning a second language. This term applies to various levels of proficiency of English language.

ELs (English Learners) or ELL (English Language Learners) may also be referred to as English Language Learners. (Echevarria, Vogt, & Short, 2000)

Language Objectives- Statements that identify what students should know and be able to do while learning English in a given lesson. They support students' language development, often focusing on vocabulary, functional language, language skills in reading, writing, listening, and speaking, grammatical knowledge, and language learning strategies. (Vogt, Echevarria, & Short, 2000).

Scaffolding- Gradually removing different supports until the learner can learn unassisted (DeCapua & Marshall, 2011; Diaz- Rico & Weed, 2002; Ovando, Collier, & Combs, 2003; Peregoy & Boyle, 2008) and Gradual Release of Responsibility (GRR) (Pearson & Gallagher 1983; Vogt, Echevarria, & Short, 2000)

Sheltered Instruction- A means for making content comprehensible for English Learners while they are developing academic English proficiency. Lessons integrate language and content learning (Vogt, Echevarria, & Short, 2000).

Assumptions

This study is utilizing the SIOP model, which is an ELL researched based program. Although this model is to be adopted with students learning a second language, the strategies represented in the model are language development strategies. Therefore, the SIOP model along with ELL instructional strategies will be useful teaching strategies for vocabulary instruction to use with all students within the classroom (Echevarria, Short, & Vogt, 2000).

Teachers within this study have an array of educational, professional, and humanistic characteristic backgrounds. Therefore, teachers may possess skills and qualities that others do not possess which are impactful during delivering of direct instruction. Each individual teacher has the ability to create their own educational environment through personal connections with students. Lastly, all subjects are known to have differential intrinsic and extrinsic motivational factors that may vary the outcomes of their learning and teaching.

Delimitation

This study will take place at a Title 1 building in a large midwestern district. This school has a wide population of 66.1% students who qualify for free and reduced lunches. Due to this percentage, the building qualifies for Title 1 federal resources and can be identified as having a student population who have obtained low socioeconomic status.

Significance of Study

Disparities between poverty students' and high socioeconomic students' vocabulary abilities continue to rise. Vocabulary is one linguistic element to students' success and ability in reading comprehension (Scarborough, 2001). Understanding which robust vocabulary instructional strategies promote syntactic and semantic growth in poverty students' academic vocabulary acquisition is imperative to decreasing the achievement gap.

ELL students have become the primary target population for integrating language-based strategies during instruction. In fact, researchers Eschavarria, Vogt, and Short have recorded profound relationships between teacher implementation of the SIOP

model on EL students' academic vocabulary acquisition. Their findings support growth within EL's academic language and reading comprehension. On the contrary, little to no research has been conducted on the relationships of EL instructional strategies and low socioeconomic students' academic vocabulary acquisition. Looking through a language instructional lens may offer new insights on how EL strategies can affect native english speaking students who are in need of language instruction due to poverty effects. Overall, this study is significant in determining new instructional opportunities for low socioeconomic students to acquire academic vocabulary.

CHAPTER TWO

Review of Literature

Framework

The SIOP Model. Through their own research and several experimental studies, Jana Eschavarria, Maryellen Vogt, & Deborah Short created The SIOP Model in 1995 to improve instruction techniques for EL learners. This model is representative of Sheltered Instruction. Sheltered instruction techniques allow teachers to use multiple instructional strategies that aid students to understand and speak English academic language. Sheltered Instruction was created for teachers to immerse within state standards and district objectives. Sheltered instruction is a set of instructional practices that embeds group work, immediate feedback, and instructional strategies (Verma, Martin-Hansen, & Pepper, 2008, p. 57). This model provides adaptations for teachers to focus on their students' linguistic needs such as written expression, orally expression, and/or identifying and understanding academic vocabulary through various elements of instructional practices.

The SIOP model is composed of eight components that is essential to making instruction comprehensible for language learners. These eight components are: Preparation, Building Background, Comprehensible Input, Strategies, Interaction, Practice and Application, Lesson Delivery, and Review and Assessment. Each of these eight components can be integrated together throughout any curricular lesson to provide meaningful and effective teaching and learning. Within each component, descriptors are

added to provide teacher support and professional learning on accessibility and application of a component.

The SIOP model has been conducted in various classrooms around the world ensuring language acquisition and accessibility is the prime indicator for each lesson. The SIOP Model's goal is for students to develop English language proficiency in order for students to be successful at high context embedded instruction. The SIOP Model also focuses attention on linguistic applications, semantics, and syntax when supporting new vocabulary acquisition. In order to do so, the SIOP Model believes language objectives and language instructional strategies scaffold students' language production and reception skills. These scaffolding techniques are vital to a students' process of learning content and its objectives in a lesson.

Language objectives are used in partnership with content objectives in the classroom. Language objectives are posted alongside with content objectives of the day. Language objectives state language functions and skills that students need to master to fully participate in the grade-level content standards (Markos, A. & Himmel J., 2016). One or all of the four domains: speaking, listening, reading, and writing are demonstrated within the language objectives for each lesson. Words such as, "write, orally explain, orally state, listen, ..." are all functions of language that students will need to access throughout the period of study and express the four language domains. Stating language functions share what language skill will be taught directly into the context of the class. Language objectives may also outline academic language that the student will be acquiring throughout the lesson. Key vocabulary will be integrated into the objective so

that students will know it is a learning target integrated into their language acquisition in the lesson. Overall, language objectives provide a clear linguistic goal for students to achieve and the proper outline for knowing what language skill sets will need to be activated.

Vygotsky's Sociocultural Theory (1978) is profound within the SIOP model. Within Vygotsky's theory, language learning is created through prior knowledge and experiences. It is after being within a learning experience, that teachers create more experiences shared within the same topic to create higher thinking. This takes place within the zone of proximal development. Teachers must be aware of students' academic and home life experiences in order to successfully activate and plan for lessons that can continue building off of current and past language exposure (Villamizar Castrillón, 2017). Teachers will facilitate content slightly above where students can access text as it is also the teacher's responsibility to guide students in their learning and help through content understanding (Stahl, 2012). Within the teaching of the zone of proximal development, teachers will reflect and assess to understand where students' knowledge continues to grow and what extra supports are needed to support growth (Stahl, 2012).

In partnership with Zone of Proximal Development, the concept of scaffolding is weaved throughout EL instructional practices. Scaffolding is an instructional strategy used to support a student's understanding (Vogt, Echevarria, & Short, 2000). Scaffolding is the process that a teacher must instructionally facilitate in order for a student to achieve independence on a task. The SIOP Model suggests three types of scaffolding: Verbal,

Procedural, and Instruction. These scaffolding types support levels of language proficiency and language development.

Verbal Scaffolding uses the instructional strategies of prompting, questioning, and elaboration to guide students to higher levels of language production and reception while enforcing academic acquisition. Verbal scaffolding focuses on monitoring understanding, reinforcing contextual definitions through word placement, providing correct pronunciation, adding more to simple sentence structures to create complex sentences, and using clarifying language (Vogt, Echevarria, & Short, 2000).

Procedural Scaffolding uses the instructional strategies of providing an I do, You do, We do framework delivery for a lesson. Pearson & Gallagher (1983) states scaffolding is the process of “gradual release of responsibility” such as a method of teacher demonstrates, students join teacher with demonstration, student demonstrates independently. The cycle in which this interaction occurs can differ through each lesson. However, the main component is that students have plenty enough modeling and practice to be successful through their application of a skill taught (Echevarria, Vogt, & Short, 2000).

Moreover, Procedural Scaffolding also entails small group practice with more experienced or higher language performing students. As well as placing intentional partners within small group exercises. Intentional partnership in a reading lesson may include a partner who is a higher skilled reader and another partner who is a lower skilled reader. This idea is to give a lower language learner the opportunity to observe a partner

who models skillful reading and higher language production with correct contextual semantics and syntactic properties. (Echevarria, Vogt, & Short, 2000).

Lastly, Instructional scaffolding utilizes the various instructional strategies to provide ELs the opportunity to access content and language objectives. Graphic organizers are used to create structure and sequencing that can be represented during instructional scaffolding (Vogt & Echevarria, 2008). The use of graphic organizers can help with making connections to prior knowledge and prepare students for academic language they may need recall or use within a lesson. The use of gestures, posters, videos, and sample products can give students a clear picture of their lesson goal.

Corresponding with instructional strategies, The SIOP Model contains Learning Strategies broken down into Cognitive Learning Strategies, Metacognition Strategies, and Language Learning Strategies that are linked together to formulate ample opportunities for language practice and acquisition for content to become comprehensible and accessible. Cognitive Strategies are used when content information is manipulated mentally and physically (McLaughlin, 2010; Vogt & Schearer, 2011). Some strategies that this may include is: consciously making past connections with current content. mapping information, identifying key vocabulary, establishing purpose, previewing story before reading, identifying important information from text, and among others. All of these strategies that are implemented are highly interactive with language and content objectives.

Metacognition Learning Strategies supports students with their awareness, reflection, and interaction with language and knowledge. The most effective students will

use these strategies in an integrated, interrelated, and repeated manner (Dole, Duffy, Roheler, & Pearson, 1991). These strategies have shown in previous research, if practiced frequently and used effectively, will increase reading comprehension for students (Dole, Duffy, Roheler, & Pearson, 1991). Some of these strategies include predicting and inferring, Evaluating and determining importance, summarizing and synthesizing, visualizing, monitoring and clarifying, generating questions to guide comprehension (Echevarria, Vogt, & Short, 2000).

Language Learning Strategies are used to increase development in oral language production and language comprehension (Cohen & Macaro, 2008). Some strategies may include: analyzing word forms and patterns (prefix, suffix, root words), making logical guesses based on contextual and syntactic information, breaking words into component parts, drawing pictures, using gestures to communicate when words do not come to mind, self-monitoring and self-correcting while speaking English, using verbal and nonverbal cues, imitating behaviors of native English-speaking peers to successfully complete tasks, purposefully grouping and labeling words, substituting a known word when unable to pronounce an unfamiliar word, paraphrasing, and others (Echevarria, Vogt, & Short, 2000).

Being able to understand the teaching of language and the process of language acquisition is critical to addressing which strategies to implement into a lesson. In Krashen's Second Language Acquisition Theory (1998) he provides information that unlocks the sequential development of learning a second language. Among these developments he also provides insights of how teachers can facilitate learning to promote

language acquisition. He states that language is learned slightly above where student's current knowledge is creating the concept of $i + 1$. "i" is represented as the level of a student's current knowledge and $+1$ is represented as one placement above where student's current knowledge is. This framework is built upon understanding that facilitating learning too high above a students' current knowledge will create a dysfunction in making connections to new information. Therefore, providing specific instructional language strategies that will increase vocabulary acquisition and making content comprehensible is imperative for their language development and overall learning.

Within Krashen's Second Language Theory he developed the input hypothesis. The input hypothesis is supported by the idea of Comprehensible input. Comprehensible input is the ability of making a message understandable for students (Krashen, 1981). Comprehensible input correlates with $i+1$. Various teacher instructional strategies are used in order to make sure comprehensible input can be achieved by students who have low proficiency in English language. The instructional strategies that teachers use aids students in the process of learning language naturally through building schemas and making connections to prior mental models. The process of comprehensible input teaching is consciously utilizing a variety of means: posters, gestures, relia, and other supports, to increase understanding. Adjusting speech, repeating new words and/or sentences, and simplifying academic vocabulary may be appropriate to help students understand.

There are several instructional strategies that are associated with comprehensible input. One strategy is utilizing sentence strips or sentence frames. This technique is defined as giving a sentence starter that includes sentence structure and word order to help frame how a student should respond through oral or written language. Sentence strips can be used across curricular areas while providing language accessibility, word order, sentence structure, and feedback. Another instructional strategy is displaying step-by-step instructions for completing a task. Students can refer back to directions and follow procedures. Students will also know the common goal in the classroom.

Many strategies integrate visuals to scaffold students in language acquisition. Showing a brief video clip that emphasizes the content objective and/ or academic vocabulary can create background knowledge. Videos can invite participation from students who have an unawareness of a big concept (Vaughn, Martinez, Linan-Thompson, Reutebuch, Carlson, & Francis, 2009). The application of using objects, slides, photographs, and bulletin boards can create a place of reference for EL students while making lectures more compelling. The use of vivid posters, videos, drawings, and relia will also grab attention while creating concrete experiences (Jensen, 2008; Echevarria, Vogt, & Short, 2000). Lastly, Teachers guiding word studies with unfamiliar words can help bridge undesired gaps in complex vocabulary terms. Utilizing previously known vocabulary can create association to newly learned vocabulary.

All of these components within The SIOP Model create an instructional framework that is motivated by language development. This model assumes that teachers will engage in culturally responsive teaching, have high expectations for students, as well

as facilitate teaching to the best of one's ability with the course of professional development. This model's goal is to provide instructional strategies that will create content that is comprehensible by scaffolding language in order to support student language acquisition growth.

Explicit Instruction. Dr. Anita L Archer and Dr. Charles A. Hughes are co-writers of the book *Explicit Instruction: Effective and Efficient Teaching*. Within the book they have defined a model in which school districts can use to create effective and explicit instruction in all classrooms. Dr. Anita Archer is an educational consultant for school districts around the United States. Her research has focused on explicit instruction, design and delivery of instruction, behavior management, and literacy instruction. She has contributed research over her 40 year career among these topics as well as written curriculum on reading, writing and studying skills. She is nationally known for her professional development activities over explicit instruction.

Explicit instruction is a model that has been adopted by the school district within this study. Additionally, Dr. Archer has also been hired by the school district as an on-going professional development consultant and has had much influence on literacy curriculum and instruction within the district. Within this study her influences will be focused within reading and writing curriculum, assessment, and instruction.

Explicit instruction framework is considered a systematic structured methodology that focuses on teaching academic skills. It uses an ambiguous direct approach to lesson designs and delivery. Rosenshine (1987) expressed that this form of instruction is a systematic method of teaching that checks for student understanding while achieving

active and engaged participation from all students. Therefore the Elements of Explicit Instruction is found in Table 1.1 below (Archer & Hughes, 2011).

