

ABSTRACT

Tiered Instruction Couched within the Five Block Schedule: An Alternative to the Sheltered Instruction Observation Protocol Model

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The purpose of this study was to examine the effectiveness of a model of instruction for English language learners that may serve as an alternative to the Sheltered Instruction Observation Protocol model. This potential alternative instructional model followed the tenets of tiered instruction couched within the Five Block Schedule. English language learners enrolled in English for Speakers of Other Languages I and II courses in two secondary schools participated in the study. For a period of six weeks, the participants in one school received instruction taught according to the tenets of the Sheltered Instruction Observation Protocol (control group) while the participants at the other school received tiered instruction couched within the Five Block Schedule (experimental group). Participants' English language proficiency at both schools was assessed using the Woodcock-Munoz Language Survey-Revised before and after this six week period and the scores were subjected to statistical analysis.

Results indicated that the control group did not make any significant gains in any of the facets of English proficiency assessed by the Woodcock-Munoz Language Survey-

Revised over the course of six weeks of instruction following the Sheltered Instruction Observation Protocol model. The experimental group made significant gains in all facets of English proficiency assessed by the Woodcock-Munoz Language Survey-Revised after six weeks of tiered instruction couched within the Five Block Schedule. A comparison of the control group and experimental group's gains in English proficiency revealed that the experimental group made significantly greater gains in the ability to identify letters and decode words, write, and follow directions in English as well as use English as the medium for content knowledge acquisition.

Tiered Instruction Couched within the Five Block Schedule: An Alternative to the
Sheltered Instruction Observation Protocol Model

by

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A Dissertation

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Submitted to the Graduate Faculty of
Baylor University in Partial Fulfillment of the
Requirements for the Degree
of
Doctor of Education

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May 2010

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ACKNOWLEDGMENTS

I wish to thank the many people who encouraged me and provided invaluable assistance as I wrote this dissertation.

First, I thank the administrators and teachers of Grapevine-Colleyville Independent School District for allowing me access to the high schools within which I conducted my research, giving me excellent advice, and providing ongoing encouragement. Ms. Jan Boomer, Dr. J. D. Hollingsworth, Dr. Judith Kelly, Ms. Kathy Tipton, Mrs. Patricia DeLima, Mr. Roger Alzamora, and Ms. Mary Wheeler are deserving of my utmost gratitude.

Next, the Curriculum and Instruction Department in the Baylor School of Education deserves recognition for guiding me through my coursework, advising me throughout my research, and encouraging me to complete my course of study. The completion of this dissertation would not have been possible without the patience and advice of my mentor Dr. Larry Browning. I am forever thankful for his guidance. Furthermore, I would like to thank Dr. Betty Conaway, Dr. Tony Talbert, Dr. Gretchen Swartz, and Dr. James Ellor for serving as members of my dissertation committee.

Finally, my family deserves acknowledgement. Thank you to my father for driving me countless times from Dallas to Waco to complete my prelims, orals, and dissertation consultations. Thank you to my mother who served as my mentor teacher as I planned learning activities for my classroom. Thank you to my husband, my best friend, whose encouragement sustained me throughout this process.

DEDICATION

For our precious Sprout, our light, our purpose

CHAPTER ONE

Introduction

As mandated by federal legislation and supreme court decisions, all United States school districts are required to offer courses specifically designed to meet the unique educational needs of English language learners (Bilingual Education Act, 1968, 1974; Equal Educational Opportunity Act, 1974; Lau vs. Nichols, 1974), to assess the progression of students' English language acquisition (Civil Rights Language Minority Regulations, 1980; Illinois vs. Gomez, 1983), and to report progress to regulatory government agencies (Casteñeda vs. Packard, 1981; Idaho vs. Migrant Council, 1981). With a political focus on accountability (No Child Left Behind, 2001), and the moral imperative of educational equity (Delpit, 1995; Dewey, 1922, 1966; Kozol, 1991, 2005; Ladsen-Billings, 1994; Nieto, 1996; Oakes, 1985; Olsen, 1997; Valenzuela, 1999), school leadership is continually challenged to improve the quality of programs for English language learners.

As if legal, political, and ethical imperatives were not cogent enough to warrant educator's urgency on behalf of English language learners, the consequence for failure to serve such unique students is high rates of attrition. According to U.S. Census Bureau (2003, 2005) data, English language learners are up to 70% more likely to drop out of high school. Schools cannot afford to provide *adequate* services. Instead, innovation is necessary in order to ensure that English language learners further their education, progress in their academic and formal skills, and therefore begin their adult lives with the same advantages as native-born individuals.

The state of Texas was one of the first in the nation to adopt educational standards and implement accountability measures in the form of the Texas Essential Knowledge and Skills (TEKS) and the Texas Assessment of Knowledge and Skills (TAKS), while paying special attention to English language learners. School districts across the state spent the better portion of a quarter century refining bilingual and English as a second language programs in order to uphold the academic rigor demanded by the state standards.

At the time of this study, larger school districts in north central Texas, such as Arlington Independent School District and Fort Worth Independent School District, had such great numbers of English language learners (Texas Education Agency, 2009e, 2009g) that they offered services on a grand scale with newcomer centers and content area courses disaggregated by proficiency levels (Arlington Independent School District, 2009; Fort Worth Independent School District, 2009). These measures proved moderately successful, as evidenced by the districts' continued modest improvements on students' performance on the Texas Assessment of Knowledge and Skills and graduation rates (Texas Education Agency, 2009a, 2009c).

Since smaller school districts, such as Birdville Independent School District and Grapevine-Colleyville Independent School District, served far fewer students at the time of this study, the comprehensive interventions of their larger counterparts were not warranted (Texas Education Agency, 2009f, 2009h). These smaller districts opted for a more reserved approach at intervention: sheltered instruction (Birdville Independent School District, 2009; Grapevine-Colleyville Independent School District, 2009).

Whereas sheltered instruction has been shown to be of great benefit for Birdville Independent School District and Grapevine-Colleyville Independent School District, as well as other practicing large and small districts (Calderon, 1990; Echevarria, Short, & Powers, 2006; McLeod, 1995; Slavin & Madden, 1998; Texas Education Agency, 2009b, 2009d), its application in smaller school districts was not without complication. In larger school districts, sheltered classes were further divided into such categories as English I for beginning level students, English I for intermediate level students, English I for advanced level students, and so on (Arlington Independent School District, 2009; Fort Worth Independent School District, 2009). On the other hand, smaller school districts were forced to place students into the same sheltered English I or English II classes regardless of their proficiency levels (Birdville Independent School District, 2009; Grapevine-Colleyville Independent School District, 2009). This created a two-fold conundrum for the teacher of a sheltered class within a smaller school district:

1. With multiple levels of English proficiency represented in the same room, how can students study the same content?
2. What degree of success can be achieved given this complication?

In order to answer these questions, the researcher examined sheltered instruction in Grapevine-Colleyville Independent School District, and two particular schools within the district, as representatives of this situation.

Statement of the Problem

Grapevine-Colleyville Independent School District is a suburban school district in north central Texas. Over the past 10 years, the district witnessed a shift in the demographics of the student body (Texas Education Agency, 1999, 2009h). The district

once served students from a relatively homogeneous socioeconomic and cultural background: Caucasian, upper-middle class (1999). Recent population and economic shifts in the area have changed the demographics of the student population. At the time of this study, the district served an increasingly heterogeneous student body (2009h). For the first time, Grapevine-Colleyville Independent School District had a significant proportion of students who were classified as “at-risk” due to socioeconomic status or limited English proficiency (2009h).

With a modest population of English language learners, Grapevine-Colleyville Independent School District’s secondary schools could neither offer newcomer centers nor employ a different teacher for each English proficiency level. Secondary students of all English proficiency levels enrolled in the same sheltered courses taught by educators specially trained in the Sheltered Instruction Observation Protocol, a procedure for lesson evaluation and an instructional model for teaching content while fostering second language development.

For the purpose of this study, Grapevine-Colleyville Independent School District’s two high schools were the foci of inquiry. At these two high schools, freshman and sophomore English language learners had all of their classes, sans electives, with specially-trained English as a second language teachers. Of utmost importance for such students was the English/language arts course, as English is the tool by which they acquired content knowledge in all other courses. This arrangement proved complicated. Despite being in the same sheltered classes, students could neither read the same story nor study the same vocabulary lists. Some students understood the academic language necessary to analyze a literary text while others did not even have the language skills

necessary to participate in a personal conversation. Regardless of the disparity, the curriculum was the same. Sheltered instruction following the Sheltered Instruction Observation Protocol model did not wholly suffice.

Two new interventions implemented at one school showed promise in ameliorating this situation: tiered instruction and the Five Block Schedule for English/language arts instruction. Over the course of the fall semester of the 2009-2010 academic year, the researcher conducted a quasi-experimental research study in order to evaluate the application and effectiveness of tiered instruction within the Five Block Schedule to her English for Speakers of Other Languages I and II classes. Specifically, the researcher compared the English language proficiency skills, as determined by participants' performance on the Woodcock-Muñoz Language Survey-Revised, of participants who received sheltered instruction following the Sheltered Instruction Observation Protocol model at School A (control group) to those participants who received tiered instruction within the Five Block Schedule at School B (experimental group).

Purpose

The purpose of this study was to examine the effectiveness of a secondary English/language arts course structured around the tenets of tiered instruction and the Five Block Schedule in an effort to reveal implications for effective programs for secondary English language learners.

Research Questions

1. What is the impact of instruction following the tenets of the Sheltered Instruction Observation Protocol on the specific abilities of English language learners enrolled in English for Speakers of Other Languages I & II (control group) as measured by the Woodcock-Muñoz Language Survey – Revised?
2. What is the impact of instruction following the tenets of the Sheltered Instruction Observation Protocol on the overall abilities of English language learners enrolled in English for Speakers of Other Languages I & II (control group) as measured by the Woodcock-Muñoz Language Survey – Revised?
3. What is the impact of tiered instruction couched within the Five Block Schedule on the specific abilities of English language learners enrolled in English for Speakers of Other Languages I & II (experimental group) as measured by the Woodcock-Muñoz Language Survey-Revised?
4. What is the impact of tiered instruction couched within the Five Block Schedule on the overall abilities of English language learners enrolled in English for Speakers of Other Languages I & II (experimental group) as measured by the Woodcock-Muñoz Language Survey-Revised?
5. Are the gains in student achievement for specific skills, as measured by the Woodcock Muñoz Language Survey – Revised, of English language learners enrolled in English for Speakers of Other Languages I & II receiving tiered instruction couched within the Five Block Schedule (experimental group) greater than that of English language learners enrolled in English for Speakers

of Other Languages I & II receiving instruction that follows the SIOP model (control group)?

6. Are the gains in overall student achievement, as measured by the Woodcock Muñoz Language Survey – Revised, of English language learners enrolled in English for Speakers of Other Languages I & II receiving tiered instruction couched within the Five Block Schedule (experimental group) greater than that of English language learners enrolled in English for Speakers of Other Languages I & II receiving instruction that follows the Sheltered Instruction Observation Protocol model (control group)?

Significance

Many other school districts in north central Texas face the challenge of meeting the needs of secondary English language learners within the context of sheltered courses, but without the luxury of grand scale English as a second language programs. Using tiered instruction within the Five Block Schedule may offer a solution for teachers of sheltered courses in which students of multiple proficiency levels matriculate.

Definition of Terms

1. *Language Acquisition* – Language acquisition is a natural, rules-driven process fostered by meaningful interactions with proficient speakers.
2. *Second Language Acquisition* – Second language acquisition is a sequential and hierarchical process of gaining fluency in a non-native language.

3. *English language learner* – The term “English Language Learner,” or ELL, refers to any individual who is learning English and for which English is not the native tongue.

4. *English Language Proficiency* – English language proficiency is where an English language learner falls on a progression of competencies. Learners progress from language proficiency in context embedded, undemanding communicative skills to context-reduced, demanding communicative skills.

5. *Basic Interpersonal Communication Skills* – Learners first acquire their Basic Interpersonal Communication Skills (BICS), a set of language skills that enable a speaker to converse comfortably and fluently in the target language.

6. *Cognitive-Academic Language Proficiency* – Cognitive-Academic Language Proficiency (CALP) refers to fluency in the technical, academic aspects of a language that enable an English language learner to use the target language as a means of acquiring new information.

7. *Sheltered Instruction Observation Protocol* – Sheltered Instruction Observation Protocol, or SIOP, is an assessment of the delivery of sheltered instruction. SIOP results are then used to encourage in incorporation of a model of sheltered instruction revolving around the analysis points of the protocol.

8. *Tiered instruction* – Developed for use in multiple ability classrooms, students receiving tiered instruction study the same concepts and strategies, with differentiated, or tiered, learning activities according to students’ levels readiness, interest, or learning profile.

9. *Five Block Schedule* – The Five-Block Schedule for English language arts instruction divides class time into five distinct blocks of instruction: word work, fluency, writing, comprehension strategy instruction, and small group differentiated instruction. This model was originally developed and applied to elementary literacy instruction.

Limitations

1. The study was confined to one school district in north central Texas.
2. The study took into consideration the implementation of tiered instruction within the Five Block Schedule in only one school.
3. The study did not incorporate elementary and middle schools.
4. All participants in the study hailed from economically disadvantaged households, a characteristic that has been linked to gaps in formal education, frequent absences, and increased attrition rates.
5. The majority of English language learners participating in the study were of Latin heritage and therefore Spanish speakers. Very few participants spoke languages of non-Latin roots.
6. Participants in the experimental group received treatment for a period of only six weeks.
7. The researcher was also the teacher to the treatment group.

Summary

An investigation of a novel blend tiered instruction following the Five Block Schedule may provide useful information for developing and evaluating existing

secondary language arts courses for English language learners within school districts where large-scale English as a second language program models are impractical.

CHAPTER TWO

Literature Review

In order to fully understand the intellectual processes involved in English language acquisition and therefore select appropriate methods to maximize student learning, an examination of first and second language acquisition, the process of learning to read and its relation to second language proficiency, program models of English language instruction and foreign language teaching methods, as well as methods proven successful in other disciplines is necessary.

Language Acquisition

First and second language acquisition are similar, yet distinct, processes. Since so much of second language acquisition is dependent upon a strong foundation in the first language, educators of English language learners must fully comprehend the nature of and relationship between both processes in order to prepare appropriate learning experiences for their students.

First Language Acquisition

According to the two schools of thought in linguistics, nativism and empiricism, language acquisition is a natural, rules-driven process fostered by meaningful exchanges with proficient speakers. Though nativists and empiricists do agree on the importance of social interaction as a pivotal contributor to language acquisition, some disagreement exists in terms of the nature of language (Chomsky, 1957, 1965; Snow & Ninio, 1999).

Nativists believe language acquisition occurs independently from other learning processes and can therefore be examined separately. Specifically, they hold that language acquisition is a natural process which unfolds for an individual as a result of her innate ability to acquire inherent knowledge of those features common to all languages and her continued interaction with proficient speakers. Every child is born equipped with the ability to acquire language utilizing an abstract mental structure referred to as the language acquisition device. This device is connected in theory to certain universal grammars which transcend cultural barriers and are apparent in every language system. Although aptly equipped, children cannot employ their innate propensity to learn language and their native understanding of common grammatical structures in the absence of meaningful interaction with proficient mentors. In other words, children have the capability to learn language and an innate understanding of basic syntax, both of which are employed to acquire language as a result of interaction with proficient speakers (Chomsky, 1957, 1965).

Converse to the nativist view, empiricists believe language acquisition occurs in conjunction with other learning processes such that it must be studied as one interconnected part of a myriad of simultaneous and symbiotic processes. Empiricists contribute the theory of social interactionism and the competition model of language development to our conceptualization of language acquisition. First, the theory of social interactionism highlights the important role of adults as they show children how to understand written and spoken messages and what constitutes acceptable responses within a given socio-cultural context. Language and cultural knowledge are inseparable insofar as acquiring language is also a means of determining cultural norms and practices

(Ninio & Snow, 1999). Next, the competition model details how complex syntactic phenomena result from efficiency-driven, linear computational systems. Syntax itself is a dynamic entity, influenced by a collective desire to communicate efficiently in contexts of never ending variety, and negotiated in conjunction with other mental processes (O'Grady, 1987). In sum, empiricists perceive language acquisition to be a logical, hierarchical progression facilitated by the learner's opportunities to use her accumulated skills naturally with proficient speakers within a given socio-cultural context.