Table 1.1*Elements of Explicit Instruction*

| |
|---|
| <p>1. Focus instruction on critical content. Teach skills, strategies, vocabulary terms, concepts, and rules that will empower students in the future and match the students' instructional needs.</p> |
| <p>2. Sequence skills logically. Consider several curricular variables, such as teaching easier skills before harder skills, teaching high-frequency skills before skills that are less frequent in usage, ensuring mastery of prerequisites to a skill before teaching the skill itself, and separating skills and strategies that are similar and thus may be confusing to students.</p> |
| <p>3. Break down complex skills and strategies into smaller instructional units. Teach in small steps. Segmenting complex skills into smaller instructional units of new material addresses concerns about cognitive overloading, processing demands, and the capacity of students' working memory. Once mastered, units are synthesized (i.e., practiced as a whole).</p> |
| <p>4. Design organized and focused lessons. Make sure lessons are organized and focused, in order to make optimal use of instructional time. Organized lessons are on topic, well sequenced, and contain no irrelevant digressions.</p> |
| <p>5. Begin lessons with a clear statement of the lesson's goals and your expectations. Tell learners clearly what is to be learned and why it is important. Students achieve better if they understand the instructional goals and outcomes expected, as well as how the information or skills presented will help them.</p> |
| <p>6. Review prior skills and knowledge before beginning instruction. Provide a review of relevant information. Verify that students have the prerequisite skills and knowledge to learn the skill being taught in the lesson. This element also provides an opportunity to link the new skill with other related skills.</p> |
| <p>7. Provide step-by-step demonstrations. Model the skill and clarify the decision-making processes needed to complete a task or procedure by thinking aloud as you perform the skill. Clearly demonstrate the target skill or strategy, in order to show the students a model of proficient performance.</p> |
| <p>8. Use clear and concise language. Use consistent, unambiguous wording and terminology. The complexity of your speech (e.g., vocabulary, sentence structure) should depend on students' receptive vocabulary, to reduce possible confusion.</p> |
| <p>9. Provide an adequate range of examples and non-examples. In order to establish the boundaries of when and when not to apply a skill, strategy, concept, or rule, provide a wide range of examples and non-examples. A wide range of examples illustrating situations when the skill will be used or applied is necessary so that students do not underuse it. Conversely, presenting a wide range of non-examples reduces the</p> |

possibility that students will use the skill inappropriately

10. Provide guided and supported practice. In order to promote initial success and build confidence, regulate the difficulty of practice opportunities during the lesson, and provide students with guidance in skill performance. When students demonstrate success, you can gradually increase task difficulty as you decrease the level of guidance.

11. Require frequent responses. Plan for a high level of student–teacher interaction via the use of questioning. Having the students respond frequently (i.e., oral responses, written responses, or action responses) helps them focus on the lesson content, provides opportunities for student elaboration, assists you in checking understanding, and keeps students active and attentive.

12. Monitor student performance closely. Carefully watch and listen to students’ responses, so that you can verify student mastery as well as make timely adjustments in instruction if students are making errors. Close monitoring also allows you to provide feedback to students about how well they are doing.

13. Provide immediate affirmative and corrective feedback. Follow up on students’ responses as quickly as you can. Immediate feedback to students about the accuracy of their responses helps ensure high rates of success and reduces the likelihood of practicing errors.

14. Deliver the lesson at a brisk pace. Deliver instruction at an appropriate pace to optimize instructional time, the amount of content that can be presented, and on-task behavior. Use a rate of presentation that is brisk but includes a reasonable amount of time for students’ thinking/ processing, especially when they are learning new material. The desired pace is neither so slow that students get bored nor so quick that they can’t keep up.

15. Help students organize knowledge. Because many students have difficulty seeing how some skills and concepts fit together, it is important to use teaching techniques that make these connections more apparent or explicit. Well-organized and connected information makes it easier for students to retrieve information and facilitate its integration with new material

16. Provide distributed and cumulative practice. Distributed (vs. massed) practice refers to multiple opportunities to practice a skill over time. Cumulative practice is a method for providing distributed practice by including practice opportunities that address both previously and newly acquired skills. Provide students with multiple practice attempts, in order to address issues of retention as well as automaticity.

Note. Adapted from “ Explicit instruction: Effective and Efficient Teaching.,” by A. Archer & C. Hughes, 2011, page 2. Copyright 2011 by Guilford Press, NY

In addition to the elements of explicit instruction, Dr. Archer defined the instructional delivery by clear descriptions and demonstrations of a skill. She has used Rosenshine and Steven (1986) and Rosenshine (1997) methods of grouping teaching elements into six teaching functions. These functions are to be carried out within each lesson, while focusing on a gradual release method. The six teaching functions are found in Table 1.2 below (Archer & Hughes, 2011).

Table 1.2
Six Teaching Functions

| |
|--|
| <p>1. Review</p> <ul style="list-style-type: none"> a. Review homework and relevant previous learning. b. Review prerequisite skills and knowledge. <p>2. Presentation</p> <ul style="list-style-type: none"> a. State lesson goals. b. Present new material in small steps. c. Model procedures. d. Provide examples and non-examples. e. Use clear language. f. Avoid digressions. <p>3. Guided practice</p> <ul style="list-style-type: none"> a. Require high frequency of responses. b. Ensure high rates of success. c. Provide timely feedback, clues, and prompts. d. Have students continue practice until they are fluent. <p>4. Corrections and feedback</p> <ul style="list-style-type: none"> a. Reteach when necessary. <p>5. Independent practice</p> <ul style="list-style-type: none"> a. Monitor initial practice attempts. b. Have students continue practice until skills are automatic. <p>6. Weekly and monthly reviews</p> |
|--|

Note. Adapted from “Explicit instruction: Effective and Efficient Teaching.,” by A. Archer & C. Hughes, 2011, page 2. Copyright 2011 by Guilford Press, NY

Overtime within explicit instruction, principles of instruction have emerged within Dr. Archer’s research and others. Archer & Hughes (2011) defines these principals as “underpinnings of effective, explicit instruction” (p.4). These principals are

components that are addressed through the process of designing and delivering explicit instruction. Principles of effective instruction are found in Table 1.3 below (Archer & Hughes, 2011).

Table 1.3

Principles of Effective Instruction

| |
|---|
| <p>1. Optimize engaged time/time on task. The more time students are actively participating in instructional activities, the more they learn.</p> |
| <p>2. Promote high levels of success. The more successful (i.e., correct/accurate) students are when they engage in an academic task, the more they achieve.</p> |
| <p>3. Increase content coverage. The more academic content covered effectively and efficiently, the greater potential for student learning.</p> |
| <p>4. Have students spend more time in instructional groups. The more time students participate in teacher-led, skill-level groups versus one-to-one teaching or seatwork activities, the more instruction they receive, and the more they learn.</p> |
| <p>5. Scaffold instruction. Providing support, structure, and guidance during instruction promotes academic success, and systematic fading of this support encourages students to become more independent learners</p> |
| <p>6. Address different forms of knowledge. The ability to strategically use academic skills and knowledge often requires students to know different sorts of information at differing levels: the declarative level (what something is, factual information), the procedural level (how something is done or performed), and the conditional level (when and where to use the skill).</p> |

Note. Adapted from “Explicit instruction: Effective and Efficient Teaching.,” by A. Archer & C. Hughes, 2011, page 2. Copyright 2011 by Guilford Press, NY

Furthermore, Dr. Archer has had great influences in reading and writing curriculum through vocabulary instruction. Dr. Archer has evaluated effective vocabulary through an explicit instruction lens. She states that vocabulary is often taught in procedure aligning with explicit delivery of instruction. First, the teacher would choose tier 2 vocabulary terms, that are critical to the comprehension of a passage. Second, terms are taught robustly in groups. Therefore, students are exposed to words in 5 chunks a

time. This will allow students to process the vocabulary without brain content overload which could be rejected into mental processing. Next, a dictionary definition should be modeled and given to students as well as a student friendly definition. The word also should be written for students to process it in its lexical form. After, a word should be analyzed for the parts within it, such as prefix, suffixes, root words, and syllables. Finally, the word is taught relative to its meaning through support in visuals, examples, and verbal examples. Students' deeper processing of vocabulary words' meaning is created once students are asked to construct their own examples of the word.

Following procedures of explicit teaching, teachers are to check students' comprehension of a vocabulary term during instruction and after instruction. Teachers prompt students in a progression to deep processing of a vocabulary word. There are various examples of checking for understanding in the comprehension of a vocabulary term provided by Dr. Archer. Teachers may use the word in cloze questions where the academic vocabulary word is omitted from the sentence. Students would then be asked to place the correct vocabulary term in the sentence in order to construct meaning. This could be asked in a way with guided teacher support for student practice or without support to evaluate an individual's comprehension of the vocabulary word.

Another example of checking for understanding, is having students create their own example of the academic vocabulary word through power sentences. Power sentences answer three to four questions: who, what, when, where, and/or how. These four questions provide developmentally appropriate language structure and questioning. Power sentences use semantic mapping in order to share the meaning of a vocabulary

word. Semantic mapping places the vocabulary word among other words within the sentence into categories. Furthermore, semantic mapping is a vocabulary strategy that develops word association and expands knowledge of categories of words (Heimlich & Pittelman, 1986). Dr. Archer provides a power sentence example using the word meager: At the end of the month, our dinners were meager because we had little money. This power sentence categorizes words of when, who, what, and why are in association with the vocabulary term to construct meaning (Archer & Hughes, 2011). Teachers can evaluate student syntactic construction through this word as well as their comprehension of the vocabulary term.

Contemporary Findings

A child's early development has a significant influence on academic achievement. There are many aspects of child development such as cognitive, linguistic, physical, and social functions that develop as a child is growing (Berk, 2009). Socioeconomics impacts a child's development overtime and can manipulate many factors in a household. One developmental function it impacts is a child's understanding and capability of using language (Hoff, 2013). Language is heavily produced not only through daily living activity but also through academics in which students are exposed to new vocabulary daily.

Academic language can take many forms through instruction. However, language is often seen integrated into literacy as students' study and acquire new vocabulary words while reading, writing, and answering questions (Pearson, Heibert, & Kamil, 2007). The impacts of socioeconomics on family structures can greatly impact the academic

language exposure a child has had in early ages. Later, in elementary school, SES factors change the way students learn and grow academically. Hoff (2013) states, “A substantial body of evidence has argued that the differences in language experiences are the primary cause of SES-related differences in children’s oral language skills” (p. 6). Furthermore, language development is a critical component of academic skills in elementary school and beyond.

Low Socioeconomics

Defining Poverty

Poverty is a well-known factor that can define and manipulate lives around the world. Internationally poverty can be defined as a deprivation of well-being rather than a lack of income or financial resources. However, U.S. policy makers as well as political affiliates define poverty as material deprivation or income deprivation (Mitra & Brucker, 2017). Therefore, these definitions lead to contrasting ideas of how to best define people in poverty along with their home structure and/or environment.

Furthermore, Poverty in the United States can be categorized as having low-socio economics or low SES. Socioeconomic status is an objective, ranked system that designates individuals’ economic value based on their income, education, and occupation (Cook & Lawson, 2015, p. 94). Often in a public eye low SES is easily transverse into the idea of poverty. According to Brooks-Gunn & Duncan (1997), “Income poverty is the condition of not having enough income to meet basic needs for food, clothing, and shelter (p.55).” Although poverty may seem to have a definition that is clearly understandable, there are many components or categories that make up the complicated idea of poverty.

Some of these categories are the means of capital, human, and social resources (Bradley & Corwyn, 2002, p. 373). Capital, human, and social resources also can be broken down into dimensions that relate to each of these resources

Consumption is one form of measurement that closely relates to the material and income deprivation stated in the U.S. definition of poverty. Consumption is the usage of money such as how money is spent on household needs, payment on houses, cars, and other bills, as well as the access of credit a family has acquired (Meyer & Sullivan, 2009, p.2). In fact, consumption also measures the capabilities of a family's financial situation in long-term means and depth of wealth. All of these categories affect families on a daily basis in regards to their debt, how they pay off bills, as well as how daily life needs are met. Bradley & Corwyn (2002) report that income, education, and occupation or career status often can capture one's socioeconomic status (SES). There are many details that define poverty and its impacts on American society today.

Measuring Poverty

Poverty can be measured both through mathematical formulas as well as social norms and understandings. It has been reported by the United State Census Bureau that in 2016 14.0 percent of the U.S. population had an income below the poverty level (Bishaw & Benson, 2017). There are many featuring components that are taken into consideration when the Census Bureau measures poverty. One of which is called the Official Poverty Measure (OPM). This form of measurement relies only on one of the family's income, and based on a set of pretax income threshold, which do not include capital gains or in kind benefits (Short, 2014). Another form of measurement is called the Supplemental

Poverty Measure (SPM). SPM thresholds take in consideration the dollar amount spent for basic goods and small amounts of personal needs. Overall, the SPM measurement will give further understanding of economic conditions and trends for those living in poverty (Short, 2014). The SPM also breaks down the idea of “family units” that there are several individuals to take into account in a household as well as state residence or geographic location of families.

Greatly, society places poverty in a structure of social class status. Cook and Lawson (2015) states, “Social class is a more subjective, yet often ranked, term that integrates individuals’ SES factors with the totality of attitudes, beliefs, consciousness, values, behaviors, and interactions that affect their personal and group worldviews based on their social location, resources, and experiences with their social class affiliations” (Cook & Lawson, 2015, p. 2015). There are three different kinds of social statuses that one can obtain during their lifetime. Social statuses define household finances. Krus & Keltner (2013) explains that these social statuses are defined by the gaps that are created in each household's finances. The gap created in finances then places each household into a different category called middle class, upper class, and lower class. Furthermore, each category is elaborated by the certain financial and social image that it possesses. Kraus & Keltner (2013) states, “While upper class means wealthy, middle class normally is described as blue collar and/or middle of the socioeconomic financial group” (p.15). Lower class is defined as being poverty. Social contexts are also suffused with class boundaries: Neighborhoods, K-12 schools, occupations, and social clubs all tend to be inhabited by people of similar class backgrounds (Kraus, Tan, & Tannenbaum, 2013).

Parents and children today both are categorized in certain geographic locations as well as social groups that affect the opportunities they are exposed to.

Child Poverty

A division of poverty that has been closely researched in the effects of child development is child poverty. Child poverty is measured in various forms of deprivations that families experience. In the U.S. we define child poverty as people who are disadvantaged by counting deprivations that are experienced by households or individuals and use measurements that reflect the depth of deprivations (Mitra & Bucker, 2017, p. 38). These are all related to the family that a child is born into. In the U.S. 44% of families or 10.7 million people live in low-income and 21% of families or 5.2 million people live in a poor family (Jiang, Granja, & Koball, 2017). Furthermore, this can be broken down to exactly what constitutes an impoverished family and/or low income family. To be considered as poverty in the United States a family of four with two children would need to make less than or equal to \$24, 036, a family of three with one child would need to make less than or equal to \$19,078, and a family of two with one child would need to make less than or equal to \$16,337 (Jiang, Granja, & Koball, 2017). As one could assume many of these families are working low income jobs with little to no promotions in opportunities. In order for various family structures to incline into the middle class they would need to make double the amount they are making at the measured poverty level (Jiang, Granja, & Koball, 2017). However, although family income is a vital piece of child poverty, there are many other factors that take part in a child's upbringing as well as a household's stature in socioeconomics.

A study was conducted by Harrell & Payne (2007) to research important factors that contribute to child poverty in the United States. Both researchers suggested that there were predictors in personal responsibility and work opportunities that lead to child poverty for families. Indicators noted that stated child poverty were demographics, the health and state economy, generosity, inclusiveness, and quality of support services provided by each state's welfare program (Harrell & Payne, 2007). The study also shared what group of people were mostly targeted for living in low socioeconomic conditions. The citizens shared were large numbers of black citizens, births to unmarried women, children living with a parent without a high school degree, and children living with a single parent household (Harrell & Payne, 2007). Furthermore, this study has concluded that poverty is treated differently in each state in the fact of social judgements, financial help, as well as decisions that are targeted to aid the progress of reducing child poverty.

Upbringing in Child Poverty

The environment a child is exposed to affects child development. There are several factors that create a healthy, enriched, and stable environment. One leading factor is parents' background in education and job placement. 85% low income and 55% percent poverty families have less than a high school degree (Jiang, Granja, & Koball, 2017). A parents' education affects the child's living and learning environment. Due to little exposure to schooling, parents can be misinformed about positive parenting habits and other environmental factors that can lead to a positive or negative environment for children (Sime & Sheridan, 2014). Cook & Lawson (2015) stated "Conversely, the fewer economic resources people have, the more limited their opportunities and life chances

are.” Life opportunities such as job or career status can change the environment a child is given. Without or little education parents are then forced to work at low-income jobs leading to stress, chaotic and sporadic work hours, as well as little time spent with children at home. This can lead to environments such as crowded housing, unemployment, and limited access to resources making parenting tougher and more stressful (Sheridan & Sime).

Stress can put a negative atmosphere in an environment or household. Parents are identified with three stressors that could lead to negative outcomes in which are defined as psychosocial stressors (violence, family turmoil, and family separation) and three physical stressors (crowding, noise, and low housing quality) (Family Life Key Investors, 2013). In turn, stress may trigger more frequent negative parental control strategies, more emotional neglect, and more difficulties in promoting appropriate socio-emotional adjustment in children (Lipina, 2016). Stress is a factor that contributes to the lifestyles of children and adults in low SES backgrounds. Furthermore, stress induces toxic environments for children and consequently has a negative relationship in emotional and cognitive development (Morris et al., 2017). A stressful environment implicates constructive parent-child interactions in the home environment.

Consequently, health also has a critical effect on child poverty. Due to the lack of stability and low income jobs many impoverished parents have acquired, they may not have the ability to provide healthcare for their children and themselves leading to chronic health issues (Pepper & Nettle, 2014). Ciula & Skinner (2015) identifies, “Low income parents are more likely to be less educated, unemployed or underemployed, and worse in

health than parents with higher incomes' ' (p.494). There are many leading factors that contribute to their undercare of health. The lack of health knowledge, voluntary unhealthy behaviors such as increased use of alcohol, drugs, and physical activity lead to mortalities among this social class (Pepper & Nettle, 2014). These choices by adults then lead into child bearing complications. Additionally, health complications can start early in pregnancy leading to premature births which mimic poor prenatal care (Bradley & Corwyn, 2002). After birth takes place for a child other health complications arise as well. Health risks that are significant to impoverished children include physical health complications like that of asthma, elevated blood levels, and malnutrition as well as mental health problems (Stanton-Chapman, Chapman, & Hancock, 2004). These health complications will later be detrimental to many challenges that a child tries to overcome in their life.

A study conducted by Hanson, Chandra, Wolfe, & Pollak (2011) researched the implications on poverty and the hippocampus. The hippocampus region is in the medial temporal lobe of the brain which is connected with stress and cognitive functions including memory, learning, and behavior regulation. These researchers note that an enriched environmental stimulation using and obtaining high child-parent interactions with resources of reading books contribute to productive long-term memory. Parents' with low SES backgrounds often lack child-parent interactions as well as resources to create a healthy learning environment (Rowe, 2012). Furthermore, Hanson, Chandra, Wolfe, & Pollak (2011) found children who have had early life stressors due to their low SES environment have higher amygdala volume which affects the hippocampus. Overall,

one can conclude that both the options to provide health care as well as an enriched environment has severe effects on brain development for children. The effects of memory loss, impaired learning, and behavioral regulation all affect the way a child can achieve in development milestones and academics later in life.

Child Development

Language Development

Parent-child interactions play an important role in the exposure and developmental milestones that children face. In fact, a study conducted by Sylva (2014) states that there is a high correlation between parents' education and the types of academic enriched exposure they give to their children at a younger age. Most importantly, the relationship between parent education and child development are closely related to the possible outcomes children will produce on academics (Feldman, 2017). Poverty is connected with poor outcomes for children in the classifications of child development and the quality of children's achievement in academics (Vernon-Feagans & Cox, 2013). Parents are the first form of exposure to developmental experiences that a child receives. Therefore, there is no doubt that parents have an influence over their child's development.

Although there are many factors in an impoverished lifestyle that can change the development of a child, the most important presence in a child's life is one's parent(s). Mothers' are the first to experience parent-child interaction through the birthing process and the preliminary exposure to bonding with the newborn baby (Berk, 2009). According to Feldman (2017), "Bonding is the close and physical emotional contact between parent

and child during the period immediately following birth, which is crucial for formatting a lasting relationship between parent and child” (p.90). Children are dependent on parents for support, safety, health, and developmental outcomes. Morris, Robinson, Hays-Grudo, Claussen, Hartwig, & Treat (2011) states, “Healthy and nurturing parent-child interactions guide children’s emotional and cognitive development and allows children to explore their world with a sense of emotional security” (p.391). These healthy and nurturing parent-child interactions are foundational points that guide infants to cognitive developmental milestones.

Through the developmental timeline of a child’s life, one of the first cognitive learning features is language. Language is learned through a period of stages as a baby grows and develops. Children begin to be receptive to language when they are first born (Feldman, 2017). They begin cooing, crying, and smiling in order to interact with others around them (Aydin, 2016). Caregivers such as mothers and fathers are the first to teach their baby vocabulary through several interactions (Goldstein, Ziolkowski, Bojczyk, Marty, Schneider, Harpring & Haring, 2017). A baby goes through various language acquisition stages as they begin growing.

Next, babies are more receptive to their environment. At the age of 3-6 months’ babies repeat sounds they hear (Aydin, 2016). Often, parents will make mimicking sounds to their baby as they play. Babies also begin to recognize words that have been repeated such as their own name (Goldstein et al., 2017). According to Tamis-LeMonda, Bornstein, & Baumwell (2001), “Maternal speech that semantically matches children’s speech, as one form of responsiveness, strongly predicts children’s linguistic abilities”

(p.749). Additionally, At the age of 6-9 months they begin to repeat syllables in which is sometimes called babbling. Babbling often creates patterns in their language in which they design and perceive new patterns (Aydin, 2016, p.). Parents will frequently coo mama, dada, and other object names which will create repetition and context. This allows babies to develop language play.

Furthermore, At the age of 10 months, babies begin to link words to objects in which they have had exposure. Babies begin to create joint social interactions with their parents as they become receptive in their environment (Berk, 2009). Parents and baby eagerly interact with one another through expressive play. Infants begin pointing while learning names which are then stored creating vocabulary and understanding of language (Aydin, 2016). Mothers will label objects with words while babies begin to linguistically match symbols to objects to create meaning in new vocabulary (Tamis-LeMonda, Bornstein, & Baumwell, 2001).

Lastly, as a child grows they become more curious about their environment as they begin to wonder about the world around them. At the age of 2-3 children start to ask questions such as Where? Who? What? (Aydin, 2016). A cause and effect relationship begins to establish as both receptive and productive language are produced and interacted. When parents respond to their children in early language they begin to provide pragmatic cues to word learning and sentence structure (Tamis-LeMonda, Bornstein, & Baumwell, 2001). During this age many vocabulary words are expressed and stated in phrases and/or simple sentences. Consequently, by 30 months, 360 to 630 vocabulary words are expressed and used in conversations (Goldstein et al., 2017). Children are able

to communicate with peers and adults. At age 3, language is drastically developed (Vernon-Feagans & Cox, 2013). In which children soon will enroll in preschool to engage in academic readiness.

Vocabulary, Literacy Correlations and Low SES Effects

As language begins to develop, so does the progression of vocabulary. It is inevitable that with the development of language becomes syntactic. Also, when one creates structure order one also creates semantic understandings in which in turns leads to vocabulary interactions and vocabulary meanings of objects, people, and environments (Feldman, 2017). According to the Social Interactionist Theory, children have a strong desire to understand others which promotes the many developmental language periods babies and young children undergo. Through social interactions with parents' children will make sense of language through responding to the environment that surrounds them as well as respond and repeat words that parents produce (Berk, 2009, p. 366). Ultimately they create social meanings out of the basic interactions with caregivers and their environments.

Although these developmental milestones are expected from most infants and toddlers, there are implications for low SES children. Research has shown that lower SES mothers may talk less frequently to young children and are less likely to read books, listen to music, and engage in literacy activities compared to higher SES mothers (Misty & Wadsworth, 2011). These vital parent interactions with children can change the development course in early life stages. Argumentatively, the absence of parent-child interactions such as these hinder possible child development in the course of babies,

younger children, and school age children can result in low growth in child development stages (Stanton-Chapman, Chapman, Kaiser, & Hancock, 2004). The lack of environmental stimuli reduces the amount of language that is being stored and produced. In fact, at the age of 22 months' children from low SES backgrounds are described as behind their peers in language, social, and emotional development (Sime & Sheridan, 2014). The lack of exposure and interaction of language with impoverished children create complications in later life.

A study conducted by Ozkan, Senel, Arslan, & Karacan (2012) found that parents who had low SES backgrounds and had distinguishable factors such as poor educational backgrounds, poor environmental, and poor health correlated to children that ultimately were considered developmentally delayed. Additionally, developmentally delayed disabilities were defined as cognitive/motor impairments which included some assessments based on language. Children having a background of either low birth weight or premature birth, lack of resources, and maternal interaction was crucial to the development of the children in the study.

In addition, other researchers have noted that SLI (Specific Language impairments) can also generate through low SES children due to many qualifying factors. Stanton-Chapman, Chapman, Kaiser, & Hancock (2004), express that many children who have a background of being premature, lack of stability, inadequate nutrition, and high levels of environmental stress, as well as genetic history of a language impairment could be identified as SLI. Nevertheless, age is also imperative when SLI is identified in a child. Children in the preschool years can be identified as SLI due to the syntactic

abilities that are produced at this specific age in language development (Vernon-Feagans & Cox, 2015). Not only is there a relationship with SLI identification but also that of I.Q. scores. Smith & Gibbard (2011) relate that children with low SES status have a lower I.Q. score due to environmental factors and stressors a child is immersed in. Cognitive impairment can be placed in both in identification in SLI and low I.Q. scores.

However, a study conducted by Vernon-Feagans & Cox (2013) reported otherwise about child development outcomes with low SES. He had studied mother positive and negative parenting using language during play in a 36-month old child's home setting. Vernon-Feagans & Cox (2013) stated that although there was cumulative risk present in child outcomes, parental language possibly did not have prediction of child behavior. Other arguments over child development come from biological reasoning. In which genetics can play apart in the behavior and development one experiences (King, McKean, Rush, Westrupp, Mensah, Reilly, & Law, 2017). Similarly, Merrill-Palmer, Quarterlycabrera, Fitzgerald, Bradley, & Roggman (2016), found that genetics and environmental factors both are interrelated in behaviors of children. Overall, there are many conforming arguments about the relationship language has in regards to genetics as well as parent involvement in language acquisition.

Partnerships of Low SES, Language Development, and Vocabulary Instruction

Child development greatly impacts the understanding, learning capabilities, as well as the vocabulary a child can obtain later in schooling years. Language development is one component of child development that impacts a child's schooling process. According to Vernon-Feagans & Cox (2013), "The acquisition of language allows the

child to more easily extract meaning from the environment and to create the basis for learning about the world” (p.13). Language is heavily integrated in our daily living. In addition, language is also intertwined in the learning objectives of reading, writing, and oral communication later in years (Gonzalez-Betancor & Lopez-Puig, 2016). The language skills that children possess shapes their educational journey. In fact, young children who know more words in the first years tend to know more later and will help one learn how to read, improve verbal comprehension, and acquire better oral and academic skills (Bornstien, Hahn, & Putnick, 2016). Language is an essential key component to how children develop.

Vocabulary is one of the basic components of any language. Metsala (1999) states, “...vocabulary growth drives development in spoken word recognition processes based on relatively holistic lexical representations...” (p.4). Vocabulary is developed when parent-child interactions in early life. At the 12-24 month of age babies are more responsive to their environment while pointing at objects and using direct communication with parents about what they want or see (Luke, Ritterfeld, Grimminger, Liszkowski, & Rohlfing, 2017). This initiates parent-child interaction and speaking about the environments and objects around them. In turn, the vocabulary and/or language an adult will produce in an interaction are predictive in their child’s language development (Richards, Gilkerson, Xu, & Topping, 2017). Therefore, the diverse and specific vocabulary that a parent uses during an interaction can have a long lasting effect on their child later in their schooling experiences (Rowe, 2012). A child’s environmental

background as well as parent-interactions greatly influence the vocabulary development a child acquires through his/her life.

Thus, the second point of vocabulary exposure children have is in preschool. In preschool there are many language variables that begin to build off of the prior learned language between birth and 3 years. The ability to use and develop syntax, vocabulary, as well as phonological sensitivity in preschool largely correlates to later literacy development proficiency (Vernon-Feagans & Cox, 2013). Considerably, language in schooling can be described as vocabulary in an educational context. In preschool students begin to learn by oral language and emergent literacy skills called inside-out skills that are relatable to decoding in reading (Hemphili & Tivnan, 2008). In order to decode later in reading, early language skills are learned in preschool as well as the home environment during the preschool years. Skills that are learned during this development time are that of understanding print awareness, identifying letters and their sounds, vocabulary, syntactic abilities to understand text (Hemphill & Tivnan, 2008). All of these skills need to be acquired in order to learn and grow in academic vocabulary and further skills in literacy.

A component of language that transverses early literacy abilities is oral narrative skills. Oral narrative skills are the ability to be able to express something that has happened to oneself (Gardner-Neblett & Iruk, 2015). An example of producing an oral narrative is a child telling a story about a bug touching their hand and flying away. This skill gradually develops beginning at 2-3 years of age using phrases proceeding into sentences and continues to develop with more contextual in-depth information until 6

years and older (Gardner-Neblett & Iruk, 2015). Oral narratives require children to use previous and learned language in the following language domains of vocabulary, syntax, and semantic structures which are produced during literacy (Reese, Suggate, Long, & Schaunghency, 2009). Oral narrative skills use vocabulary skills to identify events around them as well as build comprehension in the context children are placed in.

However, there is critical information that is placed on the performance of oral narrative skills with children from low SES backgrounds. Hoff (2013) organized many studies around the effects of Low SES environmental factors and the correlation of language development. Her studies had found maternal education in low SES backgrounds have effects on a child's language development. This takes into consideration the many environmental factors children undergo in impoverished communities such as low parental education and the lack of educational resources.

Furthermore, she stated a child who has absent language skills can have difficulties with linguist tasks such as storytelling. Storytelling similar to oral narratives has many of the same language structure components. Moreover, Hoff (2013) defined importance in understanding children who identified as low SES have weaker language in regards to oral language, narrative skill, and emergent literacy which are the effects of poverty factors. Oral narrative skills bridge to literacy skills. Consequently, when children enroll in school with little language development background especially vocabulary terms, they are at risk for reading failure and academic underachievement (Goldstien, Ziolkowski, Bojczyk, Marty, Schneider, Harping, & Haring, 2017). Understanding how poverty and low SES students develop language gravitates to some

concern in their academic responses in schooling. All in all, poverty can affect language components in preschool literacy.

The ability to produce and understand language correlates with how children will develop in elementary academic environments as well. Due to various home backgrounds that children are exposed to different academic progress can be measured due to vocabulary. In fact, at the end of second grade students with strong vocabularies know between 4,000-8,000 more word meanings than students with weak vocabulary (Biemiller, 2004). Time spent with these children are crucial to their ongoing development. Hart & Risely (2003), additionally report that after implementing vocabulary instruction the gap between the two groups of children, those with low vocabularies and those with higher vocabularies, would continue to grow at a constant rate and never meet at same vocabulary acquisition. The lack of vocabulary leads into the types of experience and instruction children will receive upon entering each grade level.