Second Language Acquisition

Much like first language acquisition, second language acquisition is a sequential and hierarchical process of developing fluency in a non-native language that is governed by certain maxims.

Sequential and hierarchical process of developing fluency. The work of Freeman and Freeman (2001), as well as that of Cummins (1996), illustrates the sequential and hierarchical nature of second language acquisition. In their 2001 text *Between Worlds: Access to Second Language Acquisition*, Freeman and Freeman detail a five-stage model of second language acquisition. The stages include: Silent/Receptive or Preproductive, Early Production, Speech Emergence, Intermediate Language Proficiency, and Advanced Language Proficiency. Taken altogether, language learners progress through the stages in a span of five to seven years. Learners gradually move from understanding only a handful of words and phrases in the target language to being able to participate fully in communicative endeavors with native speakers.

Jim Cummins translates this learning progression to educational settings in his 1996 text, *Negotiating Identities: Education for Empowerment in a Diverse Society*, by describing how learners move through a progression of competencies in language skills of increasing complexity as they acquire a second language. Learners begin by mastering context-embedded, undemanding communicative skills before moving on to context-reduced, demanding communicative skills. Cummins defines two different second language capabilities: Basic Interpersonal Communication Skills and Cognitive Academic Language Proficiency. Basic Interpersonal Communication Skills, or BICS, enable speakers to converse comfortably and fluently in the target language. The BICS, however, are not enough to enable a second language learner to use the target language as a means of apprehending new information. For that task, they must develop fluency in technical, academic language, what Cummins dubs Cognitive Academic Language Proficiency or CALP. BICS precede the CALP. Often, native speakers erroneously make the assumption that second language learners who have mastered their BICS are capable of using their second language in academic settings to acquire content area knowledge.

Governed by certain maxims. Stephen Krashen's 1981 text, *Second Language Acquisition and Second Language Learning*, delineates the maxims that govern second language acquisition: the acquisition versus learning distinction, the monitor hypothesis, the natural order hypothesis, the affective filter, and the input hypothesis.

To begin, according to Krashen's (1981) acquisition versus learning distinction, there is a difference between learning and acquisition. Learning is the product of conscious participation in formal instruction. Acquisition, on the other hand, is the

product of meaningful and natural interaction with native speakers attained subconsciously as the learner strives to communicate for authentic purposes. Krashen advocates acquisition over learning as a more effective way of developing second language fluency.

Next, Krashen's (1981) monitor hypothesis postulates that two cognitive systems are at work when a speaker is formulating an utterance in a second language: the acquisition system and the learning system. The acquisition system initiates the utterance and the learning system edits the utterance for errors. The interplay between the two systems can either help or hinder a communicative endeavor. An overly eager speaker or one that is too concerned with precision may not produce a meaningful utterance. A careful balance between the acquisition and learning system is necessary for meaningful, natural communication in the second language.

Third, the natural order hypothesis states that acquisition of grammatical structures is orderly and predictable (Krashen, 1981). Learners progress in a hierarchical fashion despite age, first language, and conditions of exposure. Hence, the curriculum of a second language classroom should progress from the simple to the complex.

Furthermore, Krashen (1981) makes allowances for learner characteristics outside of the cognitive domain. He notes that *affective variables* play a facilitative, but non-causal role in second language acquisition. He collectively refers to such factors as motivation, self-confidence, self-image, and level of anxiety as the *affective filter*. So, a learner who is motivated to learn, has confidence in her language abilities, and feels comfortable within the learning environment is more apt to acquire a second language with greater ease than a learner for whom the converse is true.

Finally, Krashen's (1981) input hypothesis, complemented nicely by Swain and Lapkin's (1995) comprehensible output hypothesis, rounds out what current theorists believe about second language acquisition. Reminiscent of Vygotsky's zone of proximal development, the input hypothesis states that a language learner improves and progresses along the "natural order" of language development when she receives second language input that is one step beyond her current level of language proficiency. Krashen calls this phenomena *comprehensible input* or *i+1*. Swain and Lapkin extend this notion to a phenomenon they call *comprehensible output*. According to this hypothesis, language learners must be allowed to use their newly-acquired second language skills at a level in which they are competent. In order to progress, a second language learner needs planned language experiences that allow her to capitalize on her current level of proficiency while also requiring her to apply new skills in the context within which they are capable and apt to succeed.

Literacy and Language Proficiency

Since the focus of this study is the language arts classroom, a discussion of the competing conceptualizations of the reading process and their practical applications is appropriate. The same processes that apply to learning to read in a first language apply to building literacy in a second language. Historically, conventional wisdom regarding apposite literacy instruction has occupied a position along a spectrum with two extremes: highly structured programmatic literacy instruction on one end and flexible, holistic literacy instruction on the other end. The nature of the dialogue regarding literacy instruction has run the gamut between these two extremes leaving mainstream students and English language learners alike subject to the latest swing of the pendulum.

Learning to Read

Depending on the orientation of the theorists describing the process, learning to read has been labeled a bottom-up, top-down, and interactive endeavor. Theory naturally leads to practice. Hence, an examination of each theoretical orientation and literacy program following the tenets of said orientation is in order.

Bottom-Up

Theoretical overview. A bottom-up model of the reading process emphasizes a single direction, part-to-whole processing of a text as evidenced by observable outcomes. Meaning is the end result of associating graphemes with phonemes, blending phonemes into words, combining words into sentences, and stringing sentences together into one cohesive message. The message lies within the text itself; it is a puzzle the reader must solve. The bottom-up perspective evolved as natural result of the work of political commentators, educational researchers, and linguists.

A discussion about the nature of the process of learning to read began in earnest in 1957 after Rudolph Flesch wrote a bombastic criticism of reading instruction in the United States. In *Why Johnny Can't Read*, Flesch noted the disparity between the reading proficiencies of students in the U.S. as compared to students in Britain and Germany. He also reported that *remedial reading* courses were strictly an American educational phenomenon. Flesch blamed lower reading proficiency on the absence of disciplined, systematic reading instruction in American schools. He discovered that teachers were instructing students to recognize whole words rather than learning how to break words into letters and sounds. In his opinion, to use methods such as lip reading

and basic phonics would be to patronize the child, who the reigning educational philosophy regarded as merely a small adult. Without the ability to decode a word by relying on letter-sound correspondences, children's only strategy to employ when encountering an unknown word was to make a guess based upon how the word looks. Hence, the gap between students' ability to comprehend oral language and their ability to comprehend written language could be as wide as 90%. Teachers found a litany of excuses, ranging from physical impairments to poor home environment, to explain away the problem rather than change their instructional practices. Left unchecked, Flesch believed this problem could leave the U.S. at a decided disadvantage compared to other industrialized countries. The launch of Sputnik further fueled national concern about public education. Hence, educational stake-holders began a national debate over the exact nature of the process of learning to read and its implications for instruction in public schools.

Jeanne Chall (1967, 1983) became an advocate of direct, systematic instruction in reading when she synthesized the research endeavors of the first half of the 20th century in an effort to end the debate once and for all. From 1962-1965, the Carnegie Corporation funded her review of existing research in literacy instruction, interviews with various stakeholders, and analysis of popular basal reading series used in the mid 20th century. Specifically, she compared results yielded from literacy instruction that was highly focused on phonemic awareness to more holistic approaches in order to determine which approach was most appropriate for fostering literacy development. Her analysis, published in *Learning to Read: The Great Debate* (1967), argued the merits of literacy instruction rooted in the *conventional wisdom*; that reading for meaning occurs from the

start, that decoding skills are important, that language cuing systems should be taught explicitly, and that instruction in site words provides students a base upon which they can build their vocabularies. Several years later, Chall published *Stages of Reading Development* (1983), further detailing her belief that reading is a developmental process that progresses from pre-reading behaviors, initial decoding, and fluency to reading to learn, recognizing multiple viewpoints, and critical analysis. Moreover, holistic approaches, while helpful in fostering the ability to recognize irregular words, are not as effective as phonics-based instruction in fostering the development of skills necessary to transition to independent reading. Hence, the only responsible avenue to instruction is a skills-based curriculum heavily laden with drills and repetition.

Further research conducted from the bottom-up perspective by Leonard Bloomfield and C. L. Barnhart, Charles Fries, as well as Phillip Gough, seems to verify the perception that learning to read is a serial process involving the ability to decipher a hierarchy of written representations of oral language.

Leonard Bloomfield, a renowned linguist and C. L. Barnhart, an influential lexicographer, collaborated to produce the 1961 instructional text, *Let's Read: A Linguistic Approach*. Bloomfield focused much of his research on the rules and forms of language. His efforts led to the development of structural linguistics which in turn influenced much of the works of Noam Chomsky. Barnhart's labors centered on collecting American lexicography and cataloguing his findings in a series of dictionaries purposed for use by individuals of various levels of English language proficiency. Of particular note are his dictionaries aimed for use by children. *Let's Read* is an instructional method designed for teaching native English speakers to read that integrates Bloomfield's extensive

knowledge of language structure and Barnhart's ability to level the language of instruction according to complexity. Following the method, students progress through four steps. First, students must learn the names of the upper and lowercase letters of the alphabet. Next, students internalize the alphabetic principle that graphemes represent phonemes that can be blended together to make words. Third, phonemes represented by graphemes are blended together to make two- or three-letter words with built around the same onset or rime. Finally, students read easy short stories rife with repetition of decodable words, become familiarized with the common irregular words, and learn the irregular spelling of vowel sounds. All things considered, it is a linear method of instruction, strongly rooted in the behavioral tradition in its emphasis on building reading habits through highly structured lessons.

Charles Fries' 1962 book, *Linguistics in Reading*, postulates that children learn to read in much the same manner as they learn to speak: naturally and developmentally, progressing from the simple to the complex by engaging in activities aimed at building habitual responses to the stimuli found in written language. Fries describes the act of learning to read in terms of three distinct stages. During the transfer stage, students make the connection between oral and written language. Fries believed that fluent reading requires the development of habitual responses to specific patterns of graphic shapes. So, the second stage of learning to read, or productive stage, involves a large focus on decoding predictable texts of increasing difficulty. Automatic recognition of words finally progresses to the comprehension of sentences that in turn constitute a meaningful message. When students employ reading as a form for vicarious experience, they have arrived at the final or vivid imaginative stage.

Phillip Gough and Wesley A. Hoover present a model for the reading process (Hoover & Gough, 1990). According to this model, reading ability is dependent upon language comprehension and decoding ability. Language comprehension relies upon two factors: the reader's background knowledge and linguistic knowledge. The reader must have had meaningful experiences in her past related to the topic of the text and she must understand the phonology, syntax, and semantics employed by the author in the creation of the written message under examination. Decoding ability involves both cipher knowledge and lexical knowledge. Readers demonstrate cipher knowledge when they grasp the relationship between written and oral language and understand the general patterns followed when making words. Lexical knowledge follows cipher knowledge as it deals with all of the exceptions in written language, when words are spelled one way but pronounced in another. Both cipher and lexical knowledge are dependent upon the reader's phonemic awareness, knowledge of the alphabetic principle, letter knowledge, and concepts about print.

Key program characteristics. Proponents of the bottom-up reading model advocate a structured beginning literacy program that stresses phonemic awareness (Yopp 1992; Yopp & Yopp, 2000), word recognition (Adams & Huggins, 1985), direct instruction of sight words and high frequency words (Starrett, 2006), systematic development of comprehension skills (Garcia & Pearson 1990; Taylor, Pearson, Peterson & Rodriguez, 2003; Valencia & Pearson, 1986), as well as fluency (Kuhn & Schwanenflugel, 2006).

Examples. One of the most widely-used commercial programs following the tenets of bottom-up literacy acquisition is Reading Mastery, created by direct instruction devotee Siegfried Engelman. Reading Mastery involves a complete restructuring of literacy instruction for whole classes whether or not intense intervention is warranted for all students. The program was formerly the literacy portion of Direct Instruction System for Teaching Arithmetic and Reading, a rigid instructional system based upon the tenets of applied behavioral analysis and created for historically disadvantaged elementary school students in the 1970s. The method continued to gain recognition through the 1990s as one of many instructional packages studied in Project Follow Through. In its latest iteration, the program is available in two different packages: Reading Mastery Classic and Reading Mastery Plus. Reading Mastery Classic provides instructional guides for literacy lessons in kindergarten through third grade. Reading Mastery Plus extends the lessons from the Classic package through the sixth grade. Both programs of instruction in Reading Mastery follow a similar progression, otherwise known as the Scientific Research Associates Direct Instruction Curriculum: phonemic awareness and letter sound correspondence drills, repeated word and passage reading, vocabulary development, comprehension skills instruction, and extensive fluency practice. All lessons are leveled according to ability, fast-paced, highly scripted, and interactive. Students are placed in homogenous groups based upon their scores on a placement test before instruction begins (What Works Clearinghouse, 2008).

The overall effectiveness of Reading Mastery is a moot subject. Some studies suggest that the program yields positive results for general student populations (Adams & Englemann, 1996; Brenner et al., 2002; Bruton & Owen, 1988; Schwartz, 1974; What

Works Clearinghouse, 2007) as well as special populations including minorities (Sexton, 1989), children with mental retardation (Gersten & Maggs, 1982), and those from economically disadvantaged backgrounds (Cotton & Savard, 1982). However, just as many studies find the method to be either inconsequential (Kruder, 1990; Moseley, 1997; Traweek & Beringer, 1997; What Works Clearinghouse, 2007) or harmful (Bruton & Owen, 1988; Kugelmass, 1982) to literacy development.

Top-Down

Theoretical overview. In the top-down model of the reading process, the reader is the source of meaning for a text. She employs a variety of internal meaning-driven processes and makes assumptions about the import of the text in order to make sense of its message. Readers use decoding skills, such as identifying letters and words, only to confirm or deny their initial assumptions about the meaning of the text. To add further layering, reading is the result of a combination of factors: proper motivation, access to quality literature, many opportunities to read, focus on meaning-making, and instruction that helps students use meaning clues to pronounce unknown words (Dechant, 1991). The top-down model of the reading process is supported by research in linguistics, psycholinguistics, and cognitive psychology.

Linguist Noam Chomsky contributed two texts, written from the linguistic perspective, that influenced the conception of reading as a top-down process: *Syntactic Structures* (1957) and *Aspects of a Theory on Syntax* (1965). Chomsky contends that all people have an innate cognitive structure that enables them to acquire the language of the community into which they are born and raised. Chomsky calls this innate structure the

language acquisition device. The presence of this device explains how children can acquire complicated language systems so effortlessly. Next, Chomsky makes two other key observations. First, all literate societies use written language to represent oral language. Second, orthography is not represented in oral language. In other words, reading is both an observable and unobservable process in which the written word is inferior to the complexity of the spoken language it represents. A child can be observed reading aloud, expressing herself in writing, and answering comprehension questions about a passage. However, these outer expressions are only crude manifestations of the complex internal processes at work in the consciousness of the reader.

The research of psycholinguists Kenneth Goodman (1964, 2006) and Frank Smith (2003, 2004) emphasizes the active role of the reader in the interpretation of a given language's various cuing systems as she makes meaning out of print. Goodman describes the process of reading as a *psycholinguistic guessing game* to multifarious for orthographic analysis. Literacy development depends on the synchrony of the reader's ability to appropriately respond to the syntactic, semantic, and graphophonemic cuing systems of written language. In other words, the reader's comprehension of a text is not simply her ability to decode the words. Comprehension is wholly dependent on the reader's ability to attach appropriate meaning to the cues presented within the framework of the text. Indeed, Goodman found that increased fluency and comprehension are associated with preferential consideration to the context within which words appear over regard for their individual orthographic structure. Goodman's contemporary, psycholinguist Frank Smith, echoes the sentiment that reading is not simply an act of decoding. Rather, it is a matter of bringing meaning to the print. Smith describes reading

as a constructive process acquired naturally through experience not instruction. While becoming literate, children learn to take hints from four sources of information: orthography, syntax, semantics, and visuals.