Scarborough (2001) suggests that skilled reading consists of many component skills that are shaped through teacher instruction throughout many students' years in education. These reading skills are woven into strands with two major categories of language comprehension and word recognition. Both of these categories are vital to reading achievement. Under the lens of language four strands remain: background knowledge, vocabulary, language structures, verbal reasoning, and literacy knowledge. Furthermore, Scarborough (2001) carefully defines vocabulary as the predth, precision, and links of language. Scarborough (2001) suggests within his research that each of these need to be at a development readiness in order for successful skilled reading to take place

within an individual. Therefore, educators should reflect carefully on students' language development in the form of vocabulary through semantics and syntactic usage.

Vocabulary is integrated in many of the components in literacy. The domains of listening, speaking, reading and writing are all in both receptive and productive language and are made up of vocabulary words (Pearson, Hiebert, & Kamill, 2007). Therefore, the underdeveloped vocabulary that some students may have acquired have negative effects while learning how to read and write. According to Wright & Neuman (2015), "Countless studies over decades of research have demonstrated that young children with stronger vocabulary knowledge become better at text comprehension and are more successful in school than their peers with weaker vocabulary knowledge" (p.25). Children not only need to be able to put prior vocabulary acquisition into practice but they also must be able to build upon their vocabulary to grow in literacy. The idea that if children are motivated and take interests in learning new words and create new meaning with the words they have had prior exposure to then they will also have a new purpose for reading and listening (Wright & Neuman, 2017). The purposeful goal for all children when directed into vocabulary learning is the ability to foster reading goals in comprehension, word recognition, and other components of reading.

Moreover, comprehension success is based on vocabulary knowledge. In a study conducted by Hemphill & Tivnan (2008) explored the imperative counterparts of vocabulary and literacy in high-poverty schools. Their participants were of different ethnicities and races of impoverished schools ranging from the grades 1-3. Overall, they had found that vocabulary is the greatest language predictor compared to phonological

awareness and syntax in a child's comprehension of a story. Both phonological awareness and syntax are important when a reader begins to decode a text. However, after a child decodes a word and does not recognize it from one's vocabulary they will not be able to decipher its meaning (Goldstien, Ziolkowski, Bojczyk, Marty, Schneider, Harpring, & Haring, 2017). Specifically, a child's receptive vocabulary created patterns of literacy growth and without it contributed to the declining comprehensive scores. All in all, comprehension is assessed throughout a child's educational experiences. Without the proper pre-exposures to vocabulary and/or the prior knowledge vocabulary that a child needs to understand a text they will struggle greatly in comprehending future stories as they move through each grade level.

Vocabulary & Language Instruction Connections

Vocabulary and language instruction is heavily integrated when teaching EL (English Learning) students. EL students are a popular sub-group of students who display a shortage of vocabulary acquisition and struggle to learn tier 2 content vocabulary words. EL students undergo learning English as a second language with the support from academic exposure and academic vocabulary in their first language. Like native English speakers, many EL learners live in poverty and have limited pre-exposure to academic experiences. In order to promote academic vocabulary acquisition in English, many ELL teachers utilize language-based instructional strategies to fill academic vocabulary gaps and experiences.

For many students, vocabulary is built upon making connections between past learned concepts and new concepts. Having background knowledge and past experiences

is a vital piece for learning to occur (Rumelhart, 1980; Eschavarria, Vogt & Short, 2017). Vocabulary is critical for any learner in order to make gains in academic achievement (Nagy & Townsend, 2012; Townsend, 2015). There is no surprise that within our educational system, vocabulary is taught purposefully with intentionality, direct instruction, and heavily researched instructional strategies (Sibold, 2011). Vocabulary researchers share that multiple combinations of language experiences within vocabulary will be meaningful in the development of understanding new vocabulary terms (Graves et al. 2013).

Within each classroom there are profound differences in vocabulary knowledge among learners in a classroom due to ability and socioeconomic groups (Beck, McKewon, and Kucan, 2002; Sibold, 2011). Students with smaller vocabularies are at a greater disadvantage in their academic achievement which becomes the main barrier in reading comprehension (Sibold, 2011; Newton, Padlak & Rasinski, 2008). Thus, gathering more information on how to bridge a linguistic gap of word knowledge and academic vocabulary will help educators to make more of a movement towards academic achievement.

McIntyre, Kyle, Chen, Munoz, & Beldon (2010) conducted a study to examine ELL students' reading achievement in teachers' classrooms who were professionally trained in implementing the SIOP model. Students, Kindergarten through 5th grade, were within the population sample. McIntyre et. al (2010) results showed that students who had teachers well versed in the SIOP model benefited significantly more than students who were not served by the model in pretests and posttests. However, there was not a

significant difference between students who were exposed to SIOP instructional methods compared to students who were not in the California Test of Basic Skills (State assessment) performed in areas of Math, Reading, and Language testing components.

Moverover, Mclntyre et. al (2010) study can offer an understanding of how language strategies can support students who have limited English language exposure to reading contexts. They found exploring language instructional strategies in smaller interlocking reading strands may create new power to understand how to continue promotion of growth in language development through literacy.

Language is integrated in several content areas throughout a students' general education experience. Pre-taught vocabulary words are visible in most content areas. As students continue through grade levels, academic specific vocabulary becomes more complex in content areas. Students need support in making connections with academic language in order to continue building their mental schema. Teachers will assess student learning and scaffold content and academic language in order for students to access the language objective (Krashen, 1986) . Making the lesson comprehensible for students will allow students to understand new concepts (Krashen, 1986).

Bergman (2011) specifically compared Eschavarria, Vogt, and Short (2017) SIOP model and science inquiry model to uncover relationships in addressing language development in science content. Bergman felt it was a teachers' critical role to address scientific vocabulary, especially for those who had a lack of exposure to scientific vocabulary such as EL students. Bergman found that Eschavarria, Vogt, and Short (2000) ELL instructional strategies addressed language that students needed in order to perform

academic objectives and state standards. It also fostered language usage opportunities in students' language fluency and constructive meaning through scientific academic language. Relatively, when teachers were implementing these specific language strategies they supported EL students while bridging language from prior experiences.

Within language instruction, students must be able to manipulate words and understand their meaning through various contexts. According to Adoniou (2013), Text structure, grammar and vocabulary choices are all made according to the purpose and audience of the text and all learners must develop skills that will make effective language choices if they are to succeed in the educational system. Evaluating word usage among its semantic and syntactic properties help students gain depth in word knowledge and language systems.

Filippini, Gerber, & Leafstedt (2012) conducted a study related to vocabulary growth through semantic and syntactic relationships. Filippini, Gerber, & Leafstedt (2012) focused on EL students as a targeting population due to their gap of word knowledge skills and vocabulary knowledge. Filippini, Gerber, & Leafstedt (2012) shared that teachers rarely highlight meaningful units of language (semantic features) among words being taught in a longer period of time. Thus using a phonological awareness intervention as dictated as vocabulary plus model, EL students were measured on their acquisition of word skills (decoding, morphological awareness, phonological awareness) and added vocabulary growth. Results indicated that when students received vocabulary plus instruction it allowed for growth in reading comprehension and skills.

EL Instructional Strategies

ELL instructional strategies are focused on language in the forms of four domains: reading, speaking, listening, and writing. These four domains are descriptive towards reception and productive language components. All domains consist of vocabulary acquisition of lexical and conceptual semantics and syntax: developing simple and complex sentence structure. Shaping reading content instruction around language development assumes intentions for linguistic application and development.

Through ELL instructional strategies, teachers will be influencing new language through semantic and syntactic properties. These linguistic components shape the way students understand and construct new and old language. These components are demonstrated through receptive and productive language skills. Students use syntactic and semantic properties to make connections to new vocabulary in order to put it in use within a structure to make meaning. Teachers should create multiple contexts for students to practice language in order for a new vocabulary term to be well understood and rehearsed. Syntax and semantics create partnerships within language, without support from one or another new vocabulary terms are not clearly expressed nor understood.

Within The SIOP model, Eschavarria, Vogt & Short (2000) share that teachers create a word consciousness environment adapted from Stahl and Naggy (2006) in which words are discovered, examined, and appreciated. Eschavarria, Vogt & Short acknowledge that the SIOP model embeds many vocabulary strategies that have already proven to be effective vocabulary instruction. These vocabulary strategies are then integrated in a series of activities where students can manipulate words through activities

that can promote academic vocabulary learning. Students should also personalize their word learning such using mnemonics and other structures that place meaning. Creating word walls and providing multiple sources of information can also add to student retention (Blachowicz & Fischer, 2000; Fisher & Fry, 2014).

In addition, making language meaningful is imperative when delivering vocabulary. Many curricular vocabulary terms are unfamiliar to students due to language constraints but also because prior experiences have not correlated with terms being learned (Campbell, 2012). Language immersed in context and true language interactions will personalize the new information (Campbell, 2012). Therefore creating background knowledge allows access for students to comprehend and retain the new vocabulary terms students are taught.

Several language instructional strategies make effective and meaningful relationships between new academic language and new experiences. The use of creating meaningful partnerships with words such as synonyms, rhyming, opposites, and ect. can be impactful in learning academic vocabulary (Buteau, Gerard & True, 2009). This instructional strategy promotes lexical semantic application. The linguistic study of words and their relationships with one another can create mental mapping. When a child learns to produce a new word, he/she must integrate it into an existing mental lexicon and then map it's connections (Goffman, 2017). Mental mapping creates new schemas that later can boost student's recall from memory. Several other researchers will promote the idea of lexical priming. Priming new vocabulary words will find commonalities within syntactic language structures (Hartsuiker & Bernolet, 2017). The use of repetition of

sentence structures coinciding with new vocabulary terms can create strong associations and link words into categories in parts of speech (Messenger, Branigan, McLean, & Sorace, 2012). Priming can be an effective strategy for students when asked to create a written language production in context (Pickering & Branigan, 1998).

Other strategies that advocate for language development are the usage of pictures. Pictures can be used in isolation or can be used in picture books to integrate the academic vocabulary while constructing meaning within the context that a student will come upon (Louie & Sierschynski, 2015; Buteau, Gerard & True, 2009). This strategy can be reversed to decompress language by having students first draw a picture of the new academic vocabulary words to construct their own thinking and personalized meaning of the word (Buteau, Gerard, True &2009). When students are drawing representations of words, they are experiencing semiotics. Students are creating a sign, symbol, or graphic for the academic vocabulary terms. Upon creating this graphic students are communicating their meaning of the word as well as creating word context through a picture. This particular strategy demonstrates how students create meaning while connecting symbols and/or pictures to construct a new mental schema to prior knowledge. Having students tell about their graphic will in turn prompt students to orally express the meaning of the academic vocabulary term and begin to place the term in a sentence structure as well (Uvaraj, Begum, Pavadai, 2011). Conversations that embed integration of a new academic language should be initiated within the classroom for vocabulary growth (Yahia & Sinatra, 2013).

All in all, vocabulary is learned when EL students can use context in sentences, acting words out, or engage in word play. These modes of learning academic language promote various gateways to contextual semantics rather than just word reading and defining a word (Yahia & Sinatra, 2013). Language demonstration through acting out and/or word play can meet the four domains addressed in language: speaking, reading, writing, and listening. These productive and receptive language domains interchangeably address vocabulary, syntactic, and semantic relationships. Constructing meaning for new academic language will interplay with language development and linguistic technicalities of semantics and syntax.

Conclusion

Children at various ages are exposed to language in multiple contexts by the world that surrounds them. However, language can be altered during the learning process by several impeding factors. Children born in poverty surroundings develop a much smaller vocabulary due to lack of personal experiences, exposure to academic enriched vocabulary, environmental stressors, parental influences, along with other factors caused by low socioeconomics. As poverty students attend school, they begin to fall behind academically compared to peers who belong to other socioeconomic groups. One of the struggling targeted areas of academics is reading comprehension. In order for students to clearly understand what is read, they will use prior experiences to connect new knowledge as well as vocabulary. However, without the capabilities of activating prior knowledge and learned vocabulary, students struggle in grasping new concepts as well as utilizing new academic vocabulary in context.

EL learners across the United States also attempt to learn new academic vocabulary in English as they connect prior experiences that may or may not have been acquired. EL learners encounter new academic vocabulary while needing instructional language supports to receive, produce, and construct new language in context. Although these students are learning a second language, they too struggle with activating prior knowledge due to cultural constraints and impoverished lifestyles as well as making connections with new academic vocabulary.

It is undeniable that language is at the root cause for the disruption in reading comprehension for EL learners and students from poverty households. More so, one can contest that vocabulary along with its linguistic properties, semantics and syntax, creates the divide between how and what students comprehend. However, language instructional strategies have been well researched to bridge this discrepancy. Language instructional strategies have linguistic properties that support reading, writing, speaking, and listening. Language instructional strategies along with scaffolds can meet students' linguistic needs to access and produce new vocabulary content.

CHAPTER THREE

Methodology

Participants

Classroom Demographics. Students are placed randomly at the beginning of the school year into appropriate grade level classrooms. Demographics of students are mixed by ability, race, and gender. All classrooms have students who participate through remote learning and in-class attendance. All classroom accrual populations are relatively equal by grade level. In addition, each classroom has an enrollment of students with various abilities in academics.

Number of Participants. The maximum accrual for this study is students ($N=179$) participating in the research in grades 3-5 at a midwestern school district. Each grade level population was divided into 3 sections. The total population in third grade is 46 students. Third grade had a cohort of two teachers in which classroom student population both had 23 students. Fourth grade had a cohort of three teachers. The total population in fourth grade is 68 students. Each fourth grade classroom resulted in subpopulations of 23, 23, and 22 students. Fifth grade had a cohort of three teachers. The total population in fifth grade is 63 students. Each fifth grade classroom resulted in subpopulations of 23, 21, and 19 students. All students are taught within their general education grade level classroom and assigned homeroom teacher.

Gender of Participants. Students in third grade have a total of 21 boys and 25 girls. Subpopulation of boys in each third grade class includes 11 and 10. Subpopulation of girls in each class includes 12 and 13. Students in fourth grade have a total of 40 boys and 28 girls. Subpopulation of boys in each 4th grade class includes 11, 14 and 15. The

subpopulation of girls in each 4th grade class is 12, 9, and 7. Students in fifth grade have a total of 38 boys and 25 girls. Subpopulation of boys in each fifth grade class includes 17, 11, and 10. Subpopulations of girls in each 5th grade class includes 6, 10, and 9.

Racial and Ethnic Origin. A diverse range of ethnic backgrounds create the population of students in third, fourth, and fifth grade. Ethnic background categories labeled by a midwestern school are Native American, African American/Black, Asian, Hispanic, White, and Biracial.

Free Reduced Lunch. The overall school population reports a total average of 66.96% of students who are served free and reduced lunches.

Special Education Participants. A midwestern school has an accrual population of 17.9% of students who have been identified as needing Individualized Education Plans. Within this requirement, there are various identifications that students meet in order to access special education services.

Gifted Participants. The overall accrual population for gifted and highly gifted students at a midwestern school is 7.1%. Students 3-5th grade identified as gifted make up 0.3% of Riley's accrual population of gifted students.