Cognitive psychologist Jean Piaget (1955) contributes to the top-down model of the reading process insofar as his genetic epistemology informs educators as to how learners acquire new information. Movement from one stage of cognitive development to the next is dependent upon a learner's ability to incorporate new information into existing understandings or to modify existing understanding to accommodate for disequilibrium. Piaget uses the term schema to refer to knowledge structures in an individual's memory, a metaphor involving the existence of mental receptacles into which we deposit new information gained through experience. Over time, these receptacles store worlds of interconnected information. As previously stated, schemata are altered by two processes that occur naturally through meaningful interaction with a learner's environment: assimilation and accommodation. Assimilation involves incorporating new information into an existing conceptualization without alteration. Accommodation occurs when an existing conceptualization is not sufficient for explaining a new concept and said schemata must be altered to account for the dissonance of experience. In terms of reading, Piaget stresses the unseen, and ultimately more powerful, mental processes associated with reading. Making meaning out of a printed text is then a matter of cross-referencing the language encountered with existing mental structures as well as adding to or modifying those structures when appropriate. The reader is not simply translating the written text into the spoken word, but creating worlds within her mind (Inhelder & Piaget, 1958, 1964; Piaget & Inhelder, 1962).

Key program characteristics. Whole language is an instructional philosophy informed by the top-down perspective of the reading process ascribed to by educators when planning literacy experiences. In other words, whole language is not an instructional method, but rather an overarching ideology that informs practice. Whole language derives much of its identity from holism, a belief that the whole cannot be understood by simply analyzing its parts. In terms of literacy, one cannot break down the process of reading or the text itself into smaller chunks for the sake of analysis. Rather, the process must be regarded as too complex to be completely comprehensible. Furthermore, the whole text can be understood without complete comprehension of each individual word, sentence, and paragraph. In other words, readers do not have to recognize every word they encounter. Instead, meaning and grammatical cues help readers identify unknown words. The principal focus of instruction is to develop the ability to read cohesive messages (Gove, 1983).

Examples. The top-down model of the reading process cannot claim a commercial literacy program. However, the perspective does lend itself to several organized literacy activities including theme studies, process writing, and literature-based reading (Lamme & Beckett, 1992).

Thematic units may balance content from several disciplines (Lipson et al., 1993) or may be couched within one discipline (Schubert, 1993). Content is organized around an overarching theme in order to supply a clear focus, give students a rationale for participation, make interdisciplinary connections, spotlight the relationship between content and practice, and facilitate the development of integrated knowledge (Lipson, Valencia, Wilson, & Peters, 1993). Thematic units require the following carefully

selected components: a developmentally appropriate and engaging theme, a clear focus statement, objectives as stated in state and district curriculum, specific learning activities, and a list of the required resources (Rothlein & Meinbach, 1996).

Thematic instruction is associated with many positive educational outcomes. In comparison to traditional instruction, thematic instruction had been shown to elicit greater student engagement (Schubert & Melnick, 1997) and comprehension (Lawton, 1994; Yorks & Follo, 1993). In addition, thematic instruction has been proven beneficial to students with moderate learning disabilities (Hinnenkamp, 1991) as well as low reading abilities (Kettel & Douglas, 2003). However, thematic units are not without some criticism. Such endeavors require a considerable amount of effort from educators, the creators of most thematic units. Thematic units can be very cumbersome to create, and if not done properly, can result in a week long tribute to an idea rather than a theme (Lipson et al., 1993).

In process writing, writers follow a five stage progression in order to compose a text: prewriting, drafting, revising, editing, and publishing (Gardener & Johnson, 1997; Tompkins, 1990). Writers employ different composition strategies at each stage of the process. Prewriting involves the creation of a detailed plan for writing and may incorporate brainstorming ideas, free writing, and use of graphic organizers. When enough information is generated and organized, the writer enters into the drafting stage in which she writes the text for the initial time in the form of a rough draft. After completion of said draft, the writer is free to move on to the revising stage in which she may delete, add, or reorganize information in the text. During editing, the writer combs through her text to ensure proper use of writing conventions. Finally, the writer publishes

her text in the medium most appropriate for her subject and audience. It is important to note that the stages of the writing process are to be considered recursive rather than strictly sequential. For example, a writer may find that she must generate and organize further information for her text, a realization that brings her back to the prewriting stage of the process (Lipkewich & Mazurenko, 1999).

Research links process writing to positive results for both the general and special populations within the educational milieu. All students demonstrated greater learning (Supovitz & May, 2003), reported increased confidence and independence in writing (Jasmine & Weine, 2007), composed more detailed papers (Sherman & Lundquist, 2002), as well as exhibited significant gains in writing skills (Hertz & Heydenberk, 1997). Research also attests to benefits for students with special needs. Utilization of the writing process elicited increased writing performance for special education students (Fu & Shelton, 2007), English language learners (Souryasack & Lee, 2007), students with hearing impairment (Enns, Hall, Isaac, & MacDonald, 2007), and struggling readers (Furr, 2003). That said, process writing is not devoid of criticism or caveat. Adherence to the writing process can be hindered by gender stereotyping (Henkin, 1995) to the point that the practice may yield better results for female students, thereby leaving male students at a disadvantage (Allen, 2006). Furthermore, the original idea of process writing is lost in the quagmire of oversimplification (Power, 1996).

Literature-based instruction is that which incorporates the original works of celebrated authors as the medium through which literacy skills are learned and practiced (Harris & Hodges, 1995; Huck, 1977; Scharer, 1992; Tunnell & Jacobs, 1989). Students engage in authentic literacy activities that call them to interact with the text in a relevant

manner (Tunnell & Jacobs). The practice is guided by the principle that children acquire literacy skills as a result of meaningful interaction within a literature-rich environment (Cullinan, 1987). Characteristics of a literature-based curriculum include *high-quality* literature as the primary means of instruction, student choice in reading materials, as well as meaningful group interaction related to readings (Cullinan; Galda, Cullinan, & Strickland, 1993; Tompkins & McGee, 1993).

Research into literature-based literacy instruction garners both praise and caution. To begin, the practice is related to increased vocabulary, comprehension, and decoding skills for the mainstream population (Baghban, 1984; Dickenson & Smith, 1994; Sénéchal, Thomas, & Monker, 1995; Teale, 1987; Traw, 1998). Next, literature-based instruction correlates with better student attitudes toward reading (Friend, 1995; Goatley & Raphael, 1992; Morrow, 1992; Stewart, Paredes, Ross, & Lewis, 1996). Furthermore, research shows interaction with high quality literature is beneficial for English language learners (Chien, 2000; Nelson, 1996; Roser, Hoffman & Farest, 1990), *at-risk* students (Rafferty, Klimenko, & Holt-Reynolds, 1991; Wheelock, 2000), and other students with special needs (Phillips, 1990; Raphael, 1996). All accolades aside, researchers do caution educators who would attempt literature-based instruction. Delivery of such instruction can be problematic (Sadoski, Norton, Rodriquez, Nichols, & Gerla, 1998). In addition, the mere inclusion of *high-quality* literature within the language arts curriculum does not guarantee success in literacy acquisition. Educators must pair readings with quality interactions (Meyer, Wardrop, Stahl, & Linn, 1994).

Interactive

Theoretical overview. An interactive reading model attempts to reconcile the bottom-up and top-down models. According to the interactive viewpoint, the process of learning to read involves the ability to employ lower and higher level processes simultaneously or as needed in ever-increasing levels of depth and complexity (Carrell, Devine, & Eskey, 1988; Eskey & Grabe, 1988; Grabe, 1988; Samuels & Kamil, 1988). Reading is a multifarious interaction between the reader and the text that is dependent upon the reader's existing knowledge, the writer's purpose, the technical elements of the text, and the context within which the act of reading occurs (Dechant, 1991; Rumelhart, 1985). Rumelhart, Stanovich (1980), Anderson and Pearson (1984), as well as Pearson and Tierney (1984) offer models of reading commiserate with the interactive perspective.

To begin, according to Rumelhart's (1985) model, successful reading is the result of both perception and cognition. This model closely resembles the information processing model of learning. Graphic information enters through the Visual Information Store. Next, the Feature Extraction Device Feature filters the pertinent features of the text. Finally, the Pattern Synthesizer combines the textual information with existing lexical knowledge, semantic knowledge, orthographic knowledge, and syntactic knowledge in order to produce the most logical interpretation of the text.

Next, Stanovich (1980) offers the "Compensatory Model" in which readers rely on bottom-up and top-down processes simultaneously and alternatively depending on the reader's purpose for reading, motivation to engage in the task, and prior knowledge. This model helps explain why readers who are deficient in some bottom-up or top-down processes are still able to comprehend a text. When a reader encounters a text for which

their bottom-up processes are insufficient, they enter into the “compensatory mode.”

Whilst in this mode, the reader’s top-down processes fill in the gaps left by their paucities in the bottom-up processes. The converse is also true. In the instance that top-down processes prove inadequate, bottom-up processes compensate for the discrepancy. Hence, readers can and do employ lower and higher order processes, both in concert and singularly, as needed in the act of reading.

Third, Anderson and Pearson’s (1984) interactive model of reading highlights the integral role schemata have on comprehension. Schema theory posits that information stored within the brain is organized into interrelated structures known as schema. When encountering a new bit of information, a learner may either incorporate it into existing schema or alter said existing schema in order to accommodate for its unique features. Anderson and Pearson’s model presents comprehension as the result of the interaction between previous knowledge and encounters with novel information.

Finally, Pearson and Tierney (1984) emphasize the relationship between the writer and reader in their interactive model of the reading process. The text is the medium in which the reader and the writer work together to construct meaning. The writer composes under the assumption that the reader will assign meaning to the text. The reader approaches the text under the assumption that the writer has provided sufficient cues in the text for comprehension. Both the writer and the reader engage in an act of composition: the writer in the actual composition of the text and the reader in her interpretation of the author’s meaning.

Key program characteristics. An interactive reading program integrates the tenets of bottom-up (phonics) and top-down (whole language) instruction. The reader is taught decoding and comprehension strategies that call her to selectively use information from her prior knowledge, cues in the text, and the context within which the reading event occurs in order to construct meaning. The reader then uses these strategies at her discretion during reading (McCormick, 1988).

Some specific components that *may* be included in a reading program adhering to the interactional model of the reading process are reading readiness exercises, language experience activities, shared readings, thematic units, primer lessons, writing lessons for both process and form, as well as varied opportunities to develop fluency (Dechant, 1991).

Example. Reading Recovery is an additive intervention meant to supplement regular literacy instruction when appropriate. Rather than a complete reconfiguration of literacy instruction, Reading Recovery targets only the students in need of a boost in order to stay on grade level with their peers. The goal of the program is to decrease the overall number of students in the first years of primary school whose literacy skills are lagging behind those of their classmates. Reading Recovery is a short-term intervention, used only until the time when the tutee's reading level is back on grade. The typical intervention spans anywhere from twelve to twenty weeks and involves daily one-on-one lessons. In a typical lesson, a child tutee works with one specially trained adult tutor. Lesson content includes reading familiar books, rereading a book from the prior session, taking a running record, working with letters and words using manipulatives, putting the events of a story in order, as well as reading a new book (Clay, 1993).

Research into the effectiveness of Reading Recovery abound thereby serving as testament to its strengths. The program has been shown to decrease the costs of long term remedial reading intervention while increasing literacy performance over time (Rowe, 1995). Children who participate in Reading Recovery not only catch up with their peers by the end of the academic year and continue this parity throughout elementary school (Askew, Kaye, Frasier, Mobasher, Anderson, & Rodriguez, 2002; Briggs & Young, 2003; Brown, Denton, Kelly, & Neal, 1999; Schmidt & Gregory, 2005), but they can even surpass the reading proficiency of their peers who did not participate in the program (Moore & Wade, 1998; Pinnell, 1989). Reading Recovery has also been successful in raising the reading proficiencies of students in special populations including English language learners (Ashdown & Simic, 2000; Kelly, Gómez-Bellengé, Chen, & Schulz, 2008; Neal & Kelly, 1999). Accolades aside, the success of the program is highly dependent upon the tutor's ability to create positive reading and writing experiences as well as her predilection for appropriate feedback (Scull & Lo Bianco, 2008).

Connection between Literacy and Second Language Proficiency

Current research into the connection between literacy and second language acquisition suggests that the interactive instructional approach to teaching reading is preferable for language arts instruction of English language learners. Instruction must equip such students with the rudimentary skills necessary to decode a text in the target language while also providing them with an array of comprehension strategies to ensure the ability to grapple with the abstraction of written language. Elements of the bottom-up approach to teaching reading include basic phonics instruction (Carrell, Devine, & Eskey,

1988), examination of grammatical structures (Carrell, Devine & Eskey), direct and explicit comprehension instruction (Klinger & Vaughn, 1996), and intensive vocabulary instruction (Beck, McKeown, & Omanson, 1987; Carlo, August, & Snow, 2005; Fukkink & de Glopper, 1998; Swanborn & de Glopper, 1999). The top-down instructional approach is reflected in an emphasis on relevant, engaging, and linguistically appropriate texts for use by English language learners within the language arts classroom. Such texts may be read independently or in a group. Simply reading the materials is not sufficient. Students must engage in meaningful before, during, and after reading activities that call for the use of reading, writing, listening, and speaking skills in the target language (Eskey & Grabe, 1988).

Developing English Language Proficiency for English Language Learners

The bottom-up, top-down, and interactive approaches to literacy instruction target mainstream students. Educators specially trained to work with English language learners blend mainstream practices with others meant to facilitate second language acquisition within the context of specialized program featuring courses of instruction that employ unique teaching methods. In other words, the development of English language proficiency is approached at the programmatic level and the classroom level. It is important to understand how instructional services are provided to English language learners at both the programmatic and classroom level in order to understand how the focus of this study fits within a broader context.

Program Models

Program models vary according to the amount of native instruction used to develop English language proficiency. Programs that use native language include bilingual programs, developmental programs, and two-way immersion programs. Programs that do not include instruction in the native language include English as a second language programs and sheltered instruction programs.

Transitional Bilingual Education

Transitional bilingual programs employ students' first language as a means of keeping up with academic content while developing English language skills. The use of students' first language is then diminished as English skills develop. Once students have reached a relative level of English proficiency, they are *transitioned* into mainstream classes where they receive instruction solely in the target language (Calderon, 2001). The point at which this occurs varies from student to student, but occurs most commonly after two years (Gersten & Woodward, 1995). In early-exit transitional bilingual programs, students enter into the program during kindergarten or first grade and are then transitioned into regular classes in second or third grade. Students remain in the bilingual classes until such time as their English proficiency is at a level commiserate to that which is required to complete grade-level work in English (Calderon). On the other hand, late-exit bilingual programs maintain first language instruction even after proficiency in the target language is established. Students enter into such programs in kindergarten and first grade, but continue to receive bilingual instruction through the end of elementary school at which time students are mainstreamed into classes taught exclusively in English (Calderon).

Research into the effectiveness of transitional bilingual programs provides cause for concern. Despite evidence that other forms of bilingual education yield greater results in terms of academic achievement, (Rolstad, Mahoney, & Glass, 2005; Rossell, 1990; Saunders, 1999), the transitional bilingual program model continues to be the most common model implemented in elementary schools within the United States (Slavin, 1996). In fact, all students, high and low achievers alike, experience a stark decline in academic achievement in the first couple of years directly following their transition into English only instruction. After this initial bump, high achievers eventually rebound and find themselves back on grade level. Sadly, low achievers often widen the gap of academic achievement, falling further and further behind their grade-level peers year after year (Reese, Gallimore, & Guthrie, 2005).

Two-Way Immersion

Two-way immersion bilingual programs are differentiated from transitional bilingual programs in terms of the students served, the language of instruction, the time allotted for instruction in the minority language and English, as well as the goals of the program. Two-way bilingual programs serve both English language learners and native English speakers at the same time within the same class. Ideally, half of the class would be non-native speakers of English and half of the class would be native English speakers. Organizers allot equal instruction time for the use of minority students' native language and English. The goal of instruction is the development of high levels of proficiency and literacy in both languages, academic achievement that exceeds students' grade level, as well as positive multicultural attitudes. Ideally, enrollment in such programs spans the

entirety of students' time in elementary and secondary school (Howard, Sugarman, & Christian, 2003).

Two-way immersion programs prove beneficial for English language learners and native English speakers alike (Culatta, Reese, & Setzer, 2006). English language learners show increased academic achievement in writing and math in later grades while native English speakers show increased academic achievement in reading in later grades (Cobb, Vega, & Kronauge, 2006). Both English language learners and native English speakers exhibit higher self-esteem and tolerance for cultural difference (Ruiz, 1984). Such accolades are not without caveat. Native English speakers must account for no less than a third of the composition of the two-way immersion program in order to meet its intended goals (Gómez, Freeman, & Freeman, 2005). In addition, the results of the program may revert to those of remedial programs if administrators do not adhere to high standards of implementation (Alanis & Rodriguez, 2008).