English Language Learners. English language proficiency levels 3, 4, & 5 ELL students will be participants. Lower language proficiency level students are not participants due to the school district's English Language Learner Model of Service, therefore these students are taught by an ELL assigned teacher during whole group reading. The midwestern school has an accrual population of 12.8% of ELL students

served building wide in all English language proficiency levels. 1.28% of this population will be represented in 3rd, 4th, & 5th grade as level 3, 4, or 5.

Instrumentation

A unit vocabulary assessment will be used in order to examine students' comprehension and production of lexical semantic and sentence syntax of academic vocabulary words. This assessment was created by a large midwestern school district. The assessment utilizes Wonders McGraw Hill curriculum and vocabulary terms. The assessment was created to assess students semantic and syntactic usage of vocabulary words.

Within the construction process of the assessment, the school district had formulated teams of specialists from the Reading Curriculum Department, Assessment and Evaluation Department, and a liaison group of 3-5 general education teachers to work together to create the unit vocabulary assessment. In the beginning of the assessment's development, the school district's reading curriculum supervisors asked teaching liaisons from different school buildings to pilot the unit vocabulary assessment in the school year of spring 2017-2018 for units 5 and 6. School buildings within the district range in socioeconomic, ethnicity, population, and student academic achievement differences. Teachers from differing building backgrounds were included within the pilot. The duration of the pilot lasted a total of 12 weeks with each unit consisting of 6 weeks. After each piloted unit, teachers then reported back with their students' vocabulary assessment scores. Then, the reading curriculum specialist, evaluation and assessment specialist, along with the liaison of teachers graded students assessments together. The team of

reading curriculum specialists and assessment and evaluation specialists within the district found common themes from the teacher's feedback of what went well and changes needed in order to create consistency within the assessment of measuring a students semantic and syntactic knowledge of academic vocabulary. Furthermore, they carefully examined data for the adjustments in the type of testing questions compared to student outcomes on semantic and syntactic vocabulary construction and usage. Through data, they had found the new assessment was necessary to properly assess students' development of semantic and syntactic construction of academic vocabulary words taught.

In addition, the writing team constructed the assessment as a ten question assessment in order to value student and teacher time in assessing. The school district stated that assessments should not impede students' learning time. Older assessment versions created a longer duration of time for testing. Therefore, a ten question assessment would have the proper amount of time for a student to take in order for teaching time to resume effectively.

The unit vocabulary assessment was reviewed again in fall 2019 - spring 2020. The district had invested in Dr. Anita L. Archer's explicit instruction model which entails delivering effective vocabulary instruction and students' production of vocabulary through written and oral expression. A new assessment was piloted. The assessment was very similar to the first being the first section, questions 1-8, using cloze questioning to measure students' semantic vocabulary acquisition. According to Sadeghi (2011), cloze questioning has been carefully examined and tested among several different researchers

since the 1980s. Cloze questioning is referred to in Spolsky's (2000) research trend as 'language testing'. Due to being used in a series of research designs of different researchers, a cloze test has acquired a reputation of being reliable and valid due to having strong correlations with other language administered tests. Cloze tests are consistent deletions of content words within sentence structures to measure high-order reading processing.

Section 2, questions 9 and 10, was piloted for a duration of two units during spring 2019- fall 2020. This pilot used the same Wonder McGraw Hill vocabulary terms as the previous assessment. Section 2 was written to show students' production of sentence syntax through power sentences. As a cohort of experts: Dr. Anita Archer, teachers from different buildings across the district, reading specialists, as well as evaluation and assessment specialists found common themes within the assessment. These assessment themes addressed student knowledge of semantics and sentence syntax of vocabulary terms learned throughout a unit.

Out of the common themes dissected, the assessment and evaluation department and curriculum reading specialists decided to place 15 words out of the 40 words taught within the given unit of the assessment because it gave an overview of what students have retained from the past 5 weeks. 15 vocabulary words were chosen to be placed in the word bank in order to give a range of choice for a ten question assessment. For this particular assessment, students would only have 5 words left over or not used during the test. The team had also chosen to use 15 vocabulary words on the assessment because the assessment would have three vocabulary terms within each five weeks out of one unit to

assess students' retention. The vocabulary terms selected from each week of the McGraw Hill reading curriculum fell into tier 2 or 3 category of vocabulary words. Tier 2 and 3 words are considered to be sophisticated vocabulary often used by mature language users typically above reading level but taught to create context in further academic studies (Sobolak, 2006).

Moreover, the assessment team wrote the assessment to measure a students' lexical semantic and sentence syntax production of academic vocabulary. In order to measure both linguistic skills in academic vocabulary, the vocabulary assessment was broken down into two sections. The first section of the vocabulary assessment contains questions 1-8 which was composed to measure lexical semantics. The construction of this section was created using cloze question procedure. Cloze question procedure allowed for measurement of a higher level thinking process of deciphering which vocabulary word correctly completed a sentence with meaning. Furthermore, cloze question procedure was chosen due to being highly researched within its properties and components of being a reliable student assessment that measures semantics (Bagheai & Ravand, 2019). With the development of this section, the writing team chose vocabulary words that had different parts of speech to support students' learning through identifying different syntactic properties through semantics. Each cloze sentence had been reproduced by the district in a way that mimicked language and contexts used within McGraw Hill Wonders reading curriculum. Therefore each grade level had language that was suited to their age development, reading development, as well as grade level supported background. In the process of each cloze question, students would have to choose the vocabulary word they

felt completed the sentence to construct semantic meaning. This was suitable for systematic investigations by teachers. Students could either construct the sentence correctly or not correctly by their processing of the semantic properties of the sentence and vocabulary. Therefore, teachers across the district in different school buildings giving the assessment would always have the same answer to each cloze question in section 1 of the vocabulary assessment based on the semantic meanings of the vocabulary word and its sentence construction.

The second part of the vocabulary assessment is questions 8 and 9 which measured a students' sentence syntax. This assessment had a previous evaluation in the 2017-2018 school year. The open ended question concept had delivered evidence of displaying student personalized knowledge. The assessment was composed of two questions which asked students to write a meaningful sentence. A rubric was developed to create consistency in grading the meaningful sentences that students produced. Students were taught how to produce meaningful sentences by embedding a dictionary definition, antonym, or example context clue into a sentence in order to show semantic value of a vocabulary assessment. During the evaluation of this assessment, the reading curriculum specialists and evaluation and assessment specialists confirmed with assessment data that many students had varying responses which were abnormal for an upper elementary grade level student to produce due to developmental linguistic capabilities. The assessment was proven to not mark developmental appropriateness in the production of semantic and sentence syntax later in 2019-2020 by Dr. Anita Archer. Due to a change in curriculum, student development of linguistic production of semantics

and syntax, and guidance of Dr. Anita Archer the unit vocabulary assessment rubric had a reconstruction to measure appropriately student's production of semantics and sentence syntax.

Dr. Archer has had a big impact on the midwestern district's instructional strategies through reading and writing. The recent pilot changed the process of how teachers assessed student's production of constructed sentence syntax. This section was built upon open ended question reasoning and procedures. Under Dr. Archer's guidance, the writing team has adopted Dr. Archer's (2011) explicit instruction for writing which has been adopted from her explicit instruction model. This model entails syntactic and semantic components in writing expression that align with how students construct sentences at their appropriate developmental age.

Within this section 2, students are to choose 2 words out of the 5 left from the word bank from section 1 to construct a sentence on their own to show semantic and syntactic properties of a vocabulary word. Questions 8 and 9 are labeled as power sentences by Dr. Archer and the school district. Power sentences allow teachers to assess students' own construct of words' conceptual semantic meanings. It also allowed teachers to assess the students' independent syntactic constructions which portrayed semantic features of a word. Each power sentence of section 2 has to be thoughtfully examined by their homeroom teacher using the power sentence rubric. The power sentence rubric was then created through the supervision of Dr. Anita Archer's research of how students produce sentences developmentally through oral and written expression. The power sentence rubric scales a students' semantic sentence syntax on 1 point or 0 points. A

student who receives 1 point on the rubric would have used the vocabulary term in a context driven sentence. Student sentence constructed context is broken into parts of language telling the who, what, how, why, when, and/or why. This context was used due to Dr. Anita Archer's research on development appropriate language production.

Through this structure of language, liaison teachers in grades 3-5, reading specialists, and assessment and evaluation specialists worked together to standardize scores that teachers will formulate from the unit vocabulary assessment rubric. During the pilot, teacher liaisons from different buildings in the district brought back student power sentences from grades 3-5. The assessment and evaluation specialists, reading curriculum specialists, and liaison teachers graded each students' sentence and then discussed the ideologies behind the score that was produced from the rubric.

In the end, a consensus was formed from the team of what a power sentence would have within its syntactic context in order for evidence of a passing 1 point score would be given. The rubric was then created to assess a student's knowledge of constructing a sentence with syntax while displaying semantic features of the vocabulary word. This was labeled as Vocabulary on the rubric. An importance of also creating a section to assess student usage of grammar was embedded into the rubric. This is labeled as G.U.M/ Grammar on the rubric. However, although grammar could be formally assessed, it did not carry weight within the power sentence scoring because the main focus was grading on student syntax construct of meaning of a vocabulary word.

Furthermore, in the rubric a reference was created below to help create consistency in scoring power sentences across the district. Examples of sentence syntax

in the context of a power sentence were written on the rubric for teachers to refer to when grading students. The reference entails examples of power sentences and examples of non-power sentences so that differentiation can occur. The example for a power sentence also mirrors the writing curriculum that is taught in grades 3-5. Students are shown the rubric during lessons to create consistency and knowledge in what a construction of a power sentence looks like and sounds like. Power sentences are necessary in the unit vocabulary assessment in order to evaluate a students' independent generation of thoughts through semantic and syntactic properties of an academic vocabulary words learned. Lastly, power sentences have been further evaluated by Dr. Anita Archer's other research along with open questioning responses.

| Scoring Power Sentences | | | |
|--|--|--|---|
| Vocabulary | | Grammar-Usage-Mechanics (not required) *This may be used as formative assessment for GUM* | |
| 0 points | 1 point | - | + |
| *Vocabulary word is not included in the sentence OR *Vocabulary word is not used correctly OR *Sentence lacks context clue <i>*Pointless sentence</i> <i>*Replacement sentence</i> <i>*Dictionary Sentence (copied from a source)</i> | *Vocabulary word is correctly used in a power sentence AND *Evidence of the word meaning shown through <i>context</i> | *Sentence does not begin with a capital letter *Sentence does not end with correct punctuation *Sentence is a fragment *Sentence is not grammatically correct | *Sentence begins with capital letters *Sentence ends with correct punctuation *Sentence is complete *Sentence is grammatically correct |

Figure 1.1 Power Sentence Rubric

Vocabulary Context in Power Sentences:

Examples:

- Today, I appreciated the librarian for helping me find a book at the library. (appreciate)
- Last night, I refused to touch the rattle snake in the desert. (refuse)
- Tomorrow, I will donate food to the shelter. (donate)

Non-examples:

- On Sunday, the day was splendid at church. (splendid)
- A month ago, I appreciated my summer camp teachers at the zoo. (appreciated)

** These are non-examples because it is difficult to determine the student's understanding of the vocabulary word. ***

The assessment and its entities are continually revisited as needed as curriculum and students' needs change. There are on-going meetings of validity and reliability between the assessment construction team as they are evaluated each year. The writing curriculum as well as reading curriculum continue the review process through the direction of Dr. Antia Archer and district superintendent.

Research Design Overview

This study is designed to evaluate the significance of low socioeconomic students' development in semantic and sentence syntax of academic vocabulary words through implementing ELL instructional strategies of the SIOP model. Teachers and students grades 3-5 are participants in this study. Teachers will be selected randomly out of a cohort of 3-5 teachers at a school building from a large midwestern district to implement the SIOP instructional strategies. Teachers who are implementing the ELL instructional strategies will be given 5 hours of professional development of the SIOP model by the researcher. These teachers will be the experimental group within the study. The remaining teachers in grades 3-5 will be in the control group which will perform instructional practices through their own teacher learning and through support knowledge from the midwestern's school district professional learning.

All teachers will use the vocabulary terms and materials provided by McGraw Hill Wonders reading curriculum during whole group vocabulary instruction. The experimental group will be teaching an additional 8-10 minutes of vocabulary instruction

during the whole group reading time on Wednesday, Thursday, and Friday of each week. Within this additional time, teachers will be implementing the SIOP model ELL instructional strategies as well as additional materials created by the researcher. Additional materials are created to use ELL instructional strategies and McGraw Hill Wonders reading curriculum for students to continue their learning of lexical semantics and sentence syntax. The study will last for one unit in unit 1 of McGraw Hill Wonders reading curriculum. One unit is equivalent to five weeks of teaching a unit's vocabulary terms and one week for a two day review period and 3 days of reading assessments. The vocabulary assessment will be given on day 2 of the assessment period of time in week 6 of unit 1.

Procedures

Control Group. The control of this study is one classroom out of each 3-5th grade level. These classrooms will be taught by their homeroom grade-level teachers. In this study one teacher from each grade level is chosen at random as part of the control group. Each teacher's implementation of vocabulary strategies are heavily influenced by the school district Curriculum Department and scripted through a lesson plan format provided by the school district.

Eight vocabulary terms will be taught provided by the adopted curriculum Wonders written by McGRAW HILL Publications each week out of a 5 week unit. Students will receive eight to ten minutes of instruction from teachers on Monday and Tuesday of each week in a whole group reading. Teachers will begin their lessons with introducing the weekly essential question which is a question to pose upon students

before reading that entails the topic of reading in their literature for the week. On Monday, Teachers will teach four vocabulary words. On Tuesday, teachers will teach the previous four vocabulary words and also teach the remaining four to make the weekly total of 8 vocabulary words taught. Teachers will be provided with picture vocabulary cards from the Wonders Curriculum. Before reviewing the definition, Teachers will familiarize students with each vocabulary word by having students say the word, tap syllables of the word, and say the word again. Next, direct instruction will be implemented as teachers read from the back of each vocabulary card. Each card will follow the three step cycle of:

1. Define: Vocabulary word definition was read to student
2. Example: A sentence using the example of the word was read to students
3. Ask: a posing question about the vocabulary word about application to real life or usage through antonym/synonym association. Students then will turn and talk with a partner to answer the question.

Students will be asked to complete independent work during a guided reading block of time of 45 minutes. This independent time will take place Monday-Friday. Students' independent work suggests writing power sentences independently, filling out graphic organizers independently with concepts: antonyms, synonyms, writing an example of the word, finding a picture of the word, and writing a definition of vocabulary terms independently. Much of the independent work is constructed on computers and will be turned into their teacher at the end of each week for possible feedback and review.

Power sentences will be taught through the writing curriculum. A compile of 5 lessons were taught at the beginning of each school year. Pacing of each of these lessons took one day of a 45 minute block of time. Lessons are composed in grades 3-5 around the same topics of:

- A power sentence is to show that you understand the meaning of a vocabulary word.
- Each sentence should begin with a capital and end with appropriate punctuation.
- Each sentence should make sense.
- Should include the who, what, when, where, why, and/or how
- Changing a vocabulary's word inflectional endings to meet the structure of a sentence.
- Using the usage of the vocabulary word in a sentence

Grade level slides differed by grade level appropriate development in semantic and syntactic understanding of constructing sentences. However, all students in grades 3-5 had the same expectations of sentence outcomes. All students are shown, practiced, and understood the grading rubric in which teachers were using to grade their completion of a meaningful sentence.