English as a Second Language

English as a second language programs are conducted solely in English and are generally grammar-based, communication oriented, and content-driven. Implementation of said programs varies according to the grade level served. At the elementary school level, instruction in English is conducted in a pull-out program. At the secondary level, students learn English and core subject area content simultaneously in what is known as sheltered instruction (McKeon, 1987).

Pull-out programs. In pull-out English as a second language programs, students are literally pulled out of class and into a separate environment in which they receive

specialized instruction in English (McKeon, 1987). The teacher works with a heterogeneous group of students, who vary according to grade level, native language, and English proficiency (Ovando & Collier, 1998; Rennie, 1983). Grade-level content from core subject areas is neglected in favor of the forms and functions of written and spoken English (McKeon). Instructional sessions generally last between thirty and forty-five minutes (Ovando & Collier).

Though some instruction in English is preferable to none at all, the pull-out English as a second language program is purported to be the least effective model of intervention for English language learners. Critics of pull-out programs argue that students may miss valuable instructional time during their sessions with the English as a second language teacher (Duke & Mabbott, 2001; Mabbott & Strohl, 1992). Because English language learners are singled out and separated from their classes, they may develop a sense of isolation which can evolve into a feeling of helplessness that will negatively impact their academic achievement (Jama, 1992). All things considered, English language learners would be better served in a bilingual program in which they learn English and core subject area content in both their native language and English alongside other English language learners of the same grade-level (Escamilla & Cogburn-Escamilla, 1980; Seaman, 2000).

Sheltered instruction. Sheltered instruction is a term referring to a myriad of strategies for teaching English language learners mainstream grade level content while also fostering English language development. The classes are sheltered insofar as English language learners do not compete with their native English speaking peers. Sheltered instruction has two aims: providing access to grade level mainstream content

and promoting the development of English language proficiency (Freeman & Freeman, 1988).

The execution of sheltered instruction varies widely. To begin, it can be a three faceted endeavor; a combination of the tenets of bilingual education, immersion education, and content-based instruction. This hybrid allows students to learn content, acquire a second language, and refine their skills in their first language (Weinhouse, 1986). Next, programs using sheltered instruction can also be leveled according to English language proficiency and aimed at the English language learner's eventual placement in mainstream classes. These transitional programs teach content and foster English language development by using a diminishing ratio of native language to English according to student proficiency level (Krashen, 1985). Finally, sheltered instruction programs can teach content while developing English language skills without capitalizing on students' strengths in their native languages. In such programs, students attend sheltered content area courses, English as a second language courses, and regular elective courses (Schifini, 1985).

Specially-trained regular classroom teachers generally deliver sheltered instruction (Freeman & Freeman, 1988). The manner in which these specially trained educators provide sheltered instruction varies according to delivery, content, audience, and program model. Despite this, most lessons have some common grounds: thematic organization of course content, access to prior knowledge, address of context-specific vocabulary, interaction with peers, and use of comprehension strategies (Freeman & Freeman). Prior to instruction, educators often organize the content of the curriculum into thematic units (Freeman & Freeman). Next, sheltered lessons tend to begin with an

introductory activity that has a two-fold purpose: assessment of students' current understandings of a topic and activation of students' prior knowledge. During the introduction, educators take time to clearly define all language and content to be used in the lesson. Often vocabulary is controlled and modified (Parker, 1985). After the introduction, students engage in meaningful, interactive learning activities with frequent comprehension checks (Kagan, 1985; Freeman & Freeman). Finally, students also learn various comprehension strategies, such as mapping and note-taking (Langer & Applebee, 1985).

The Sheltered Observation Instruction Protocol, or SIOP, is a formalized machination of sheltered instruction that is practiced in classrooms throughout the United States. SIOP is a method of teaching both content and language to English language learners within the same context. The method has two goals: to expose English language learners to appropriate grade-level content and to facilitate the development of English language proficiency (Echevarria, Vogt, & Short, 2000).

Instruction following the SIOP model consists of eight components: preparation, building background, comprehensible input, specialized strategies for both teacher and student, interaction, practice/application, lesson delivery, and review/assessment. As a teacher prepares for instruction, she chooses appropriate content and language objectives for students' levels of proficiency while maximizing the resources available. When building background, a teacher helps students establish a link between lesson content and existing knowledge related to the topic of instruction. Input of a lesson must be comprehensible insofar as the language of instruction should be appropriate for the language proficiency of the students, all academic tasks are explained adequately, and an

array of techniques are employed to ensure clarity. Teachers employ instructional strategies that allow for scaffolding and illicit student response in a variety of forms. Students learn several different comprehension strategies to employ as they attempt to make sense of lesson content. Interaction is frequent, supports lesson objectives, allots adequate wait time for student response, and provides generous opportunities for elucidation of lesson concepts. During practice or application activities, students often work in groups with hands-on materials. Support for learning objectives, high levels of student engagement, and appropriate pacing all characterize quality lesson delivery. Lesson review and assessment require thorough review of pivotal vocabulary and content, frequent and meaningful feedback, as well as evaluation of student learning (Echevarria, Vogt, & Short, 2000).

Research into the effectiveness of instruction following the SIOP model appears to paint a rosy picture. In terms of the intended audience of instruction, SIOP works well for English language learners with gaps in their formal education (DeCapua, Smathers, & Tang, 2007). Studies exploring the effect of instruction that follows the SIOP model on academic achievement cite student improvements in mathematics (Friend, Most & McCrary, 2009), language arts (Echevarria, Short, & Powers, 2006; Friend, Most & McCrary), and science (Whittier & Robinson, 2007). However, the true effects of SIOP may still be debatable. The What Works Clearinghouse (2009) examined eight research studies of the SIOP model and deemed the results inconclusive due to such problems as lack of control groups, limited amount of variables, as well as incomplete explanation of research design.

Instructional Models and Approaches for Teaching a Second Language

Instructional models used within the aforementioned programs for English language learners began as methods for use in courses of foreign language instruction. Each method aims to instill competency in a target language such as French, Spanish, or German. Given that English is indeed a foreign language to English language learners, educators adopted or modified many of foreign language teaching methods used with mainstream students. Indeed, many elements of historical foreign language instruction are echoed in current instructional practice. As such, examination of these methods is advantageous.

Methods for teaching a second language vary according to the focus of instruction. Instruction may center on the grammatical structures of the target language, the precision of oral language production, the use of movement as an instructional medium, the natural facilitation of second language acquisition, or the balance of language form and function.

Focus on Grammar

The grammar translation method and cognitive code learning both focus on technical aspects of the target language.

The grammar translation method is a derivation of the classical method employed since the 18th century to teach Latin. Since the goal of this method is accurate translation of written text from the native language to the target language, instruction is delivered in the learners' native language and focuses on the explicit teaching of grammar and the memorization of semantically unrelated word lists. Lessons generally contain the following progression: memorization of a lengthy vocabulary list, extensive explanation

of grammar rules by the teacher, as well as grammar drills and passage translation. At first, translations are simple in nature. Students translate sentences and short passages into the target language. As the lessons progress, translations become more and more complex. The length of translations increases until students are able to translate whole texts (Brown, 2001).

Although the grammar translation method allows for detailed grammar explanation and requires a relatively modest amount of effort from the teacher in comparison to other methods, it has little support to encourage its usage. To begin, the lesson progression is wholly unnatural as it does not mirror the manner in which first language is acquired. Instead of learning conceptually related word lists and grammar rules of increasing complexity, students study disjoint word lists and those grammar skills necessary to complete the translation at the end of a lesson (Brown, 2001). Next, since translation is the ultimate goal of instruction, free oral and written expression is neglected. Even after several years of intense study, students can neither speak nor write original messages in the target language (Kresovich, 1990). Further compounding the matter, the grammar translation method does not prepare students to use the target language as the medium for learning new content, a complication that makes it an inappropriate method for English language learners (Iwai, 2008). All things considered, the grammar translation method is the least preferable method for use in a second language classroom (Landolfi, 1991).

Cognitive code learning emphasizes the development of a conscious awareness of language rules, or cognitive codes, and their applications to meaningful communicative exchanges (Brown, 2001; Carroll, 1996). Chomsky's theory of transformational

grammar serves as the theoretical basis for cognitive code in learning. According to this theory, language exists on two structural levels: deep structures and surface structures. Deep structures are the core semantic relationships that serve as the basis of every message and are common to all languages. For example, every language has nouns, verbs, and adjectives. The exact order of said parts of speech is dictated by surface structures which are linked to deep structures in variant ways from one language to another. Because deep structures are similar in all languages, learners can be taught to peel away surface structures to get at the roots of a message in a non-native language. In essence, learners can be taught to interpret the surface codes of a language in order to get to the universal codes within (Chomsky, 1957). Hence, an instructional approach following the tenets of cognitive code learning focuses on phonetics and grammar within the context of structured lessons that require students to utilize deductive reasoning (Brown).

Strict adherence to the cognitive code learning method has fallen by the wayside in recent years, however research testifies to its relative advantage over other methods popular during its heyday. Specifically, the cognitive code learning method yielded superior results in terms of increased communicative proficiency and integration of language skills (Varela, 1975; vonElek, 1974; vonElek & Oskarsson, 1972, 1973).

Precision of Oral Language Production

Both the direct method and the audiolingual method seek to enable learners to produce utterances in the target language with the precision of a native speaker.

According to the direct method, also known as the Berlitz Method, teaching a second language should be attempted in much the same manner as teaching the learner's

first language. Explicit explanation of grammar rules is considered futile. Grammar of the second language should be learned in the same way as grammar in the native language: inductively as the result of oral interaction. The direct method curriculum progresses through a series of increasingly complex linguistic structures of oral language. Students engage in multiple and varied question and answer sessions in the target language with the teacher in order to progress in language proficiency. Those learners who develop the ability to produce flawless utterances in the target language are deemed proficient (Brown, 2001).

Research points to several flaws in the direct method. First of all, the underlying principle that a second language can and should be learned in the same manner as a first language has been considered erroneous. First language acquisition does not occur within the synthetic environment of a classroom for one hour five days a week. Instead, first language acquisition is an ongoing endeavor that occurs every waking hour of an individual's life as she interacts with others (Brown, 2001). Next, because the method emphasizes the importance of listening and speaking over reading and writing, learners are only prepared to use the target language in colloquial situations thereby leaving them at a decided disadvantage in academic settings (Kraus, 1916). Learners can use their newfound proficiency to discuss simple matters of directions or grocery lists, but they cannot use it to acquire new concepts and skills. Furthermore, the method requires a lot from teachers insofar as they are responsible for lesson creation and delivery (Lui & Shi, 2007).

World War II created the need to train bilingual armed forces personnel quickly and efficiently. Behaviorist teaching principles fulfilled the need for efficiency of

method in the development of the audiolingual method. The goal of instruction is the perfect production of the target language in response to spoken stimuli. The method strictly adheres to two overarching principles in order to achieve this goal. First, speaking and listening are of greater importance than reading and writing. Second, learning a new language is akin to habit formation as a result of the classical and operant conditioning. Learners are trained to respond to messages in the target language through feedback that reinforces correct pronunciation and grammatical structure (Brown, 2001).

Learners work toward accuracy in oral language production through repetition, practice, and immediate feedback within the context of a language lab (Brown, 2001). Instruction is conducted completely in the target language with little explanation of grammar and mechanics. A typical lesson involves exposure to a model dialogue (presentation), reiteration of the model dialogue word for word and with changes to key words and phrases (repetition), as well as drills with grammatical patterns (production) (Richards & Rodgers, 1986).

The audiolingual method maintains both benefits and hindrances. On a positive note, the method adheres to a strict hierarchical syntactic progression thereby making the content accessible to learners (Brown, 2001). On the other hand, the audiolingual method ignores language theory in terms of the importance of language structures inherent in all meaningful messages (Mohd, 1989). Learners are simply taught how to convey certain messages without explanation of the structure of said messages. Furthermore, the context within which learners study the target language is synthetic. Hence, learners are often unable to transfer the skills learned within the language lab to authentic contexts (Liu & Shi, 2007; McGarrell, 1981).

Use of Movement as Key to Second Language Learning

Movement is the cornerstone of two instructional methods: the series method and total physical response.

Frances Gouin suffered many failed attempts at learning German in the 18th century. He studied vocabulary extensively and memorized a great number of disconnected terms, but could not speak German fluently until he considered how the words fit together conceptually in the context of familiar actions. Gouin's method, also known as the series method, entails the presentation of a series of easy, connected, and action-driven commands for the learners to follow. Through these commands, learners acquire new vocabulary and grammatical structures in relationship to the context within which they are used. Instruction is conducted directly, without translation, and conceptually, without explanation of grammar rules. Students learn basic vocabulary and grammar by replicating a simple series of actions as narrated and demonstrated by the instructor (Brown, 2001).

The series method naturally evolved into a method commonly used today: total physical response. Assuming that second language acquisition is almost identical to first language acquisition, this method is modeled after the language-building interactions between a parent and child. Much in the same way a parent elicits a child to fix her gaze upon her mother with a command such as "Look at Mommy," thereby teaching the child the meaning of the words "look" and "Mommy," a teacher helps students learn new vocabulary by issuing similarly simplistic commands and requiring students to follow through with the appropriate actions. A lesson that follows the total physical response method progresses from teacher modeling of the command and related action, to whole

class practice following the command, to individual student practice following the command, to students giving the command to each other (Asher, 2000; Brown, 2001).

Total physical response claims several advantages as an instructional supplement. First, the method is especially effective for teaching classroom vocabulary, imperatives, story structure, and action-based vocabulary (Sprayberry, 1993; Wolfe, & Jones, 1982). Second, because of its simplicity, total physical response can decrease the anxiety often responsible for insufficient participation in a lesson and deficient retention of lesson content (Haskin, Smith, & Racine, 2003). Finally, learners of all proficiency levels and learning abilities can benefit from this type of instruction (Conroy, 1999).

Total physical response is not without detractors. To begin, the method is most appropriate for use with learners at beginning and intermediate proficiency levels in the target language who must first master concrete vocabulary before moving on to abstract concepts (Asher, 2000). Hence, advanced language learners practice existing vocabulary and grammar skills but do not learn anything substantially new. Secondly, since learners do not engage in oral interpretation of learning tasks, total physical response does not facilitate communicative competence (Murphy, 1992; Silver, Adelman, & Price, 2003). In other words, learners can follow through and repeat commands, but they cannot engage in a spontaneous conversation using the vocabulary and grammar structures of the commands.

Natural Facilitation of Second Language Acquisition

The natural approach attempts to make second language acquisition as seamless and fluid as first language acquisition. It is not a method, but an orientation from which to plan instructional activities. As such, the natural approach does not promote specific

learning activities. Instead, proponents advocate adherence to certain maxims in planning instruction. First, there is a distinction between language learning and language acquisition. Language learning is the conscious study of language rules whereas language acquisition is an unconscious process which occurs through authentic interaction in the target language. Second, according to the monitor hypothesis, speakers monitor the accuracy of their utterances according to existing knowledge of language form and function. Third, the grammatical structures of a language are learned in a hierarchical progression. Instruction should follow this natural order hypothesis in planning lessons for simple grammar structures first and then naturally increase the complexity of grammar lessons over time. Next, the input hypothesis postulates that language acquisition is enhanced when the instructional input is just one level beyond the learner's current level of proficiency. Finally, the affective filter dictates a learner's level of engagement in learning tasks. In other words, a learner's emotional state affects her participation. If she perceives the task as congruent with her current level of proficiency, she is likely to participate. However, if she perceives the learning task to require skills beyond her skill level, she will disengage (Krashen & Terrell, 1983).

Instruction following the natural approach claims several distinguishing characteristics. First of all, the focus of instruction is communicative competence, so lessons taught exclusively in the target language are heavily laden with vocabulary and functional grammar. Next, learning activities are based upon the unique instructional needs of learners at the beginner or intermediate level of proficiency in the target language. So, activities such as total physical response are adapted in order to make the input comprehensible to learners. Thirdly, teachers tolerate a period of silence from their

beginning language learners. During this time, the learners internalize elements of the target language to which they are exposed. Finally, teachers do not correct grammatical errors once learners begin to produce utterances in the target language. Through engagement in authentic language activities, learners will naturally deduce the rules and correct errors themselves (Krashen & Terrell, 1983).