See Appendix B for Meaningful Sentence Rubric.

Experimental Group. Two teachers from each classroom in 4 & 5th grade will be chosen at random to take part in the experimental group. One teacher from 3rd grade will be chosen at random to take part in the experimental group as well. The same content in Wonders McGRAW Hill curriculum performed with the control group of this study will be taught in all experimental groups. However, within the experimental group, the

SIOP model as well as ELL instructional strategies will be implemented in each lesson in order to scaffold semantic and syntactic sentence construction.

Students will receive eight to ten minutes of instruction from teachers on Monday through Friday of each week in a whole group reading. Teachers will begin their lessons by introducing the weekly essential question which is a question to pose upon students before reading that entails the topic of reading in their literature for the week. Eight vocabulary terms will be taught provided by the adopted curriculum Wonders written by McGRAW HILL Publications each week out of a 5 week unit. These vocabulary words were taught using the same pacing guide as the control group. On Monday, Teachers taught four vocabulary words. On Tuesday, teachers reviewed the four previous vocabulary terms and taught the remaining 4 of the week. Teachers will be provided with picture vocabulary cards from the Wonders curriculum. Teachers will also be provided additional materials to fully execute the ELL instructional strategies within each lesson. These materials will be supporting pictures, videos, and graphic organizers, all found in outside sources but also approved by the school district through supplemental resources from the library and computer websites. Materials are listed in lesson plans and will be provided to teachers. Teachers will be expected to use the cycle of lesson plans for the entirety of the unit.

The lesson plans are formatted from the SIOP model. Each ELL instructional strategy is supported by The SIOP Model. Strategies that will be chosen have been integrated from the different categories of Metacognitive Strategies, Scaffolding,

Cognitive Learning Strategies, and Language Learning strategies from the SIOP models.

ELL instructional strategies that will be implemented are:

- Visuals/Relia
- Gestures
- Sentence stems
- Scaffolding
- Analyzing forms of English Words and Categorizing
- Language objectives

One strategy will be used each day of a five day week (Monday, Tuesday, Wednesday, Thursday, and Friday). These strategies have been chosen to support students with building prior knowledge, utilizing language functions, and creating syntactic and semantic structures. Lesson plans will be scripted with components of what teachers should demonstrate (I do), student and teacher do together (we do), and students practice independently (you do) in a gradually release scaffolding direct instruction process based off of Pearson and Gallagher (1983) model of “gradual release of responsibility”. This model of instructional scaffolding is aligned by the school district’s instructional plan design. However, SIOP is unique in the process of lesson plan scaffolding by utilizing EL instructional strategies and language development.

Like the control group, students will be asked to complete independent work during a guided reading block of time of 45 minutes. This independent time will take place Monday-Friday. Students' independent work suggests writing power sentences independently, filling out graphic organizers independently with concepts: antonyms,

synonyms, writing an example of the word, finding a picture of the word, and writing definition vocabulary terms independently. Much of the independent work was constructed on computers and turned into their teacher at the end of each week for possible feedback and review.

Experimental group students will also receive meaningful sentence instruction like the control group at the beginning of the school year. The same content and lesson designs constructed by the school district will be used. Therefore, power sentences will be taught through the writing curriculum and/or integrated through the whole group reading curriculum. A compile of 5 lessons were taught at the beginning of each school year. Pacing of each of these lessons took one day of a 45 minute block of time. Lessons are composed in grades 3-5 around the same topics of:

- A power sentence is to show that you understand the meaning of a vocabulary word.
- Each sentence should begin with a capital and end with appropriate punctuation.
- Each sentence should make sense.
- Each sentence should include a who, what, when, where, why and/or how
- Changing a vocabulary's word inflectional endings to meet the structure of a sentence.
- Using the usage of the vocabulary word in a sentence

Grade level slides differ by grade level appropriate development in semantic and syntactic understanding of constructing sentences. However, all students in grades 3-5 had the same expectations of sentence outcomes. All students are shown, practiced, and

understood the grading rubric in which teachers were using to grade their completion of a power sentence. See Appendix B for Meaningful Sentence Rubric.

Data Analysis/Collection

Lexical Semantics: Section A of the assessment contains questions 1-8 which will be used to measure lexical semantics. Each of these questions are worth 1 point, for a total of 8 possible points. Student scores could range 0-8 points. In order for students to attain 1 point per question, the student must select the correct vocabulary word out of a word bank of 40 vocabulary words and place it in the correct sentence to demonstrate knowledge of the word's meaning: lexical semantics. Students who select the incorrect word and place it within the context of a given sentence, will result in attaining a score of 0 points for each question. A sum of 8 points can be earned in this section.

Lexical semantics is measured by the use of lexicon, or written words from the word bank and words within the sentence structure. Students then used context clues driven by lexicon to construct meaning in order for students to place an academic vocabulary term in the correct sentence to create semantic meaning. Due to the lexical representation of the vocabulary words and the construct of the sentence to provide necessary word depth knowledge of taught vocabulary words meaning, this section is measuring lexical semantics students have acquired over the 5 weeks of vocabulary instruction.

Sentence Syntax: Section B of the assessment is questions 9 and 10 is students creating power sentences. Questions 9 and 10 require students to pick two words out of 7 terms that remain from a word bank that was not used to complete Section A. After

picking two academic vocabulary terms, students are required to write two power sentences. Power sentences in the midwestern school district are defined as constructing a sentence that has context clues to determine the meaning of an academic vocabulary word. Therefore, Section B will demonstrate students' semantic and syntactic sentence construction with an academic vocabulary word.

In order to measure Section B, teachers used a meaningful sentence rubric. The rubric is created by the school district's Literacy Curriculum Department. The rubric is formulated with two sections. Section 1: Vocabulary and Section 2: Grammar-Usage-Mechanics (which is not weighted for grading power sentences). For this study we will be focusing on Section 1: Vocabulary. In vocabulary students may score with 0 points or 1 point for each question. In order for students to get 1 point for a meaningful sentence they must demonstrate all of the following:

- Student uses the word correctly in a sentence
- Evidence of the student's knowledge of the word meaning through the context: definition, synonym, antonym or example.
- If definition is chosen: dictionary sentence that is original and includes context clues.

A total possible points for Section B that can be awarded is 2 points. A range of 0-2 points can be seen throughout students' assessments.

Lexical semantics and Sentence Syntax will be measured through this section. The students' fulfillment of utilizing words to create a pattern that will create a sentence ultimately leading to meaning without alarming obscurities in grammar will be

demonstrated as syntactic sentence construction. Lexical semantics is demonstrated when the sentence structure has created meaning for the chosen vocabulary word in written form. Furthermore a definitive meaning will be measured by utilizing parts of speech that create a complete sentence with the who, what, when, why, how, and/or what according to the school district.

In this study a posttest only equivalent groups design will be done. This study uses retrospective data. All vocabulary assessments were collected by homeroom teachers. Data was collected as an entirety where no individual students were recognized for assessment scores. Data was entered within a spreadsheet through Synergy, a district grading system spreadsheet. Data was then aggregated by grade level as well as subgroups to answer questions and hypotheses within the study.

Overarching Question: What is the effect of SIOP ELL instructional strategies for low socioeconomic students on lexical semantic and sentence syntax of academic vocabulary words.

The first portion, Section A, of the vocabulary assessment contains questions 1-8 which will be used to measure lexical semantics in research question 1.

Question 1: What is the effect of implementing SIOP ELL instructional strategies for low socioeconomic students on lexical semantics?

Research Question 1 shall be tested with the following hypothesis found in the matrix in Table 2.1 under Lexical Semantics. Hypotheses are broken into experimental and control subgroups that will be tested within the study. Listed under the subgroups is also the number of participants in the control and experimental group defined by n in

each subgroup. Control groups in lexical semantics and can be coded as CLS in the alternative and the null hypothesis of each subgroup. Experimental groups in lexical semantics can be coded as ELS in the alternative and the null hypothesis of each subgroup.

Table 2.1*Lexical Semantics Hypotheses and Analysis*

| <u>Lexical Semantics</u> | |
|--|--|
| <i>Overarching Alternative Hypothesis:</i> Students who receive SIOP ELL instructional strategies will score significantly higher in lexical semantics compared to those who did not receive SIOP ELL instruction. | |
| Alternative Hypotheses within Subgroups | |
| <i>Groups Tested</i> | <i>Alternative and Null Hypothesis Equation</i> |
| 3-5th Grade Students ELS (n=119) CLS (n=61) | Ha: $\bar{X}_{CLS} < \bar{X}_{ELS}$ Ho: $\bar{X}_{CLS} = \bar{X}_{ELS}$ |
| 3rd Grade Students ELS (n=42) CLS (n=23) | Ha: $\bar{X}_{CLS} < \bar{X}_{ELS}$ Ho: $\bar{X}_{CLS} = \bar{X}_{ELS}$ |
| 4th Grade Students ELS (n=37) CLS (n=19) | Ha: $\bar{X}_{CLS} < \bar{X}_{ELS}$ Ho: $\bar{X}_{CLS} = \bar{X}_{ELS}$ |
| 5th Grade Students ELS (n=39) CLS (n=29) | Ha: $\bar{X}_{CLS} < \bar{X}_{ELS}$ Ho: $\bar{X}_{CLS} = \bar{X}_{ELS}$ |

The second portion, Section B, of the vocabulary assessment contains questions 9 & 10 which will be used to measure lexical semantics and sentence syntax in question 2.

Question 2: What is the effect of implementing SIOP ELL instructional strategies for low socioeconomic students on sentence syntax?

Research Question 2 shall be tested with the following hypothesis found in the matrix under Table 2.2 Sentence Syntax. Hypotheses are broken into experimental and control subgroups that will be tested within the study. Listed under the subgroups is also the number of participants in the control and experimental group defined by n in each subgroup. Control groups in sentence syntax can be coded as CSS in the alternative and the null hypothesis of each subgroup. Experimental groups in lexical semantics can be coded as ESS in the alternative and the null hypothesis of each subgroup.

Table 2.2*Sentence Syntax Hypotheses and Analysis*

| Sentence Syntax | |
|--|--|
| <i>Overarching Alternative Hypothesis:</i> Students who receive SIOP ELL instructional strategies will score significantly higher in sentence syntax compared to those who did not receive SIOP ELL instruction. | |
| Alternative Hypotheses within Subgroups | |
| <i>Groups Tested</i> | <i>Alternative and Null Hypothesis Equation</i> |
| 3-5th Grade Students ESS (n=119) CSS (n=61) | Ha: $\bar{X}_{CSS} < \bar{X}_{ESS}$ Ho: $\bar{X}_{CSS} = \bar{X}_{ESS}$ |
| 3rd Grade Students ESS (n=42) CSS (n=23) | Ha: $\bar{X}_{CSS} < \bar{X}_{ESS}$ Ho: $\bar{X}_{CSS} = \bar{X}_{ESS}$ |
| 4th Grade Students ESS (n=37) CSS (n=19) | Ha: $\bar{X}_{CSS} < \bar{X}_{ESS}$ Ho: $\bar{X}_{CSS} = \bar{X}_{ESS}$ |
| 5th Grade Students ESS (n=39) CSS (n=29) | Ha: $\bar{X}_{CSS} < \bar{X}_{ESS}$ Ho: $\bar{X}_{CSS} = \bar{X}_{ESS}$ |

After, an independent t-test will be conducted to measure significant differences for each hypothesis in sentence syntax. The mean scores from each hypothesis will then be used to measure the significant difference between the control group and experimental group in sentence syntax. A significance of $\alpha=0.05$ will constitute a significant

difference between control groups and experimental groups within the hypotheses.

Results will be reported in a matrix in Chapter 4.

CHAPTER FOUR RESULTS

Purpose Statement

The purpose of this quantitative study is to analyze the effects of general education teachers' implementation of SIOP ELL instructional strategies and low socioeconomic students' development of lexical semantics and syntactic relationships with academic vocabulary words.

Student Participation

Each classroom within the study had a diversity population which entailed students from varied backgrounds of academic abilities, ethnicities, and gender. An accrual population of $n=100$ in 3-5th grade students participated within the study. All classroom accrual populations are relatively equal by grade level. However, participation received from students and parents varied among control groups and experimental groups. Each classroom had students who participated through remote learning and in-class attendance. Participation from each group is recorded in Table 3 which indicates students demographics.

Table 3
Participating Student Demographics

| | 3rd Grade | | 4th Grade | | 5th Grade | |
|------------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|
| | Experimental Group | Control Group | Experimental Group | Control Group | Experimental Group | Control Group |
| Total Population | <i>n</i> = 11 | <i>n</i> = 18 | <i>n</i> = 23 | <i>n</i> = 11 | <i>n</i> = 28 | <i>n</i> = 9 |
| Boys | <i>n</i> = 9 | <i>n</i> = 9 | <i>n</i> = 15 | <i>n</i> = 6 | <i>n</i> = 14 | <i>n</i> = 5 |
| Girls | <i>n</i> = 1 | <i>n</i> = 9 | <i>n</i> = 8 | <i>n</i> = 5 | <i>n</i> = 14 | <i>n</i> = 4 |
| IEP | <i>n</i> = 1 | <i>n</i> = 0 | <i>n</i> = 6 | <i>n</i> = 4 | <i>n</i> = 2 | <i>n</i> = 1 |
| ELL | <i>n</i> = 0 | <i>n</i> = 0 | <i>n</i> = 0 | <i>n</i> = 0 | <i>n</i> = 0 | <i>n</i> = 1 |
| Asian | <i>n</i> = 1 | <i>n</i> = 0 | <i>n</i> = 1 | <i>n</i> = 0 | <i>n</i> = 2 | <i>n</i> = 0 |
| African American | <i>n</i> = 2 | <i>n</i> = 4 | <i>n</i> = 1 | <i>n</i> = 1 | <i>n</i> = 2 | <i>n</i> = 1 |
| Hispanic | <i>n</i> = 0 | <i>n</i> = 0 | <i>n</i> = 2 | <i>n</i> = 2 | <i>n</i> = 4 | <i>n</i> = 1 |
| White | <i>n</i> = 6 | <i>n</i> = 12 | <i>n</i> = 16 | <i>n</i> = 8 | <i>n</i> = 13 | <i>n</i> = 6 |
| Biracial | <i>n</i> = 2 | <i>n</i> = 2 | <i>n</i> = 3 | <i>n</i> = 0 | <i>n</i> = 7 | <i>n</i> = 1 |
| Remote Learner | <i>n</i> = 3 | <i>n</i> = 5 | <i>n</i> = 6 | <i>n</i> = 2 | <i>n</i> = 5 | <i>n</i> = 4 |

Overarching Question: What is the effect of SIOP ELL instructional strategies for low socioeconomic students on lexical semantic and sentence syntax of academic vocabulary words.

Question 1: What is the effect of implementing SIOP ELL instructional strategies for low socioeconomic students on lexical semantics?

Student grade level subgroups are broken into experimental and control subgroups that were tested within the study. Control groups in lexical semantics can be coded as CLS in the alternative and the null hypothesis of each subgroup. Experimental groups in lexical semantics can be coded as ELS in the alternative and the null hypothesis of each subgroup. Listed under the subgroups is also the number of participants in the control and experimental group defined by n in each subgroup.