The natural approach garners both praise and criticism. Advocates laud its emphasis on the development of communicative competence. To start, instruction following the approach may provide for a developmentally appropriate learning progression for second language learners (Peltzer-Karpf, 1996). Second, because the focus is on the development of useful communication skills, instruction adhering to the natural approach may also yield increased communicative competence (Mayer, 1985). Moreover, given the emphasis on the natural development of communicative competence, instruction following this approach is suitable for all learners despite unique learning needs (Duran, 1993; Reyes-Bonilla & Carrasquillo, 1993). Critics, however, point to a major oversight in the approach. Chiefly, the approach places too much emphasis on vocabulary and ignores the importance of grammar (Lally, 1998). Failure to examine finer points of grammar can lead to decreased technical knowledge (Mayer, 1985) and even fossilization at lower levels of proficiency (Ommagio, 1986). In essence, a learner will stop increasing her proficiency in the target language when she has learned enough to suffice her needs to function, albeit not entirely successfully, within an environment in which the target language is spoken.

Balanced Approaches

Three instructional approaches balance language form and function with the ultimate goal of helping learners develop the repertoire of skill necessary to participate in meaningful interactions in the target language: the silent way, notional-functional syllabi, and communicative language teaching.

The silent way builds upon constructivist principles insofar as learners develop their own understanding of language concepts through experience. In order to create effective learning experiences, teachers must develop an awareness how language is used within appropriate contexts, understand that language is a means for expression, help students learn the criterion for different forms of expression within different contexts, and provide ample opportunities for students to practice speaking the target language. The teacher acts as the “silent” party in classroom activities, setting up opportunities for students to experiment with their language skills in authentic communication tasks thereby forcing them to come to their own conclusions about language form and function (Gattengo, 1972; 1976).

Lessons following the tenets of the silent way follow a structural syllabus that addresses parts of speech, vocabulary, and grammar structures necessary to successfully communicate in common situations. The ultimate goal of instruction is help students become independent, autonomous, and responsible learners. A typical lesson will take the form of a language exploration or problem-solving exploit as the students progress through four learning stages: initial encounter of the unknown, practice of skills, mastery of skills, and application of skills. To help throughout their exploration, students have several materials at their disposal: sound/color charts, Cuisenaire rods, word lists, as well

as reading and writing activities. Sound/color charts assign different colors to different phonemes as a way to reinforce the different sounds associated with different combinations of graphemes in the target language. Cuisenaire rods are plastic or wooden rectangular rods of varying sizes and colors. The rods are used in a multitude of ways dependent upon the needs and creativity of the students and teacher. Words lists decorate the walls in classrooms following the silent way of second language instruction. The word lists may illustrate phonetic patterns, spelling patterns, or vocabulary. Reading and writing activities enable students to apply their newly acquired language skills (Gattengo, 1972; 1976).

Proponents of the silent way extol its virtues while critics point to its shortcomings. On a positive note, instruction following the silent way fosters cooperation, recognizes the learner's power of cognition, and increases learner self-esteem (Demircan, 1990). Learners are forced to work together in order to participate effectively in the language experiments of the silent way. The method celebrates learners' ability to build their own conceptualizations about language by successfully engaging in complicated feats of cognition. The silent way may instill both satisfaction and elevated perception of self-efficacy within learners given that they labored successfully in order to development their knowledge of the target language.

Criticism of the silent way attacks the role of the teacher, the nature of the learning situation, and the potential dangers of cooperative learning experiments when the learners lack sufficient knowledge of the content to properly attend to the problem at hand (Varvel, 1979). In an effort to allow students to work through the problem-solving tasks of the silent way, the teacher disengages with the class thereby becoming aloof.

Since the method relies heavily on interaction, shy learners are at a disadvantage. Small class size is best for fostering the greatest development but often not possible given the logistics of public schooling. The learning situations themselves can be too synthetic to yield transferable results. Given that learners' conceptualizations of the demands of the language task at hand and the appropriate schemata for successful participation may be incomplete or erroneous, they may hinder the language development of their peers by encouraging the instillation of false understanding.

A notional-functional syllabus focuses on the pragmatics of language. It is not a method. Rather, a notional-functional syllabus is an orientation from which educators can organize the second language curriculum around various language notions and functions. A notion refers to a unique context within which people communicate whereas a function is the purpose for communication within said context. The goal of instruction following a notional-function syllabus is to help learners develop conceptual and practical knowledge simultaneously (Brown, 2001). The focus of such syllabi is meaning over form; helping learners communicate effectively, fluently, and appropriately in the target language instead of producing error-free utterances that adhere to the strictest of conventions (Barnett, 1980). Instructional activities and assessment take whatever form supports this orientation as long as student participation requires authentic language use (Barnett).

Notional-functional syllabi claim advantages and disadvantages alike. After just a short amount of instruction, students can almost immediately use the target language in simple contexts (Hadley, 1998). Such syllabi also encourage language variability and ingenuity (Hadley). Despite such positive points, notional-functional syllabi may leave

learners at a disadvantage. Because such syllabi do not emphasize accuracy, they may inhibit further language study (Higgs & Clifford, 1982). Also, learners may be prepared to engage in only a few activities in the target language outside the classroom (Higgs & Clifford).

Communicative language teaching is a catch-all phrase that generally refers to instruction that exhibits the following characteristics: an emphasis on cooperative and collaborative learning activities in the target language, the special attention given to metacognition, the importance of the contributions of an individual's personal experiences to learning, as well as the link between language activities inside the classroom and their related real-world applications (Nunan, 1991), whole language education, content-based instruction, as well as task-based instruction (Brown, 2001). The goal of instruction is communicative competence (Brown). Hence, students engage in such activities as role play, interviews, structured conversations, games, surveys, group work, and reciprocal teaching (Brown).

Though some may argue that communicative language teaching pays insufficient attention to the context of teaching and learning the target language (Bax, 2003), research highlights the strengths of the eclectic method. Students receiving instruction following a communicative language teaching approach exhibit higher levels of proficiency in the target language (Capocchi, 1999; Jones & Wang, 2001; Lightbown & Spada, 1990) regardless of individual differences in language aptitude (Safar & Kormos, 2008).

Borrowing from Other Instructional Disciplines to Foster Simultaneous Second Language Acquisition and Literacy

The focus of this study is on the application of tiered instruction couched within the Five Block Schedule as an alternative to practices currently used within the sheltered classroom. As such, an examination of both is advantageous.

Tiered Instruction

Developed for use in multiple ability classrooms, students receiving tiered instruction study the same concepts and strategies, with differentiated, or tiered, learning activities according to students' levels of readiness, interest, or learning profile (Kingore, 2004; Tomlinson, 2001; 2004; Tomlinson & Strickland, 2005). Adjustments in learning tasks can be made in complexity, materials, pacing, number of steps, form of expression for finished product, as well as level of dependence on the teacher or peers (Kingore; Tomlinson; Tomlinson & Strickland). Tiered instruction relies heavily on pre-assessment utilized by the teacher to prescribe content, materials, and learning experiences (Kingore; Tomlinson; Tomlinson & Strickland). Factors affecting the complexity of tiered learning experiences include: the degree of assistance and support required from the teacher and/or peers, the degree of structure, the required background knowledge and skills required to complete the task, the level of abstraction of the learning task, the quantity and complexity of resources, the complexity of the process, as well as the complexity of the product (Kingore; Tomlinson; Tomlinson & Strickland).

Tiered instruction has been correlated with increased academic achievement for a variety of student populations. First of all, tiered instruction has been linked to increases in the academic achievement of all students at all grade levels in core area subjects such

as mathematics, science, social studies, and English/language arts (Calderon, Minaya-Rowe, & Duran, 2005; Lopez & Schroeder, 2008; McAdamis, 2000). Next, tiered instruction has been used to structure effective elementary literacy programs insofar as students exhibited significant increases in reading proficiency rates (Makkonen, Haung, & Koehler, 2007) as well as significant increases in students' decoding skills, word recognition, fluency, and comprehension (O'Conner, Harty, & Fulmer, 2005). Furthermore, tiered instruction shows promise for instructional inventions with special populations including students with behavioral problems (Conroy, Davis, Fox, & Brown, 2002), learning disabilities (Faggella-Luby & Deshler, 2008), and English language learners (Pierce & Adams, 2004; Sandhu, 2000). Finally, given its promise, school districts are already adopting and reaping the rewards of tiered instruction. Mawhinney (2000) gives a detailed description of the implementation and positive effects of tiered instruction on an Upstate New York school district in which "packing" and pull-out programs conflict with the district's resources and educational philosophy. Tomlinson et al. (2004) echo Mawhinney's accolades as they describe the district-wide adoption and implementation of tiered instruction by two other districts. With all its promise, tiered instruction could be further utilized and studied as it applies to secondary English/language arts instruction of English language learners.

Five-Block Schedule

As outlined by Reutzel and Cooter (2007) in their text *Strategies for Reading Assessment and Instruction*, the Five Block Schedule divides instructional time into five distinct blocks of instruction: word work, fluency, writing, comprehension strategy instruction, and small group differentiated instruction. During the word work block,

teachers provide explicit instruction on word recognition, decoding, word structure, and word meaning. The fluency block is divided into two parts: explicit whole group fluency instruction and small group or paired fluency practice. The writing block is fashioned after Calkins' (1994) writer's workshop. Students follow the district's writing curriculum and compose a variety of texts for various purposes. In comprehension strategy instruction, students are taught various methods for understanding a variety of texts in a gentle progression of teacher scaffolding: teacher modeling, guided practice, and finally independent practice (Pearson & Gallagher, 1983). Finally, small group differentiated instruction entails student participation in proficiency-based reading groups in which progress is monitored, membership is fluid, and instructional time is spent teaching the essentials of reading (Tyner, 2004).

Shanahan, a member of the National Reading Panel, studied the application of the Five Block Schedule as it was used to structure K-12 language arts study in the Chicago Public Schools. All students, kindergarten through twelfth grade, showed a marked improvement in reading achievement scores in only one year (Shanahan, 2003). Given its effectiveness with mainstream K-12 students, the model shows promise in meeting the instructional needs of secondary English language learners placed in a class of multiple proficiency levels.

CHAPTER THREE

Methodology

Introduction

The researcher compared the effectiveness of tiered instruction within the Five Block Schedule to that of traditional sheltered instruction within the context of secondary language arts courses for English language learners. To meet this end, the researcher worked in concert with the students and teachers within the secondary English as a second language programs of Grapevine-Colleyville Independent School District. The researcher conducted a statistical analysis of participants' English proficiency scores on a reputable assessment.

Sample

Selection for the study was based upon a participant's enrollment in English for Speakers of Other Languages courses at one of two high schools in Grapevine-Colleyville I.S.D. Only students who received written permission from their parents or guardians participated in the study (Appendix A and B). The researcher anticipated the participation of 40 students in all; 20 students from School A and 20 students from School B. However, due to the high attrition rate of secondary English language learners, a total of 23 students participated in the study. Six students represented School A as the control group and 17 students represented School B as the experimental group. To protect anonymity, the researcher assigned a numerical and alphabetical code to each participant.

Instrumentation

The Woodcock-Muñoz Language Survey-Revised (WMLS-R) is an individually-administered assessment of language proficiency in either English or Spanish (Alvarado, Ruef, & Schrank, 2005). Permission to use the survey was obtained from Riverside Publishing (Appendix C). The WMLS-R has a variety of uses: determining English or Spanish language proficiency, determining oral language dominance of bilingual individuals, monitoring change in English and/or Spanish language proficiency, determining eligibility for special education services, assessing English language learners' readiness to segue into mainstream courses, determining eligibility for academically rigorous programs, assisting in educational planning, evaluating program effectiveness, as well as describing a subject's language characteristics in research studies (Alvarado, Ruef, & Schrank). For the purpose of this study only the English version was used to determine growth in participants' English language proficiency. Two specific utilities of the assessment were of use in this study: monitoring a subject's change in English proficiency and describing his or her language characteristics in a research study.

The WMLS-R was developed and standardized in a long-term process involving over 8,000 subjects of all ages, races, language proficiencies, educational levels, and economic status from all four regions of the United States (Alvarado, Ruef, & Schrank, 2005). Median reliabilities of the subtests and reporting clusters of the assessment range from .76 to .98. In terms of validity, the WMLS-R correlated with the *Wechsler Preschool and Primary Scale of Intelligence™ - Revised* (Wechsler, 1989) and the *Differential Ability Scales®* (Elliot, 1990) for preschool children; the *Wechsler Intelligence Scale for Children® – Third Edition* (Wechsler, 1991) for school-age

children; as well as the *Wechsler Adult Intelligence Scale® - Third Edition* (Wechsler, 1997), the *Oral and Written Language Scales* (Carrow-Woolfolk, 1995), and the *Wide Range Achievement Test – Third Edition* (Wilkinson, 1993) for adults.

The WMLS-R is comprised of seven tests: Test 1: Picture Vocabulary, Test 2: Verbal Analogies, Test 3: Letter-Word Identification, Test 4: Dictation, Test 5: Understanding Directions, Test 6: Story Recall, and Test 7: Passage Comprehension. Tests can be combined into clusters that serve as measures for interpretation. The WMLS-R reports 10 clusters in all: Oral Language, Reading-Writing, Broad English Ability, Oral Expression, Reading, Writing, Language Comprehension, Applied Language Proficiency, Oral Language-Total, and Broad English Ability-Total. The median reliabilities for all subtests range from .87 to .98 (Alvarado, Ruef, & Schrank, 2005).

Scores for the various language ability clusters can be reported in terms of the number correct, W Score, grade equivalent, age equivalent, Relative Proficiency Index, Cognitive Academic Language Proficiency, Comparative Language Index, percentile rank, and standard score. For the purpose of this study, the research calculated the W Scores of all participants. The “W Score” describes where a subject’s ability level fall on a Rasch-derived scale centered on a value of 500, a number set to approximate the average performance of ten-year-old individuals on the given language task (Alvarado, Ruef, & Schrank, 2005).

Procedures

Participants were assigned to either the control group or the experimental group based upon which high school they attended. As the group from School A received

traditional sheltered instruction, they served as the control group for the study. As the group from School B received tiered instruction within the Five Block Schedule, they served as the experimental group.

Participants in the experimental group were further divided according to their overall level of Cognitive Academic Language Proficiency reported by the WMLS-R. Participants demonstrating CALP levels 1 and 2 (negligible and very limited) were assigned to the first tier for instruction. Participants demonstrating CALP level of 3 (limited) were assigned in the second tier of instruction. Participants demonstrating CALP levels of 4 (fluent) were assigned to the third tier of instruction.

The researcher administered the Woodcock-Muñoz Language Survey-Revised to participants at both School A and School B at the beginning and end of the second grading period of the 2009-2010 school year, and the pre- and post-instruction English proficiencies of students at School A and School B were compared.

Research Questions

The research questions investigated in this study include:

1. What is the impact of instruction following the tenets of the Sheltered Instruction Observation Protocol on the specific abilities of English language learners enrolled in English for Speakers of Other Languages I and II (control group) as measured by the Woodcock-Muñoz Language Survey – Revised (WMLS-R)?
 - a. What is the impact on participants' ability to produce the English word for pictures of items as measured by Test 1 Picture Vocabulary of the WMLS-R?

- b. What is the impact on participants' ability to complete analogies in English as measured by Test 2 Verbal Analogies of the WMLS-R?
 - c. What is the impact on participants' ability to identify letters and decode words in English Test 3 Letter-Word Identification of the WMLS-R?
 - d. What is the impact on participants' ability to produce written English as dictated by the test administrator as measured by Test 4 Dictation of the WMLS-R?
 - e. What is the impact on participants' ability to follow directions in English as measured by Test 5 Understanding Directions of the WMLS-R?
 - f. What is the impact on participants' ability to retell stories in English as measured by Test 6 Story Recall of the WMLS-R?
 - g. What is the impact on participants' ability to comprehend passages written in English as measured by Test 7 Passage Comprehension of the WMLS-R?
2. What is the impact of instruction following the tenets of the Sheltered Instruction Observation Protocol on the overall abilities of English language learners enrolled in English for Speakers of Other Languages I and II (control group) as measured by the Woodcock-Muñoz Language Survey – Revised (WMLS-R)?
- a. What is the impact on reading ability of the control group as measured by the Reading cluster of the WMLS-R?
 - b. What is the impact on writing ability of the control group as measured by the Writing cluster of the WMLS-R?