Analysis. An independent t test was used to evaluate each null hypothesis. Students who received ELL instructional strategies with their homeroom teacher structured by SIOP is coded as ELS. Students who received teachers' implementation of strategies formulated by their own knowledge and the school district's professional teacher development is coded as CLS. The following Hypothesis were tested within each grade levels: $H_a: \bar{X}_{CLS} < \bar{X}_{ELS}$ and $H_o: \bar{X}_{CLS} = \bar{X}_{ELS}$. A 0.05 alpha level was to measure the significance of each control and experimental subgroup of students. The alpha level was set to 0.05 in order to have critical means fall 5% outside of the null hypothesis to test as significant. Results are displayed in Table 3A from each subgroup of students in 3rd Grade. Results are displayed in Table 4A from each subgroup of students

in 4th grade. Results are displayed in Table 5A form each subgroup of students in 5th grade. Results are displayed in Table 6A form each subgroup of students in 3-5th grade. Means, standard deviations, and t-test values are displayed each Table.

Table 3A

3rd Grade Lexical Semantics

| | SD | M | <i>t</i> | |
|----------------------|------|------|----------|-------------|
| CLS <i>n</i> = 18 | 1.82 | 6.61 | | |
| ELS <i>n</i> = 11 | 0.79 | 7.27 | 0.26 | CLS vs. ELS |

Table 3A shares the lexical semantic post assessment between subgroups in 3rd grade. ELS (M=7.27, SD= 0.79) compared to the post test on 3rd grade CLS (M= 6.61, SD= 1.82) in measuring lexical semantics, ($t(17), = 1.37, p=0.26$) . Statistical analysis for students in subgroup ELS in 3rd grade did not show significance in student lexical vocabulary acquisition. The statistical effect in lexical vocabulary acquisition suggests that students did not make gains in vocabulary acquisition in lexical semantics during whole group reading instruction through implementation of ELL instructional strategies. Through statistical analysis, I fail to reject the null hypothesis of 3rd Grade Ho: \bar{X} CLS = \bar{X} ELS.

Table 4A*4th Grade Lexical Semantics*

| | SD | M | <i>t</i> | |
|----------------------|------|------|----------|----------------|
| CLS <i>n</i> = 11 | 0.81 | 7.36 | | |
| ELS <i>n</i> = 23 | 2.12 | 6.17 | .084 | CLS vs. ELS |

Table 4A shares the lexical semantic post assessment between subgroups in 4th grade. ELS (M= 6.17, SD= 2.12) compared to the post test on 4th grade CLS (M=7.36, SD= 0.81) in measuring lexical semantics, ($t(22), =-1.78, p= 0.84$) . Statistical analysis for students in subgroup ELS in 4th grade did not show significance in student lexical vocabulary acquisition. The statistical effect in lexical vocabulary acquisition suggests that students have not made gains in vocabulary acquisition in lexical semantics during whole group reading instruction through implementation of ELL instructional strategies. Through statistical analysis, I fail to reject the null hypothesis of 4th Grade $H_0: \bar{X}_{CLS} = \bar{X}_{ELS}$.

Table 5A*5th Grade Lexical Semantics*

| | SD | M | <i>t</i> | |
|----------------------|------|------|----------|----------------|
| CLS <i>n</i> = 9 | 2.11 | 4.78 | | |
| ELS <i>n</i> = 28 | 1.42 | 7.21 | 0.00035 | CLS vs. ELS |

Table 5A shares the lexical semantic post assessment between subgroups in 5th grade. ELS (M= 7.21, SD= 1.42) compared to the post test on 5th grade CLS (M= 4.78, SD=2.11) in measuring lexical semantics, ($t(27), =3.96, p < .00035$). Statistical analysis for students in subgroup ELS in 5th grade did show significance in student lexical vocabulary acquisition. The statistical effect in lexical vocabulary acquisition suggests that students have made gains in vocabulary acquisition in lexical semantics during whole group reading instruction through implementation of ELL instructional strategies. Through statistical analysis, I reject the null hypothesis of 5th Grade $H_0: \bar{X}_{CLS} = \bar{X}_{ELS}$.

Table 6A

3-5th Grade Lexical Semantics

| | SD | M | <i>t</i> | |
|----------------------|------|------|----------|----------------|
| CLS <i>n</i> = 38 | 1.90 | 6.40 | | |
| ELS <i>n</i> = 62 | 1.70 | 6.84 | 0.23 | CLS vs. ELS |

Table 6A shares the lexical semantic post assessment between subgroups in 3rd-5th grade. ELS (M= 6.84, SD=1.70) compared to the post test on 5th grade CLS (M=6.40, SD=1.90) in measuring lexical semantics, ($t(61), =1.21, p = .23$). Statistical analysis for students in subgroup ELS in 3rd-5th grade did not show significance in student lexical vocabulary acquisition. The statistical effect in lexical vocabulary acquisition suggests that students have not made gains in vocabulary acquisition in

lexical semantics during whole group reading instruction through implementation of ELL instructional strategies. Through statistical analysis, I fail to reject the null hypothesis of 3rd-5th Grade Ho: $\bar{X}_{CLS} = \bar{X}_{ELS}$.

Question 2: What is the effect of implementing SIOP ELL instructional strategies for low socioeconomic students on sentence syntax?

Student grade level subgroups are broken into experimental and control subgroups that were tested within the study. Control groups in sentence syntax can be coded as CSS in the alternative and the null hypothesis of each subgroup. Experimental groups in sentence syntax can be coded as ESS in the alternative and the null hypothesis of each subgroup. Listed under the subgroups is also the number of participants in the control and experimental group defined by n in each subgroup.

Analysis. An independent t test was used to evaluate each null hypothesis. Students who received ELL instructional strategies with their homeroom teacher structured by SIOP is coded as ESS. Students who received teachers' implementation of strategies formulated by their own knowledge and the midwestern school district's professional teacher development is coded as CSS. The following Hypothesis were tested within each grade levels: Ha: $\bar{X}_{CSS} < \bar{X}_{ESS}$ and Ho: $\bar{X}_{CSS} = \bar{X}_{ESS}$. A .05 alpha level was to measure the significance of each control and experimental subgroup of students. The alpha level was set to 0.05 in order to have critical means fall 5% outside of the null hypothesis to test as significant. Results are displayed in Table 3B from each subgroup of students in 3rd Grade. Results are displayed in Table 4B from each subgroup of students in 4th grade. Results are displayed in Table 5B from each subgroup of

students in 5th grade. Results are displayed in Table 6B form each subgroup of students in 3-5th grade. Means, standard deviations, and t-test values are displayed each Table.

Table 3B

3rd Grade Sentence Syntax

| | SD | M | <i>t</i> | |
|----------------------|------|------|----------|-------------|
| CSS <i>n</i> = 18 | 0.79 | 0.83 | | |
| ESS <i>n</i> = 11 | 0.87 | 0.82 | 0.96 | CSS vs. ESS |

Table 3B shares the sentence syntax post assessment between subgroups in 3rd grade. ESS (M= 0.82, SD=0.87) compared to the post test on 3rd grade CSS (M= 0.83, SD=0.79) in measuring sentence syntax, ($t(17) = -0.05, p=0.96$). Statistical analysis for students in subgroup ESS in 3rd grade did not show significance in student sentence syntax by writing power sentences. The statistical effect in sentence syntax vocabulary acquisition suggests that students have not made gains in vocabulary acquisition in sentence syntax during whole group reading instruction. Through statistical analysis, I fail to reject the null hypothesis of 3rd Grade $H_0: \bar{X}_{CSS} = \bar{X}_{ESS}$.

Table 4B

4th Grade Sentence Syntax

| | SD | M | <i>t</i> | |
|------------------------|------|------|----------|-------------|
| CSS <i>n</i> = 11 | 0.69 | 0.55 | | |
| ELSSC <i>n</i> = 23 | 0.78 | 0.83 | 0.32 | CSS vs. ESS |

Table 4B shares the lexical semantic and syntactic sentence construction post assessment between subgroups in 4th grade. ESS (M= 0.83, SD= 0.78) compared to the post test on 4th grade CSS (M= 0.55, SD=0.69) in measuring sentence syntax, ($t(22)$, = 1.02, $p=0.32$). Statistical analysis for students in subgroup ESS in 4th grade did not show significance in student sentence syntax by writing power sentences. The statistical effect in sentence syntax suggests that students have not made gains in vocabulary acquisition in sentence syntax during whole group reading instruction. Through statistical analysis, I fail to reject the null hypothesis of 4th Grade $H_0: \bar{X}_{CSS} = \bar{X}_{ESS}$.

Table 5B

5th Grade Sentence Syntax

| | SD | M | <i>t</i> | |
|----------------------|------|------|----------|-------------|
| CSS <i>n</i> = 10 | 0.44 | 0.22 | | |
| ESS <i>n</i> = 28 | 0.87 | 1.21 | 0.0015 | CSS vs. ESS |

Table 5b shares the lexical semantic and syntactic sentence construction post assessment between subgroups in 5th grade. ESS (M=1.21, SD=0.87) compared to the post test on 5th grade CSS (M=0.22, SD=0.44) in measuring sentence syntax, ($t(27)$, =3.45, $p<0.0015$). Statistical analysis for students in the subgroup ESS in 5th grade did show significance in student sentence syntax by writing power sentences. The statistical effect in sentence syntax suggests that students have made gains in vocabulary

acquisition in sentence syntax during whole group reading instruction. Through statistical analysis, I reject the null hypothesis of 5th Grade Ho: $\bar{X}_{CSS} = \bar{X}_{ESS}$.

Table 6B

3rd-5th Grade Sentence Syntax

| | SD | M | <i>t</i> | |
|----------------------|------|------|----------|-------------|
| CSS <i>n</i> = 38 | 0.71 | 0.60 | | |
| ESS <i>n</i> = 59 | 0.85 | 1.02 | 0.015 | CSS vs. ESS |

Table 6b shares the lexical semantic and syntactic sentence construction post assessment between subgroups in 3rd-5th grade. ESS (M= 1.02, SD=0.85) compared to the post test on 3rd-5th grade CSS (M=0.60, SD=0.71) in measuring sentence syntax, ($t(58) = 2.49, p < 0.015$). Statistical analysis for students in subgroup ESS in 3rd-5th grade did show significance in student sentence syntax by writing power sentences. The statistical effect in sentence syntax suggests that students have made gains in vocabulary acquisition in sentence syntax during whole group reading instruction. Through statistical analysis, I reject the null hypothesis of 3rd-5th grade Ho: $\bar{X}_{CSS} = \bar{X}_{ESS}$.

The results shared for students in 3rd and 4th grade suggests that general education students who attend a low socioeconomic status elementary school did not show significant differences of vocabulary acquisition in semantic vocabulary acquisition and sentence syntax through implementation of ELL instructional strategies from their homeroom teachers. In addition, in an accrual population 3rd-5th grade did not show significance in student lexical vocabulary acquisition. Therefore, no vocabulary

acquisition gains were impacted through ELL instructional strategies through the findings of this study.

However, students in 5th grade who attend a low socioeconomic status elementary school had made significant gains in lexical semantic vocabulary acquisition and sentence syntax through implementation of ELL instructional strategies from their homeroom teachers. Also, in an accrual population of 3-5th grade students made significant gains in lexical semantic and sentence syntax of vocabulary acquisition. In conclusion, ELL instructional strategies had the most impact on sentence syntax.

CHAPTER FIVE

DISCUSSION

Discussion

Language is the way in which we connect, communicate, and learn from each other. Understanding academic language in the school setting is how students unlock a gateway to learning. Schools challenge students everyday with different genres of reading and writing. These reading genres deliver new concepts that allow students to participate and engage with the world around them. In the beginning of schooling, students are integrated with content and academic language through play, short stories, and simplistic language. As students graduate each grade level over the years, the content, text, and academic language become rigorous and complex.

Making content comprehensible is one of the vital components that distinguishes the SIOP model from other instructional models. Academic content in fifth grade exposes students to several genres that entail challenging academic vocabulary terms that unlock the comprehension at a grade-level standard. Furthermore, the genres integrated into reading curriculums such as history, non-fiction, fables, and others entail specific background knowledge for students to fully evaluate and participate in the story's overall meaning. Background knowledge is learned throughout a students' years of exposure to topics and vocabulary. Students make connections in linguistic concepts to understand a text. Teachers who use sheltered instruction are able to support students using language scaffolds to frontload background knowledge to help students connect new information. The SIOP model analyzes the content of a topic and uses strategies to support students in

building academic vocabulary so that they can understand the content. Simplistic language is used at the beginning of lessons to give students a foundation of learning.

ELL instructional strategies within the SIOP model had the greatest impact on fifth grade students. In our educational system, we expect students at this age to already have the prior knowledge to link newly learned high-level content. Due to these assumptions, students are left behind in accessing text and participating in discussions about the topics they are immersed in. In my own experiences with teaching fifth grade students, I have noticed that many times students do not have background knowledge to draw upon. This leads students to be confused during class, they rarely participate, and overall they become further behind than their peers. Teaching social studies, science, expository text and other modes through literature is a very demanding process for both teacher and student. The bridge of understanding these complex genres is through academic language.

One complex topic within American history is the American Revolution. This topic could be introduced in a social studies classroom or through literature in whole group reading. The American Revolution has several themes integrated with academic vocabulary that must be examined in order to fully comprehend the content. Moreover, this topic is clearly an instructional topic, therefore it can be predicted that no initial conversations about this topic have been introduced in a social setting or in a student's home environment. In addition, fifth grade students would have no prior knowledge built from previous grade levels to connect new vocabulary with. The SIOP model allows these rigor topics to be broken down and scaffold through using several representations

of pictures, sentence stems, videos, repetition, and sentence scaffolds with simplistic language to initiate prior knowledge and word association between new academic vocabulary words. After ELL instructional methods, students would be able to be immersed in discussions as well as demonstrate their learning in a variety of ways.

Furthermore, schools expect students to quickly learn, process, and retain the new academic vocabulary words in a short period of time while drawing lexical semantics from text. In fifth grade students are expected to do more immediate independent tasks. The gradual release process is often lost and guided practice is scarce. The SIOP model embedded sheltered instruction through a lesson design that gives students teacher supported guidance that gradually releases responsibility to the student. This gradual release allows students to practice new academic language through the four language domains to increase their depth of understanding, processing, and retention. Practicing new academic vocabulary integrated in productive and receptive language helped students with creating meaning in syntactic structures for them later to identify in text and use in language production.

This leads me to believe that all students in fifth grade can benefit from the SIOP model. Teachers work tirelessly to make sure all students' needs are met in the classroom. They differentiate instruction in a variety of ways. Even through the implementation of various differentiation techniques, students who are considered in the lower third of the class get left behind. In my own observations, these students are usually students who are receiving other support such as special education, speech, as well as english as a second language. Moreover, each of these groups of students all can use language supports to

help them express their thoughts, scaffold content, and learn student strategies to help them in their language process. I believe that the ELL instructional strategies could help these students manipulate language to construct new meaning as well as produce a variety of work samples to share their ideas. The SIOP model would allow students to receive instruction that is tailored to their individual experiences in order to support them in gradual building of background knowledge and vocabulary. It would also support students in their readiness to respond by giving them example sentence structures. Overall, integrating the four language domains would be essential to supporting students in all speech and disabilities.

Schooling experiences in third and fourth grade also have rigorous content in which students are to discuss. However, these students have yet to experience tier 3 vocabulary words integrated in expanding literature modes. In my experience of teaching at these grade levels, academic vocabulary is still embedded in relatable content. Academic vocabulary is still comprehensible in tier 2 vocabulary terms using fiction and non-fiction content that is relatable to prior experience in earlier grade levels. Students may already have background knowledge to support content learned in the classroom. Within these grade levels, students begin to be introduced to independent work. Therefore, they are receiving direct instruction that supports scaffolds and gradual release processes.

In addition, the complexity of language that students are asked to produce are still at the beginning phases. In my experiences teachers begin teaching independent tasks of writing powerful sentences at a third grade level. Therefore, the developmental

differences between third, fourth, and fifth grade students relatively look different in their sentence structures as well as words chosen to express their thoughts. Students in third and fourth grade are still in an emerging phase of completion of a complex linguistic task where as a fifth grade student is considered to be at an intermediate level or even mastery at an elementary level. In third and fourth grade, the use of scaffolds and introductory language is used within the majority of lessons as students are introduced to new topics in both writing and reading.

The SIOP Model should be embedded in instruction with other content areas for learning to take place. Science, math, and social studies classes should integrate SIOP instructional strategies in order to help students comprehend content in the classroom. In my observations and teaching, math concepts ask students to produce explanations in the form of math talk to defend their answers or help guide others in their analysis. At a young age students are asked within the school districts to have math talk using simplistic language to describe their work. In upper elementary classes students begin learning math concepts of algebra, complex story problems, as well as fractions that require tier 2 & 3 academic language in order to process the new information. Using ELL Instructional strategies will implement student scaffolds to help make new math content comprehensible. It will also help deliver vocabulary in a sequential order to help students process, retain, and produce new language to explain their math thinking. Using sentence stems can help students begin a question or statement about math concepts as well as initiate math conversations using academic vocabulary language.

Science is another content area that has been considered by other researchers as a placement for the SIOP model. Researchers continue to evaluate student effects of teachers using the SIOP model in science instruction in academic vocabulary. Science is a content area where words are heavily dissected through morphology, phonology, and categories of lexical semantics. Words are associated by common prefixes, suffixes, and root words. The SIOP model scaffolds this robust language for students to carefully analyze its linguistic features to begin mapping commonalities between academic vocabulary. I believe that all grade levels would benefit from implementing ELL instructional strategies in science classrooms because at any grade level in science curriculum tier 3 words are manipulated and expressed through a variety of meaningful contexts. Without thorough understanding of academic language in science class students will not be able to engage in their learning.

Additionally, I believe that the SIOP instructional model must be integrated into classrooms with fidelity, proper professional development training, as well as delivered with several checks of understanding embedded in lessons. The SIOP instructional method is tailored to student groups needs. This model gives teachers the flexibility and the opportunity to teach at a pace that is student centered. As instruction is delivered through each lesson, student checks for understanding is at the very center of how lessons will develop. This development relies heavily on what background knowledge students have as well as their cultural backgrounds. So much of the content that is taught today in classrooms is quickly paced. The push to get students through as much content as possible doesn't give options for teachers to slow down and take time for students to fully

understand, process, and rehearse academic vocabulary. This is a vital piece to any and all learning. Therefore, we must find other measures as a vocabulary facilitator to introduce new academic language in meaningful ways in order to leave a lasting impression on students. The SIOP model supports this idea.

However, to my knowledge, I know some of the activities within the study may have been rushed in the classroom. This is due to teachers expressing their thoughts of fitting in extra time for cooperative learning structures and other activities that engage students in linguistic skills. However, little did they know that teaching the academic vocabulary was also a part of their introduction to the very lessons their students interacted with in the reading objectives of the day. The SIOP model should not have just been integrated into one section of the reading lesson but instead the whole reading lesson. The SIOP model also has many components that are complementary to other models of explicit instruction, researched vocabulary activities, as well as lesson designs that adopt scaffolding. Implementing ELL instruction in the classroom is a part of good instructional strategies teachers use to reach all students in the classroom.

Furthermore, One could argue that additional time of 30 minutes of vocabulary instruction greatly impacted the results of students' vocabulary acquisition. Although this could be an indicator of students' vocabulary acquisition, I believe it is not. In the experimental group, the students received an additional 30 minutes per week of direct instruction during the whole group reading period using the SIOP model. On the contrary, the control group received 20 minutes of direct instruction during the whole group reading period. In addition, the control group engaged with vocabulary activities during

guided reading instruction with teacher feedback. These activities added 30 minutes of vocabulary instruction to the control group's allotted time. Therefore, students in the control group and experimental group had 50 or more minutes of vocabulary exposure through whole group reading and other reading periods during the school day.

A study conducted by Nelson, Dole, Hosp & Hosp (2015) evaluated the amount of time teachers facilitate vocabulary instruction during a school day. They state within their study of upper elementary students that teachers spend 15%-20% of their instructional time teaching academic vocabulary. Nelson, Dole, Hosp & Hosp's findings are aligned with this study as both groups would have had 17% of vocabulary learning integrated within their reading periods of time. Nelson, Dole, Hosp & Hosp (2015) emphasize that the type of instruction along with linguistic skills taught in activities impacted students more greatly in their vocabulary comprehension. In other words, instructional strategies and taught student strategies are more impactful than time in vocabulary comprehension. Therefore, explicit direct instruction as well as the SIOP model should be noticed as the treatment between the control and experimental group of students. Thus, I believe this treatment is the defining factor in low socioeconomic student gains of academic vocabulary in lexical semantics and sentence syntax..

Moreover, teachers could have used more professional development over how to implement instructional strategies as well as how to deliver the instruction through SIOP. Although, teachers were given five hours of professional development training from myself, the researcher, there may have not been enough professional development in order for teachers to feel they have a well enough understanding of the SIOP model to

deliver the instruction with fidelity. According to Guskey (2000), successful professional development sessions are when teachers teach within their own classroom with a coach/supervisor. Therefore, it could have been more beneficial for teachers to have had myself, as the expert, to be integrated in the classroom for coaching during the implementation of ELL instructional strategies. More research could be conducted with an integrated approach with coaching and observing teachers' implementation of instructional strategies. This could also help with teachers implementing the SIOP model with fidelity.

Overall, I can conclude that ELL instructional strategies within the SIOP model have had an impact on low socioeconomic students' academic vocabulary acquisition. The greatest theme that arose from this study is that fifth grade students acquired lexical semantic and sentence syntax through the SIOP model. Furthermore, I believe that as students need to be taught using language strategies because they need language support to build background knowledge of rigorous content, language scaffolds to support complex language structures used in productive modes of expression, as well as implementation of activities that support the four language domains for understanding, processing, and retention of academic vocabulary terms. Using ELL instructional strategies within the SIOP model allows for content to be comprehensible in the general education classroom. ELL instructional strategies support students in connecting new vocabulary terms to prior knowledge a student has of other language contexts, words, and sentence syntax.

Further Research

The achievement gap continues to be one of the greatest topics in our educational system. Finding answers through research of how to close this alarming gap for all students and specifically those with low socioeconomic backgrounds will change the world's depth of knowledge and bring success to all students. Therefore, research in this particular topic must continue.

One particular need in continuing this research is integrating coaches and professional development into the classrooms to support teachers in their self-efficacy of executing ELL instructional strategies effectively with fidelity. According to Batt (2010), teachers are not prepared for the challenges linguistically diverse children need in order to reach success in their academics. Priming teachers to use language strategies such as those concentrated in ELL instructional strategies and the SIOP model, will take time, coaching, and professional development. The use of observations, coaching, and timely feedback could be greatly impactful to teachers and their implementation of these instructional strategies.

A calling for continuing research in extracting student populations would also be beneficial to the work of closing the achievement gap. Specifying student needs through student linguistic backgrounds could also allow educators to examine specifically how language strategies can support a diversity of students' academics. Additionally, gathering information about when students need linguistic appropriate scaffolds due to age and academic development could change how instruction is delivered in the

classroom. This could help educators in supporting students who are identified as SLI (speech language impairment) due to low socioeconomics.

Implications for Practice

The school district within this study has made equity practices to be a yearly district goal to meet the needs of all students. Within the new findings of this study, it would be beneficial for low-socioeconomic 3-5th grade teachers to execute ELL instructional strategies for students who are learning new academic vocabulary terms. This would be heavily connected in the idea of supporting low socioeconomic students in their process of understanding the lexical semantics and sentence syntax. ELL instructional strategies provided students the opportunity to create new mental schema for vocabulary terms they had already had the preexisting background knowledge to connect with. Additionally, ELL instructional strategies gave students repetition in the form of all productive and receptive language domains of speaking, reading, writing, and listening. In order to effectively foster ELL instructional strategies in the classroom, a variety of professional development should be considered.

Due to nonsignificant findings in 3-4th grade in lexical semantics, the district may find that teachers are implementing district suggested vocabulary strategies that support constructing prior knowledge while meeting the needs of low-socioeconomic third and fourth graders in lexical semantics.

However, this study recommends there should be focus on students' lexical semantics and sentence syntax in order for student success in vocabulary acquisition. As significant results showed that ELL instructional strategies did in fact help low

socioeconomic students with contextual writing in power sentences. Therefore, the district should have careful consideration in utilizing ELL instructional strategies during vocabulary lessons in order to specifically focus on lexical semantics & syntactic sentence construction. Also, the district should also consider professional development on the implementation of ELL instructional strategies in order for teachers to implement them with effective fidelity. All in all, district leaders should continue to adopt several effective teaching strategies for a variety of learners into classrooms. The thinking that only specific strategies work for a selected group of students is not true. Effective learning strategies for one subgroup of a student population may impact all students.

Implications for Policy

ESSA was developed to give school districts throughout the country the opportunity to continue to support students who have been identified as high-need students. School districts across the nation have worked to better understand students' needs and differentiate instruction to meet the needs of students. Based upon this study, school districts will want to continue to make progress in learning about students' linguistic acquisition through vocabulary development to further support students. Teachers implementing instructional strategies tailored to language development can have a connection with student vocabulary acquisition through lexical semantics & syntactic sentence construction. This could be a foreseeable development in how students comprehend the academic language in which they receive and produce each day at school. Therefore, researchers must be urged to continue analyzing the linguistic connections of a student's development through academic content.

Conclusion

The results of this study suggests that upper elementary students of low socioeconomic status had significant improvements in lexical semantics and sentence syntax through a teacher's implementation of ELL instructional strategies. Teachers of general education can utilize the SIOP model to carry out lesson designs to systematically deliver a model of gradual release through ELL instructional strategies. Implementing these strategies in a whole group direct instruction classroom can differentiate the linguistic needs of students in order to create new metal schemas for academic vocabulary while performing the task of sentence construction. ELL instructional strategies helped students to construct background knowledge of academic vocabulary contexts, categorize academic words and word parts to create sentence syntax, as well as personalize the learned academic vocabulary words' meaning in lexical semantics. Vocabulary is one of the basic components of language that unlocks comprehension in various academic contents and forms. It is important to continue to identify which evidence based practices have the most impact on student linguistic development in order to close the achievement gap of low socioeconomic status students.

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APPENDICES

APPENDIX A

UNIT VOCABULARY ASSESSMENTS

Grade 3, Unit 1 Vocabulary

| | | | | | |
|------------|-------------|--------|---------|---------|---------|
| ached | concentrate | pride | remind | symbols | admires |
| contribute | practicing | design | quality | clues | massive |

Complete the following eight sentences with words from above.

1. My piano teacher told me I would get better by _____ everyday.
2. I always forget my backpack, so my brother has to _____ me.
3. The _____ the police found helped them to solve the mystery.
4. Last night my stomach _____ after winning the hot dog eating contest.
5. My best friend _____ me for my great soccer skills.
6. I felt a lot of _____ when I finished my first chapter book.
7. The coat lasted a long time because it was made with _____ material.
8. Instead of paying money, my classmates and I are going to _____ canned foods to the charity.

Choose any 2 words from the bank. Write a power sentence for each word showing the meaning of the word in the sentence.

Grade 4, Unit 1 Vocabulary

| | | | |
|-------------|-----------|-----------|------------|
| gracious | hesitated | alter | accelerate |
| original | hazard | thrilling | innovative |
| desperately | funds | gravity | routine |

Here are 12 vocabulary words from Unit 1. Complete the following 8 sentences using the words provided.

1. This year our class is raising money, or _____ to pay for a field trip.
2. I _____ want the new video game that just came out.
3. Yesterday, the fallen tree in the street caused a _____ for driving.
4. Today in Science class we are doing an experiment to test _____ when a ball is dropped from a high place and falls to the ground.
5. This morning, we had to _____ our plans of playing outside when it suddenly started to rain.
6. Just now the girl walked to the edge of the pool but _____ before jumping in.
7. An _____ person is always coming up with new ideas.
8. Today I learned my bike will _____ too fast if I ride down that hill.

Choose any 2 words from the word bank. Write a power sentence for each word showing the meaning of the word in the sentence.

Grade 5, Unit 1 Vocabulary Assessment

| | | | |
|-----------|-------------|------------|---------|
| data | envisioned | distracted | scarce |
| drawback | captivated | devices | debris |
| encounter | navigate | accomplish | prosper |
| options | generations | afford | |

Here are 15 vocabulary words from Unit 1. Complete the following 8 sentences using the words provided.

1. I can _____ to buy a car if I get a loan from the bank.
2. _____ drivers are dangerous because they are not paying attention to the road.
3. The destructive storm last night blew a lot of _____ into our yard.
4. While walking in the woods, we had an _____ with a wild animal.
5. My imagination was _____ by breathtaking scenes in the 3-D movie I saw last week.
6. Teams of inventors have _____ people in the future using jet-packs to help them fly.
7. To write a research report, you must gather _____ from many sources.
8. Getting lost is a _____ of going on a hike without the right equipment.

With the remaining 7 words, choose 2 words and write a power sentence for each.

APPENDIX B

POWER SENTENCE RUBRIC

| Scoring Power Sentences | | | |
|--|--|--|---|
| Vocabulary | | Grammar-Usage-Mechanics (not required) *This may be used as formative assessment for GUM* | |
| 0 points | 1 point | - | + |
| *Vocabulary word is not included in the sentence OR *Vocabulary word is not used correctly OR *Sentence lacks context clue <i>*Pointless sentence</i> <i>*Replacement sentence</i> <i>*Dictionary Sentence (copied from a source)</i> | *Vocabulary word is correctly used in a power sentence AND *Evidence of the word meaning shown through <i>context</i> | *Sentence does not begin with a capital letter *Sentence does not end with correct punctuation *Sentence is a fragment *Sentence is not grammatically correct | *Sentence begins with capital letters *Sentence ends with correct punctuation *Sentence is complete *Sentence is grammatically correct |

Vocabulary Context in Power Sentences:**Examples:**

- Today, I appreciated the librarian for helping me find a book at the library. (appreciate)
- Last night, I refused to touch the rattle snake in the desert. (refuse)
- Tomorrow, I will donate food to the shelter. (donate)

Non-examples:

- On Sunday, the day was splendid at church. (splendid)
- A month ago, I appreciated my summer camp teachers at the zoo. (appreciated)

** These are non-examples because it is difficult to determine the student's understanding of the vocabulary word. ***

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