- c. What is the impact on comprehension ability of the control group as measured by the Language Comprehension cluster of the WMLS-R?
 - d. What is the impact on of the control group's ability of English language learners to use English as the medium to acquire new information as measured by the Applied Language Proficiency cluster of the WMLS-R?
 - e. What is the impact on oral language proficiency of the control group as measured by the Oral Language cluster of the WMLS-R?
 - f. What is the total impact on of the control group's English ability as measured by the Broad English Ability cluster of the WMLS-R?
3. What is the impact of tiered instruction couched within the Five Block Schedule on the specific abilities of English language learners enrolled in English for Speakers of Other Languages I and II (experimental group) as measured by the Woodcock-Muñoz Language Survey-Revised (WMLS-R)?
- a. What is the impact on participants' ability to produce the English word for pictures of items as measured by Test 1 Picture Vocabulary of the WMLS-R?
 - b. What is the impact on participants' ability to complete analogies in English as measured by Test 2 Verbal Analogies of the WMLS-R?
 - c. What is the impact on participants' ability to identify letters and decode words in English Test 3 Letter-Word Identification of the WMLS-R?
 - d. What is the impact on participants' ability to produce written English as dictated by the test administrator as measured by Test 4 Dictation of the WMLS-R?

- e. What is the impact on participants' ability to follow directions in English as measured by Test 5 Understanding Directions of the WMLS-R?
 - f. What is the impact on participants' ability to retell stories in English as measured by Test 6 Story Recall of the WMLS-R?
 - g. What is the impact on participants' ability to comprehend passages written in English as measured by Test 7 Passage Comprehension of the WMLS-R?
4. What is the impact of tiered instruction couched within the Five Block Schedule on the overall abilities of English language learners enrolled in English for Speakers of Other Languages I and II (experimental group) as measured by the Woodcock-Muñoz Language Survey-Revised (WMLS-R)?
- a. What is the impact on reading ability of the experimental group as measured by the Reading cluster of the WMLS-R?
 - b. What is the impact on writing ability of the experimental group as measured by the Writing cluster of the WMLS-R?
 - c. What is the impact on comprehension ability of the experimental group as measured by the Language Comprehension cluster of the WMLS-R?
 - d. What is the impact on of the experimental group's ability of English language learners to use English as the medium to acquire new information as measured by the Applied Language Proficiency cluster of the WMLS-R?
 - e. What is the impact on oral language proficiency of the experimental group as measured by the Oral Language cluster of the WMLS-R?

- f. What is the total impact on English ability of the experimental group as measured by the Broad English Ability cluster of the WMLS-R?
- 5. Are the gains in student achievement for specific skills, as measured by the Woodcock Muñoz Language Survey – Revised (WMLS-R), of English language learners enrolled in English for Speakers of Other Languages I and II receiving tiered instruction couched within the Five Block Schedule (experimental group) greater than that of English language learners enrolled in English for Speakers of Other Languages I and II receiving instruction that follows the Sheltered Instruction Observation Protocol model (control group)?
 - a. Are the gains in the ability to produce English words for pictures of items, as measured by Test 1 Picture Vocabulary of the WMLS-R, greater for the experimental group?
 - b. Are the gains in the ability to complete analogies, as measured by Test 2 Verbal Analogies of the WMLS-R, greater for the experimental group?
 - c. Are the gains in the ability to identify letters and decode words in English, as measured by Test 3 Letter-Word Identification of the WMLS-R, greater for the experimental group?
 - d. Are the gains in the ability to produce written English dictated by the test administrator, as measured by Test 4 Dictation of the WMLS-R, greater for the control group?
 - e. Are the gains in the ability to follow directions in English, as measured by Test 5 Understanding Directions of the WMLS-R, greater for the experimental group?

- f. Are the gains in the ability to retell stories in English, as measured by Test 6 Story Recall of the WMLS-R, greater for the experimental group?
 - g. Are the gains in the ability to comprehend passages written in English, as measured by Test 7 Passage Comprehension of the WMLS-R, greater for the experimental group?
6. Are the gains in overall student achievement, as measured by the Woodcock Muñoz Language Survey – Revised (WMLS-R), of English language learners enrolled in English for Speakers of Other Languages I and II receiving tiered instruction couched within the Five Block Schedule (experimental group) greater than that of English language learners enrolled in English for Speakers of Other Languages I and II receiving instruction that follows the Sheltered Instruction Observation Protocol model (control group)?
- a. As measured by the Reading cluster of the WMLS-R, is the reading ability of the experimental group greater than that of the control group?
 - b. As measured by the Writing cluster of the WMLS-R, is the writing ability of the experimental group greater than that of the control group?
 - c. As measured by the Language Comprehension cluster of the WMLS-R, is the comprehension ability of the experimental group greater than that of the control group?
 - d. As measured by the Applied Language Proficiency cluster of the WMLS-R, is the ability of the experimental group to use language to acquire new information greater than that of the control group?

- e. As measured by the Oral language cluster of the WMLS-R, is the oral language proficiency of the experimental group greater than that of the control group?
- f. As measured by the Broad English Ability cluster of the WMLS-R, is the overall English proficiency of the experimental group higher than that of the control group?

Research Design and Data Analysis

Because randomization was not possible in terms of selection of a sample, this research study followed a quasi-experimental design. Specifically, the study sought to determine the effectiveness of tiered instruction couched within the Five Block Schedule via comparison to traditional sheltered instruction.

Hypotheses

The null hypothesis stated that there was no difference between the gains in English proficiency of the control group and the experimental group as measured by the Woodcock Muñoz Language Survey – Revised. The experimental hypothesis stated that there was a difference between the gains in English proficiency of the control group and the experimental group as measured by the Woodcock Muñoz Language Survey – Revised and that the gains in English proficiency of the experimental group were higher than that of the control group as measured by the Woodcock Muñoz Language Survey – Revised.

Variables

The independent variable for this study was the type of English/language arts instruction students receive in their sheltered English I and English II classes. Students at School A received sheltered instruction following the Sheltered Instruction Observation Protocol. Students at School B received tiered instruction couched within the Five Block Schedule. The dependent variable for this study was English language proficiency in the areas of oral language, reading, writing, and comprehension, as well as ability to use English language skills to acquire new information. The value of the dependent variable was determined by participants' performance on various subtests of the Woodcock-Muñoz Language Survey-Revised and described in terms of a W score. In particular, W Scores were calculated for both the pretest and the posttest for the following specific abilities: picture vocabulary, verbal analogies, letter-word identification, dictation, following directions, story recall and passage comprehension. In addition, W Scores were calculated for both the pretest and the posttest for the following clusters on the WMLS-R meant to measure general English abilities: Oral Language, Reading, Writing, Language Comprehension, Applied Language Proficiency, Oral Language, and Broad Language Ability – Total. W Scores were then used for statistical analysis.

Assessment Administration

The researcher administered the Woodcock-Muñoz Language Survey Revised to determine the language proficiency of all participants in both a pretest at the beginning of the second grading period and a posttest at the end of the second grading period, a time interval spanning six weeks. Pretest data served two purposes: as a baseline measure for

both control and experimental group and as a manner for assigning students to instructional tiers in the experimental group.

Data Analysis

To ensure no significant difference between the control and experimental groups, the researcher first conducted a two-tailed t-test on the pretest means of participants' W Scores for Broad English Ability – Total. Results of this analysis determined how posttest data were analyzed.

Since no significant difference existed between the Broad English Ability-Total W Scores control group and the experimental group, the researcher conducted a matched-pairs t-test on the posttest W Scores for all subtests and language clusters assessed by the Woodcock-Muñoz Language Survey-Revised.

CHAPTER FOUR

Results

Introduction and Purpose

The purpose of this study was to examine the effectiveness of a secondary English/language arts course structured around the tenets of tiered instruction and the Five Block Schedule in an effort to reveal implications for effective programs for secondary English language learners. Data collected were subjected to statistical analysis in order to determine significance in terms of participants' gains in English proficiency.

Overview of Data Analysis

All seven subtests of the Woodcock-Muñoz Language Survey-Revised were administered to the School A (control group) and School B (experimental group) at the beginning and end of the second grading period of the 2009-2010 school year. First, Cognitive Academic Language Proficiency (CALP) was determined for the experimental group. Participants in the experimental group were subsequently divided into one of three tiers for instruction. Second, the pre-test Broad English Ability-Total was determined for both the control group and the experimental group. The researcher conducted a two-tailed t-test on the pretest means of participants' W Scores for Broad English Ability – Total. Results of this analysis determined how posttest data were analyzed. Next, participants' W scores for Tests 1-7 as well as scores for the Reading Cluster, Writing Cluster, Language Comprehension Cluster, Applied Language Cluster, Oral Language Cluster, and Broad English Ability Cluster were calculated. Then, the control group and the experimental group's performance were examined individually in

order to determine if a significant change occurred in English proficiency. Finally, the control group and the experimental group's performances were compared in order to determine if a significant difference exists between each group's respective gains in English proficiency.

Experimental Group Assignment into Instructional Tiers

The Woodcock-Muñoz Language Survey-Revised assigns four levels of Cognitive Academic Language Proficiency (CALP) based upon participant responses to each of the assessment's seven subtests. CALP ratings range five levels: 1-negligible, 2-very limited, 3-limited, 3-4-limited to fluent, and 4 fluent. Participants demonstrating CALP levels 1 and 2 (negligible and very limited) were assigned to the first tier for instruction. Participants demonstrating CALP levels of 3 (limited) were assigned in the second tier of instruction. Participants demonstrating CALP levels of 4 (fluent) were assigned to the third tier of instruction. Individual participant's CALP levels are summarized in Table 1.

Twelve participants demonstrated CALP levels of 1 and 2 (negligible and very limited) and were therefore assigned to the first instructional tier. They engaged in activities that required a beginning level of English proficiency. Two participants demonstrated a CALP level of 3 (limited) and were therefore assigned to the second instructional tier. They engaged in activities that required an intermediate level of English proficiency. Three participants demonstrated a CALP level of 4 (fluent) and were therefore assigned to the third instructional tier. They engaged in activities that required an advanced level of English proficiency.

Table 1

Experimental Group CALP Levels

Participant Code	CALP Level	Classification	Instructional Tier
1B	4	Fluent	3
3B	1	Negligible	1
4B	1	Negligible	1
5B	1	Negligible	1
6B	3	Limited	2
7B	3	Limited	2
8B	4	Fluent	3
11B	4	Fluent	3
12B	1	Negligible	1
13B	1	Negligible	1
14B	2	Very Limited	1
15B	1	Negligible	1
17B	1	Negligible	1
18B	1	Negligible	1
19B	1	Negligible	1
21B	2	Very Limited	1
22B	2	Very Limited	1

*Comparison of Control Group and Experimental Group
Pre-Test Broad English Ability – Total*

The Broad English Ability-Total Cluster includes Test 1 Picture Vocabulary, Test 2 Verbal Analogies, Test 3 Letter-Word Identification, Test 4 Dictation, Test 5

Understanding Directions, Test 6 Story Recall, and Test 7 Passage Comprehension of the Woodcock-Muñoz Language Survey-Revised.

Table 2

Comparison of Pre-Test for Broad English Ability-Total Cluster

<u>School A – Control Group</u>		<u>School B – Experimental Group</u>	
Participant Code	Pre-Test BEAT-T	Participant Code	Pre-Test BEAT-T
1A	495.29	1B	509.57
2A	501.57	3B	453.57
3A	483.71	4B	433.00
4A	435.29	5B	360.14
5A	505.00	6B	500.71
6A	488.57	7B	497.00
		8B	471.86
		11B	508.86
		12B	430.14
		13B	421.71
		14B	487.71
		15B	461.71
		17B	460.14
		18B	433.43
		19B	467.14
		21B	487.57
		22B	482.43

A two-sample t-test at 95% confidence was conducted to compare the Broad English Ability-Total Cluster scores for both the control group and the experimental group in order to ensure that the two groups were similar enough for further comparison. The null hypothesis and alternative hypothesis are as follows:

Ho: Pre-Test Broad English Ability-Total Cluster for control group =

Pre-Test Broad English Ability-Total Cluster for experimental group

H_a: Pre-Test Broad English Ability-Total Cluster for control group ≠

Pre-Test Broad English Ability-Total Cluster for experimental group

Results revealed a t value of 1.7180 and a p value of .1089. Since .1089 > .05, the null hypothesis is confirmed. There is no significant difference between the Pre-Test Broad English Ability-Total Cluster scores for the experimental and the control group.

Analysis of Data

Since no significant difference existed between the Broad English Ability-Total W Scores control group and the experimental group, the researcher conducted a matched-pairs t-test on the posttest W Scores for all subtests and language clusters assessed by the Woodcock-Muñoz Language Survey-Revised.

Question 1: What is the impact of instruction following the tenets of the Sheltered Instruction Observation Protocol on the specific abilities of English language learners enrolled in English for Speakers of Other Languages I and III (control group) as measured by the Woodcock-Muñoz Language Survey – Revised (WMLS-R)?

Question 1a: What is the impact on participants' ability to produce the English word for pictures of items as measured by Test 1 Picture Vocabulary of the WMLS-R?

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Test 1 Picture Vocabulary scores and the μ Post-Test Test 1 Picture Vocabulary scores for the control group. The null hypothesis and alternative hypothesis are as follows:

Ho: μ Post-Test Test 1 Picture Vocabulary =

μ Pre-Test Test 1 Picture Vocabulary

H_a: μ Post-Test Test 1 Picture Vocabulary >

μ Pre-Test Test 1 Picture Vocabulary

Results revealed a t value of .5932 and a p value of .2832. Since .2832 > .05, the null hypothesis is confirmed. There is no significant difference between the μ Post-Test Test 1 Picture Vocabulary scores and the μ Pre-Test Test 1 Picture Vocabulary scores for control group (Table 3).

Table 3

Picture Vocabulary Results for Control Group

Participant Code	Pre-Test	Post-Test
1A	473	476
2A	476	492
3A	456	467
4A	410	426
5A	479	485
6A	479	479

Question 1b: What is the impact on participants' ability to complete analogies in English as measured by Test 2 Verbal Analogies of the WMLS-R?

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Test 2 Verbal Analogies scores and the μ Post-Test Test 2 Verbal Analogies scores for the control group. The null hypothesis and alternative hypothesis are as follows:

Ho: μ Post-Test Test 2 Verbal Analogies = μ Pre-Test Test 2 Verbal Analogies

H_a: μ Post-Test Test 2 Verbal Analogies > μ Pre-Test Test 2 Verbal Analogies

Results revealed a t value of .3225 and a p value of .0769. Since .0769 > .05, the null hypothesis is confirmed. There is no significant difference between the μ Post-Test Test 2 Verbal Analogies scores and the μ Pre-Test Test 2 Verbal Analogies scores for control group (Table 4).

Table 4

Verbal Analogies Results for Control Group

Participant Code	Pre-Test	Post-Test
1A	483	486
2A	500	507
3A	483	483
4A	414	434
5A	507	511
6A	479	479

Question 1c: What is the impact on participants' ability to identify letters and decode words in English Test 3 Letter-Word Identification of the WMLS-R?

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Test 3 Letter-Word Identification scores and the μ Post-Test Test 3 Letter-Word

Identification scores for the control group. The null hypothesis and alternative hypothesis are as follows:

Ho: μ Post-Test Test 3 Letter-Word Identification =

μ Pre-Test Test 3 Letter-Word Identification

H_a: μ Post-Test Test 3 Letter-Word Identification >

μ Pre-Test Test 3 Letter-Word Identification

Results revealed a t value of .7561 and a p value of .2334. Since .2334 > .05, the null hypothesis is confirmed. There is no significant difference between the μ Post-Test Test 3 Letter-Word Identification scores and the μ Pre-Test Test 3 Letter-Word Identification scores for control group (Table 5).

Table 5

Letter-Word Identification Results for Control Group

Participant Code	Pre-Test	Post-Test
1A	542	561
2A	522	539
3A	499	530
4A	442	459
5A	548	565
6A	516	516

Question 1d: What is the impact on participants' ability to produce written English as dictated by the test administrator as measured by Test 4 Dictation of the WMLS-R?

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Test 4 Dictation scores and the μ Post-Test Test 4 Dictation scores for the control group.

The null hypothesis and alternative hypothesis are as follows:

Ho: μ Post-Test Test 4 Dictation = μ Pre-Test Test 4 Dictation

H_a: μ Post-Test Test 4 Dictation > μ Pre-Test Test 4 Dictation

Results revealed a t value of .9792 and a p value of .1754. Since .1754 > .05, the null hypothesis is confirmed. There is no significant difference between the μ Post-Test Test 4 Dictation scores and the μ Pre-Test Test 4 Dictation scores for control group (Table 6).

Table 6

Dictation Results for Control Group

Participant Code	Pre-Test	Post-Test
1A	501	519
2A	506	509
3A	496	501
4A	442	455
5A	496	506
6A	468	499

Question 1e: What is the impact on participants' ability to follow directions in English as measured by Test 5 Understanding Directions of the WMLS-R?

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Test 5 Understanding Directions scores and the μ Post-Test Test 5 Understanding

Directions scores for the control group. The null hypothesis and alternative hypothesis are as follows:

Ho: μ Post-Test Test 5 Understanding Directions =

μ Pre-Test Test 5 Understanding Directions

H_a: μ Post-Test Test 5 Understanding Directions >

μ Pre-Test Test 5 Understanding Directions

Results revealed a t value of 1.1456 and a p value of .1395. Since .1395 > .05, the null hypothesis is confirmed. There is no significant difference between the μ Post-Test Test 5 Understanding Directions scores and the μ Pre-Test Test 5 Understanding Directions scores for control group (Table 7).

Table 7

Understanding Directions Results for Control Group

Participant Code	Pre-Test	Post-Test
1A	506	517
2A	521	535
3A	500	517
4A	461	470
5A	521	535
6A	506	535

Question 1f: What is the impact on participants' ability to retell stories in English as measured by Test 6 Story Recall of the WMLS-R?

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Test 6 Story Recall scores and the μ Post-Test Test 6 Story Recall scores for the control group. The null hypothesis and alternative hypothesis are as follows:

Ho: μ Post-Test Test 6 Story Recall = μ Pre-Test Test 6 Story Recall

H_a: μ Post-Test Test 6 Story Recall > μ Pre-Test Test 6 Story Recall

Results revealed a t value of .1431 and a p value of .4445. Since .4445 > .05, the null hypothesis is confirmed. There is no significant difference between the μ Post-Test Test 6 Story Recall scores and the μ Pre-Test Test 6 Story Recall scores for control group (Table 8).

Table 8
Story Recall Results for Control Group

Participant Code	Pre-Test	Post-Test
1A	504	490
2A	495	535
3A	495	487
4A	447	473
5A	508	500
6A	528	504

Question 1g: What is the impact on participants' ability to comprehend passages written in English as measured by Test 7 Passage Comprehension of the WMLS-R?

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Test 7 Passage Comprehension scores and the μ Post-Test Test 7 Passage Comprehension

scores for the control group. The null hypothesis and alternative hypothesis are as follows:

Ho: μ Post-Test Test 7 Passage Comprehension =

μ Pre-Test Test 7 Passage Comprehension

H_a: μ Post-Test Test 7 Passage Comprehension >

μ Pre-Test Test 7 Passage Comprehension

Results revealed a t value of 1.7328 and a p value of .0574. Since .0574 > .05, the null hypothesis is confirmed. There is no significant difference between the μ Post-Test Test 7 Passage Comprehension scores and the μ Pre-Test Test 7 Passage Comprehension scores for control group (Table 9).

Table 9

Passage Comprehension Results for Control Group

Participant Code	Pre-Test	Post-Test
1A	472	504
2A	490	495
3A	467	495
4A	403	447
5A	490	508
6A	476	528

Question Two: What is the impact of instruction following the tenets of the Sheltered Instruction Observation Protocol on the overall abilities of English language

learners enrolled in English for Speakers of Other Languages I and II (control group) as measured by the Woodcock-Muñoz Language Survey – Revised (WMLS-R)?

Question 2a: What is the impact on reading ability of the control group as measured by the Reading Cluster of the WMLS-R?

The Reading Cluster of the Woodcock-Muñoz Language Survey-Revised is determined by taking the average of Test 3 Letter-Word Identification and Test 7 Passage Comprehension (Table 10).

Table 10

Reading Cluster Results for Control Group

Participant Code	Pre-Test		Post-Test		Pre-Test	Post-Test
	Test 3	Test 7	Test 3	Test 7	Average	Average
1A	542	472	561	504	501.0	532.5
2A	522	490	539	495	506.0	517.0
3A	499	467	530	495	483.0	512.5
4A	442	403	459	447	422.5	453.0
5A	548	490	565	508	519.0	536.5
6A	516	476	516	528	496.0	522.0

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Reading Cluster scores and the μ Post-Test Reading Cluster score for the control group.

The null hypothesis and alternative hypothesis are as follows:

Ho: μ Post-Test Reading Cluster = μ Pre-Test Reading Cluster

H_a: μ Post-Test Reading Cluster > μ Pre-Test Reading Cluster

Results revealed a t value of 1.2386 and a p value of .1221. Since $.1221 > .05$, the null hypothesis is confirmed. There is no significant difference between the μ Post-Test Reading Cluster scores and the μ Pre-Test Reading Cluster scores for control group.

Question 2b: What is the impact on writing ability of the control group as measured by the Writing Cluster of the WMLS-R?

The Writing Cluster of the Woodcock-Muñoz Language Survey-Revised is determined by Test 4 Dictation (Table 11).

Table 11
Writing Cluster Results for Control Group

Participant Code	Pre-Test	Post-Test
1A	501	519
2A	506	509
3A	496	501
4A	442	455
5A	496	506
6A	468	499

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Test 4 Dictation scores and the μ Post-Test Test 4 Dictation scores for the control group. The null hypothesis and alternative hypothesis are as follows:

H_0 : μ Post-Test Test 4 Dictation = μ Pre-Test Test 4 Dictation

H_a : μ Post-Test Test 4 Dictation > μ Pre-Test Test 4 Dictation

Results revealed a t value of .9792 and a p value of .1754. Since $.1754 > .05$, the null hypothesis is confirmed. There is no significant difference between the μ Post-Test Writing Cluster scores and the μ Pre-Test Writing Cluster scores for control group.

Question 2c: What is the impact on comprehension ability of the control group as measured by the Language Comprehension Cluster of the WMLS-R?

The Language Comprehension Cluster includes Test 6 Story Recall and Test 7 Passage Comprehension of the Woodcock-Muñoz Language Survey-Revised (Table 12).

Table 12

Language Comprehension Proficiency for Control Group

Participant Code	Pre-Test		Post-Test		Pre-Test	Post-Test
	Test 6	Test 7	Test 6	Test 7	Average	Average
1A	490	472	490	504	481	497
2A	496	490	535	495	493	515
3A	485	469	487	495	476	491
4A	475	403	473	447	439	460
5A	494	490	500	508	492	504
6A	496	476	504	528	486	516

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Language Comprehension Cluster scores and the μ Post-Test Language Comprehension Cluster score for the control group. The null hypothesis and alternative hypothesis are as follows:

Ho: μ Post-Test Language Comprehension Cluster =
 μ Pre-Test Language Comprehension Cluster

H_a: μ Post-Test Language Comprehension Cluster >
 μ Pre-Test Language Comprehension Cluster

Results revealed a t value of 1.6422 and a p value of .0657. Since .0657 > .05, the null hypothesis is confirmed. There is no significant difference between the μ Post-Test Language Comprehension Cluster scores and the μ Pre-Test Language Comprehension Cluster scores for the control group.

Question 2d: What is the impact on of the control group's ability of English language learners to use English as the medium to acquire new information as measured by the Applied Language Proficiency Cluster of the WMLS-R?

The Applied Language Proficiency Cluster includes Test 4 Dictation, Test 5 Understanding Directions, Test 6 Story Recall, and Test 7 Passage Comprehension of the Woodcock-Muñoz Language Survey-Revised (Table 13).

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Applied Language Proficiency Cluster scores and the μ Post-Test Applied Language Proficiency Cluster score for the control group. The null hypothesis and alternative hypothesis are as follows:

Ho: μ Post-Test Applied Language Proficiency Cluster =
 μ Pre-Test Applied Language Proficiency Cluster

H_a: μ Post-Test Applied Language Proficiency Cluster >
 μ Pre-Test Applied Language Proficiency Cluster

Table 13

Applied Language Proficiency for Control Group

Participant Code	Pre-Test				Post-Test				Pre-Test Average	Post-Test Average
	Test 4	Test 5	Test 6	Test 7	Test 4	Test 5	Test 6	Test 7		
1A	501	506	490	472	519	517	490	504	492.25	507.50
2A	506	521	496	490	509	535	535	495	503.25	518.50
3A	496	500	485	469	501	517	487	495	487.00	500.00
4A	442	461	475	403	455	470	473	447	445.25	461.25
5A	496	521	494	490	506	535	500	508	500.25	512.25
6A	468	506	496	476	499	535	504	528	486.50	516.50

Results revealed a t value of 1.3841 and a p value of .0982. Since $.0982 > .05$, the null hypothesis is confirmed. There is no significant difference between the μ Post-Test Applied Language Proficiency Cluster scores and the μ Pre-Test Applied Language Proficiency Cluster scores for the control group.

Question 2e: What is the impact on oral language proficiency of the control group as measured by the Oral Language Cluster of the WMLS-R?

The Oral Language Cluster includes Test 1 Picture Vocabulary, Test 2 Verbal Analogies, Test 5 Understanding Directions, and Test 6 Story Recall of the Woodcock-Muñoz Language Survey-Revised (Table 14).

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Oral Language Cluster scores and the μ Post-Test Oral Language Cluster score for the control group. The null hypothesis and alternative hypothesis are as follows:

$H_0: \mu \text{ Post-Test Oral Language Cluster} = \mu \text{ Pre-Test Oral Language Cluster}$

$H_a: \mu \text{ Post-Test Oral Language Cluster} > \mu \text{ Pre-Test Oral Language Cluster}$

Results revealed a t value of .7440 and a p value of .2369. Since $.2369 > .05$, the null hypothesis is confirmed. There is no significant difference between the μ Post-Test Oral Language Cluster scores and the μ Pre-Test Oral Language Cluster scores for the control group.

Table 14

Oral Language Cluster for the Control Group

Participant Code	Pre-Test				Post-Test				Pre-Test Average	Post-Test Average
	Test 1	Test 2	Test 5	Test 6	Test 1	Test 2	Test 5	Test 6		
1A	473	483	506	490	476	486	517	490	488	4922.25
2A	476	500	521	496	492	507	535	535	498.25	517.25
3A	456	483	500	485	467	483	517	487	481	488.5
4A	410	414	461	475	426	434	470	473	440	450.75
5A	479	507	521	494	485	511	535	500	500.25	507.75
6A	479	479	506	496	479	479	535	504	490	499.25

Question 2f: What is the total impact on of the control group's English ability as measured by the Broad English Ability-Total Cluster of the WMLS-R?

The Broad English Ability Cluster includes Test 1 Picture Vocabulary, Test 2 Verbal Analogies, Test 3 Letter-Word Identification, Test 4 Dictation, Test 5 Understanding Directions, Test 6 Story Recall, and Test 7 Passage Comprehension of the Woodcock-Muñoz Language Survey-Revised.

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Broad English Ability Cluster scores and the μ Post-Test Broad English Ability Cluster score for the control group (Tables 15 and 16). The null hypothesis and alternative hypothesis are as follows:

H_0 : μ Post-Test Broad English Ability Cluster =

μ Pre-Test Broad English Ability Cluster

H_a : μ Post-Test Broad English Ability Cluster >

μ Pre-Test Broad English Ability Cluster

Results revealed a t value of .9847 and a p value of .1740. Since $.1740 > .05$, the null hypothesis is confirmed. There is no significant difference between the μ Post-Test Broad English Ability Cluster scores and the μ Pre-Test Broad English Ability Cluster scores for the control group.

Table 15

Pre-Test Broad English Ability-Total Cluster for the Control Group

Participant Code	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	Test 7	Pre-Test Average
1A	473	483	542	501	506	490	472	495.29
2A	496	500	522	506	521	496	490	501.57
3A	456	483	499	496	500	485	467	483.71
4A	410	414	442	442	461	475	403	435.29
5A	479	507	548	496	521	494	490	505.00
6A	479	479	516	468	506	496	476	488.57

Table 16

Post-Test Broad English Ability-Total Cluster for the Control Group

Participant Code	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	Test 7	Post-Test Average
1A	476	486	561	519	517	490	504	507.57
2A	492	507	539	509	535	535	495	516
3A	467	483	530	501	517	487	495	497.14
4A	426	434	459	455	470	473	447	452
5A	485	511	565	506	535	500	508	515.71
6A	479	479	516	499	535	504	528	505.71

Question Three: What is the impact of tiered instruction couched within the Five Block Schedule on the specific abilities of English language learners enrolled in English for Speakers of Other Languages I and II (experimental group) as measured by the Woodcock-Muñoz Language Survey-Revised (WMLS-R)?

Question 3a: What is the impact on participants' ability to produce the English word for pictures of items as measured by Test 1 Picture Vocabulary of the WMLS-R?

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Test 1 Picture Vocabulary scores and the μ Post-Test Test 1 Picture Vocabulary scores for the experimental group (Table 17). The null hypothesis and alternative hypothesis are as follows:

$H_0: \mu \text{ Post-Test Test 1 Picture Vocabulary} =$

$\mu \text{ Pre-Test Test 1 Picture Vocabulary}$

$H_a: \mu \text{ Post-Test Test 1 Picture Vocabulary} >$

$\mu \text{ Pre-Test Test 1 Picture Vocabulary}$

Results revealed a t value of 2.185 and a p value of .0182. Since $.0182 < .05$, the null hypothesis is rejected. There is significant evidence to conclude that the μ Post-Test Test 1 Picture Vocabulary scores are greater than the μ Pre-Test Test 1 Picture Vocabulary scores for the experimental group.

Question 3b: What is the impact on participants' ability to complete analogies in English as measured by Test 2 Verbal Analogies of the WMLS-R?

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Test 2 Verbal Analogies scores and the μ Post-Test Test 2 Verbal Analogies scores for

the experimental group (Table 18). The null hypothesis and alternative hypothesis are as follows:

Ho: μ Post-Test Test 2 Verbal Analogies = μ Pre-Test Test 2 Verbal Analogies

H_a: μ Post-Test Test 2 Verbal Analogies > μ Pre-Test Test 2 Verbal Analogies

Table 17

Picture Vocabulary Results for Experimental Group

Participant Code	Pre-Test	Post-Test
1B	485	504
3B	431	470
4B	401	405
5B	388	445
6B	488	514
7B	482	504
8B	492	511
11B	518	538
12B	415	463
13B	421	452
14B	482	492
15B	431	463
17B	426	467
18B	401	431
19B	456	473
21B	470	498
22B	488	521

Table 18

Verbal Analogies Results for Experimental Group

Participant Code	Pre-Test	Post-Test
1B	511	528
3B	459	486
4B	434	479
5B	414	466
6B	504	528
7B	514	528
8B	528	528
11B	497	528
12B	414	466
13B	449	449
14B	490	525
15B	476	504
17B	476	507
18B	414	466
19B	486	518
21B	486	521
22B	483	521

Results revealed a t value of 2.716 and a p value of .0054. Since $.0054 < .05$, the null hypothesis is rejected. There is significant evidence to conclude that the μ Post-Test Test 2 Verbal Analogies scores are greater than the μ Pre-Test Test 2 Verbal Analogies scores for the experimental group.

Question 3c: What is the impact on participants' ability to identify letters and decode words in English Test 3 Letter-Word Identification of the WMLS-R?

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Test 3 Letter-Word Identification scores and the μ Post-Test Test 3 Letter-Word Identification scores for the experimental group (Table 19). The null hypothesis and alternative hypothesis are as follows:

Ho: μ Post-Test Test 3 Letter-Word Identification =
 μ Pre-Test Test 3 Letter-Word Identification

H_a: μ Post-Test Test 3 Letter-Word Identification >
 μ Pre-Test Test 3 Letter-Word Identification

Results revealed a t value of 2.799 and a p value of .0048. Since $.0048 < .05$, the null hypothesis is rejected. There is significant evidence to conclude that the μ Post-Test Test 3 Letter-Word Identification scores are greater than the μ Pre-Test Test 3 Letter-Word Identification scores for the experimental group.

Question 3d: What is the impact on participants' ability to produce written English as dictated by the test administrator as measured by Test 4 Dictation of the WMLS-R?

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Test 4 Dictation scores and the μ Post-Test Test 4 Dictation scores for the experimental group (Table 20). The null hypothesis and alternative hypothesis are as follows:

Ho: μ Post-Test Test 4 Dictation = μ Pre-Test Test 4 Dictation

H_a: μ Post-Test Test 4 Dictation > μ Pre-Test Test 4 Dictation

Results revealed a t value of 2.255 and a p value of .0175. Since $.0175 < .05$, the null hypothesis is rejected. There is significant evidence to conclude that the μ Post-Test Test 4 Dictation scores are greater than the μ Pre-Test Test 4 Dictation scores for the experimental group.

Table 19

Letter-Word Identification Results for Experimental Group

Participant Code	Pre-Test	Post-Test
1B	545	565
3B	475	542
4B	436	522
5B	271	478
6B	510	565
7B	516	545
8B	554	565
11B	554	565
12B	442	530
13B	446	446
14B	496	558
15B	471	471
17B	471	519
18B	452	490
19B	465	558
21B	519	519
22B	493	548

Table 20

Dictation Results for Experimental Group

Participant Code	Pre-Test	Post-Test
1B	509	509
3B	459	484
4B	433	473
5B	276	446
6B	504	531
7B	506	519
8B	525	553
11B	511	528
12B	411	471
13B	276	468
14B	494	519
15B	465	484
17B	451	489
18B	437	471
19B	473	501
21B	476	476
22B	481	494

Question 3e: What is the impact on participants' ability to follow directions in English as measured by Test 5 Understanding Directions of the WMLS-R?

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Test 5 Understanding Directions scores and the μ Post-Test Test 5 Understanding Directions scores for the experimental group (Table 21). The null hypothesis and alternative hypothesis are as follows:

Table 21

Understanding Directions Results for Experimental Group

Participant Code	Pre-Test	Post-Test
1B	535	535
3B	444	506
4B	425	457
5B	413	461
6B	535	535
7B	477	535
8B	504	535
11B	509	535
12B	419	454
13B	425	454
14B	488	535
15B	450	463
17B	461	535
18B	425	454
19B	470	535
21B	511	535
22B	486	535

Ho: μ Post-Test Test 5 Understanding Directions =
 μ Pre-Test Test 5 Understanding Directions

H_a: μ Post-Test Test 5 Understanding Directions >
 μ Pre-Test Test 5 Understanding Directions

Results revealed a t value of 2.7175 and a p value of .0052. Since .0052 < .05, the null hypothesis is rejected. There is significant evidence to conclude that the μ Post-Test Test 5 Understanding Directions scores is greater than the μ Pre-Test Test 5 Understanding Directions scores for the experimental group.

Question 3f: What is the impact on participants' ability to retell stories in English as measured by Test 6 Story Recall of the WMLS-R?

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Test 6 Story Recall scores and the μ Post-Test Test 6 Story Recall scores for the experimental group (Table 22). The null hypothesis and alternative hypothesis are as follows:

Ho: μ Post-Test Test 6 Story Recall = μ Pre-Test Test 6 Story Recall

H_a: μ Post-Test Test 6 Story Recall > μ Pre-Test Test 6 Story Recall

Results revealed a t value of 2.5982 and a p value of .0082. Since .0082 < .05, the null hypothesis is rejected. There is significant evidence to conclude that the μ Post-Test Test 6 Story Recall scores is greater than the μ Pre-Test Test 6 Story Recall scores for the experimental group.

Table 22

Story Recall Results for Experimental Group

Participant Code	Pre-Test	Post-Test
1B	496	499
3B	470	481
4B	470	485
5B	470	481
6B	492	499
7B	494	500
8B	497	503
11B	487	497
12B	473	481
13B	473	475
14B	492	499
15B	477	489
17B	479	501
18B	473	583
19B	473	501
21B	489	496
22B	479	490

Question 3g: What is the impact on participants' ability to comprehend passages written in English as measured by Test 7 Passage Comprehension of the WMLS-R?

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Test 7 Passage Comprehension scores and the μ Post-Test Test 7 Passage Comprehension scores for the experimental group (Table 23). The null hypothesis and alternative hypothesis are as follows:

Table 23

Passage Comprehension Results for Experimental Group

Participant Code	Pre-Test	Post-Test
1B	486	533
3B	437	462
4B	432	457
5B	289	457
6B	472	504
7B	490	518
8B	476	495
11B	486	499
12B	437	447
13B	462	467
14B	472	504
15B	462	467
17B	457	467
18B	432	447
19B	447	481
21B	462	504
22B	467	486

$H_o: \mu \text{ Post-Test Test 7 Passage Comprehension} =$
 $\mu \text{ Pre-Test Test 7 Passage Comprehension}$

$H_a: \mu \text{ Post-Test Test 7 Passage Comprehension} >$
 $\mu \text{ Pre-Test Test 7 Passage Comprehension}$

Results revealed a t value of 2.4436 and a p value of .0109. Since $.0109 < .05$, the null hypothesis is rejected. There is significant evidence to conclude that the μ Post-Test Test 7 Passage Comprehension scores are greater than the μ Pre-Test Test 7 Passage Comprehension scores for the experimental group.

Question 4: What is the impact of tiered instruction couched within the Five Block Schedule on the overall abilities of English language learners enrolled in English for Speakers of Other Languages (experimental group) as measured by the Woodcock-Muñoz Language Survey-Revised (WMLS-R)?

Question 4a: What is the impact on reading ability of the experimental group as measured by the Reading Cluster of the WMLS-R?

The Reading Cluster of the Woodcock-Muñoz Language Survey-Revised is determined by taking the average of Test 3 Letter-Word Identification and Test 7 Passage Comprehension.

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Reading Cluster scores and the μ Post-Test Reading Cluster score for the experimental group (Table 24). The null hypothesis and alternative hypothesis are as follows:

$H_o: \mu \text{ Post-Test Reading Cluster} = \mu \text{ Pre-Test Reading Cluster}$

$H_a: \mu \text{ Post-Test Reading Cluster} > \mu \text{ Pre-Test Reading Cluster}$

Table 24

Reading Cluster Results for Experimental Group

Participant Code	Pre-Test		Post-Test		Average	
	Test 3	Test 7	Test 3	Test 7	Pre-Test	Post-Test
1B	545	486	565	533	515.5	549
3B	475	437	542	462	456	502
4B	436	432	522	457	434	498.5
5B	271	289	478	457	280	467.5
6B	510	472	565	504	491	534.5
7B	516	490	545	518	503	531.5
8B	554	476	565	495	515	530
11B	554	486	565	499	520	532
12B	442	437	530	447	439.5	488.5
13B	446	462	446	467	545	456.5
14B	496	472	558	504	484	531
15B	471	462	471	467	466.5	469
17B	471	451	519	467	464	493
18B	452	432	490	447	442	468.5
19B	465	447	558	481	456	519.5
21B	519	462	519	504	490.5	511.5
22B	493	467	548	486	480	517

Results revealed a t value of 2.7463 and a p value of .0056. Since $.0056 < .05$, the null hypothesis is rejected. There is significant evidence to conclude that the μ Post-Test

Reading Cluster scores are greater than the μ Pre-Test Reading Cluster scores for experimental group.

Question 4b: What is the impact on writing ability of the experimental group as measured by the Writing Cluster of the WMLS-R?

The Writing Cluster of the Woodcock-Muñoz Language Survey-Revised is determined by Test 4 Dictation.

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Test 4 Dictation scores and the μ Post-Test Test 4 Dictation scores for the control group (Table 25). The null hypothesis and alternative hypothesis are as follows:

$H_0: \mu \text{ Post-Test Test 4 Dictation} = \mu \text{ Pre-Test Test 4 Dictation}$

$H_a: \mu \text{ Post-Test Test 4 Dictation} > \mu \text{ Pre-Test Test 4 Dictation}$

Results revealed a t value of 2.255 and a p value of .0175. Since $.0175 < .05$, the null hypothesis is rejected. There is significant evidence to conclude that the μ Post-Test Writing Cluster scores are greater than the μ Pre-Test Writing Cluster scores for experimental group.

Question 4c: What is the impact on comprehension ability of the experimental group as measured by the Language Comprehension Cluster of the WMLS-R?

The Language Comprehension Cluster includes Test 6 Story Recall and Test 7 Passage Comprehension of the Woodcock-Muñoz Language Survey-Revised.

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Language Comprehension Cluster scores and the μ Post-Test Language Comprehension Cluster score for the experimental group (Table 26). The null hypothesis and alternative hypothesis are as follows:

Table 25

Writing Cluster Results for Experimental Group

Participant Code	Pre-Test	Post-Test
1B	509	509
3B	459	484
4B	433	473
5B	276	446
6B	504	531
7B	506	519
8B	525	553
11B	511	528
12B	411	471
13B	276	468
14B	494	519
15B	465	484
17B	451	489
18B	437	471
19B	473	501
21B	476	476
22B	481	494

$H_0: \mu \text{ Post-Test Language Comprehension Cluster} =$

$\mu \text{ Pre-Test Language Comprehension Cluster}$

$H_a: \mu \text{ Post-Test Language Comprehension Cluster} >$

$\mu \text{ Pre-Test Language Comprehension Cluster}$

Table 26

Language Comprehension Cluster for Experimental Group

Participant Code	Pre-Test		Post-Test		Pre-Test Average	Post-Test Average
	Test 6	Test 7	Test 6	Test 7		
1B	496	486	499	533	491	516
3B	470	437	481	462	453.5	471.5
4B	470	432	485	457	451	471
5B	470	289	481	457	379.5	469
6B	492	472	499	504	482	501.5
7B	494	490	500	518	492	509
8B	497	476	503	495	486.5	499
11B	487	486	497	499	486.5	498
12B	473	437	481	447	455	464
13B	473	462	475	467	467.5	471
14B	492	472	499	504	482	501.5
15B	477	462	489	467	469.5	478
17B	479	457	501	467	468	484
18B	473	432	483	447	452.5	465
19B	473	447	501	481	460	491
21B	489	462	496	504	475.5	500
22B	479	467	490	486	473	488

Results revealed a t value of 2.7566 and a p value of .0051. Since $.0051 < .05$, the null hypothesis is rejected. There is significant evidence to conclude that the μ Post-Test

Language Comprehension Cluster scores is greater than the μ Pre-Test Language Comprehension Cluster scores for the experimental group.

Question 4d: What is the impact on of the experimental group's ability of English language learners to use English as the medium to acquire new information as measured by the Applied Language Proficiency Cluster of the WMLS-R?

The Applied Language Proficiency Cluster includes Test 4 Dictation, Test 5 Understanding Directions, Test 6 Story Recall, and Test 7 Passage Comprehension of the Woodcock-Muñoz Language Survey-Revised.

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Applied Language Proficiency Cluster scores and the μ Post-Test Applied Language Proficiency Cluster score for the experimental group (Table 27). The null hypothesis and alternative hypothesis are as follows:

H_0 : μ Post-Test Applied Language Proficiency Cluster =
 μ Pre-Test Applied Language Proficiency Cluster

H_a : μ Post-Test Applied Language Proficiency Cluster >
 μ Pre-Test Applied Language Proficiency Cluster

Results revealed a t value of 2.8101 and a p value of .0046. Since $.0046 < .05$, the null hypothesis is rejected. There is significant evidence to conclude that the μ Post-Test Applied Language Proficiency Cluster scores is greater than the μ Pre-Test Applied Language Proficiency Cluster scores for the experimental group.

Table 27

Applied Language Proficiency for Experimental Group

Participant Code	Pre-Test				Post-Test				Pre-Test Average	Post-Test Average
	Test 4	Test 5	Test 6	Test 7	Test 4	Test 5	Test 6	Test 7		
1B	509	535	496	486	509	535	499	533	506.50	519.00
3B	459	444	470	437	484	506	481	462	452.50	483.25
4B	433	425	470	432	473	457	485	457	440.00	468.00
5B	276	413	470	289	446	461	481	457	462.00	461.25
6B	504	535	492	472	531	535	499	504	500.75	517.25
7B	506	477	494	490	519	535	500	518	491.75	518.00
8B	525	504	497	476	553	535	503	495	500.50	521.50
11B	511	509	487	486	528	535	497	499	498.25	514.75
12B	411	419	473	437	471	454	481	447	435.00	463.25
13B	276	425	473	462	468	454	475	467	409.00	466.00
14B	494	488	492	472	519	535	499	504	486.50	514.25
15B	465	450	477	462	484	463	489	467	463.50	475.75
17B	451	461	479	457	489	535	501	467	462.00	498.00
18B	437	425	473	432	471	454	483	447	441.75	463.75
19B	473	470	473	447	501	535	501	481	465.75	504.5
21B	476	511	489	462	476	535	496	504	484.5	502.75
22B	481	486	479	467	494	535	490	486	478.25	501.25

Question 4e: What is the impact on oral language proficiency of the experimental group as measured by the Oral Language Cluster of the WMLS-R?

The Oral Language Cluster includes Test 1 Picture Vocabulary, Test 2 Verbal Analogies, Test 5 Understanding Directions, and Test 6 Story Recall of the Woodcock-Muñoz Language Survey-Revised.

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Oral Language Cluster scores and the μ Post-Test Oral Language Cluster score for the experimental group (Table 28). The null hypothesis and alternative hypothesis are as follows:

H_0 : μ Post-Test Oral Language Cluster = μ Pre-Test Oral Language Cluster

H_a : μ Post-Test Oral Language Cluster > μ Pre-Test Oral Language Cluster

Results revealed a t value of 2.7237 and a p value of .0052. Since $.0052 < .05$, the null hypothesis is rejected. There is significant evidence to conclude that the μ Post-Test Oral Language Cluster scores are greater than the μ Pre-Test Oral Language Cluster scores for the experimental group.

Question 4f: What is the total impact on English ability of the experimental group as measured by the Broad English Ability-Total Cluster of the WMLS-R?

The Broad English Ability Cluster-Total includes Test 1 Picture Vocabulary, Test 2 Verbal Analogies, Test 3 Letter-Word Identification, Test 4 Dictation, Test 5 Understanding Directions, Test 6 Story Recall, and Test 7 Passage Comprehension of the Woodcock-Muñoz Language Survey-Revised (Tables 29 and 30).

Table 28

Oral Language Cluster for the Experimental Group

Participant Code	Pre-Test				Post-Test				Pre-Test Average	Post-Test Average
	Test 1	Test 2	Test 5	Test 6	Test 1	Test 2	Test 5	Test 6		
1B	485	511	535	496	504	528	535	499	506.75	516.50
3B	431	459	444	470	470	486	506	481	451.00	485.75
4B	401	434	425	470	405	479	457	485	432.5	456.50
5B	388	414	413	470	445	466	461	481	421.25	463.25
6B	488	504	535	492	514	528	535	499	504.75	519.00
7B	482	514	477	494	504	528	535	500	491.75	516.75
8B	492	528	504	497	511	525	535	503	505.25	519.25
11B	513	497	509	487	538	288	535	497	502.75	524.50
12B	415	414	419	473	463	466	454	481	430.25	466.00
13B	421	449	425	473	452	449	454	475	442.00	457.50
14B	482	490	488	492	492	525	535	499	488.00	512.75
15B	431	476	450	477	463	504	463	489	458.50	479.75
17B	426	476	461	479	467	507	535	501	460.50	502.50
18B	401	414	425	473	431	466	454	483	428.25	458.50
19B	456	486	470	473	473	518	535	501	471.25	506.75
21B	470	486	511	489	498	521	535	496	489.00	512.50
22B	488	483	486	479	521	521	535	490	484.00	516.75

Table 29

Pre-Test Broad English Ability-Total Cluster for the Experimental Group

Participant Code	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	Test 7	Pre-Test Average
1B	485	511	545	509	535	496	486	509.57
3B	431	459	475	459	444	470	437	453.57
4B	401	434	436	433	425	470	432	433.00
5B	388	414	271	276	413	470	289	360.14
6B	488	504	510	504	535	492	472	500.71
7B	482	514	516	506	477	494	490	497.00
8B	492	528	554	525	504	497	476	471.86
11B	513	497	554	511	509	487	486	508.86
12B	415	414	442	411	419	473	437	430.14
13B	421	449	446	276	425	473	462	421.71
14B	482	490	496	494	488	492	472	487.71
15B	431	476	471	465	450	477	462	461.71
17B	426	476	471	451	461	479	457	460.14
18B	401	414	452	437	425	473	432	433.43
19B	456	486	465	473	470	473	447	467.14
21B	470	486	519	476	511	489	462	487.57
22B	488	483	493	481	486	479	467	482.43

Table 30

Post-Test Broad English Ability-Total for the Experimental Group

Participant Code	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	Test 7	Post-Test Average
1B	504	528	565	509	535	499	533	524.71
3B	470	486	542	484	506	481	462	490.14
4B	405	479	522	473	457	485	457	468.29
5B	445	466	478	446	461	481	457	462.00
6B	514	528	565	531	535	499	504	538.14
7B	504	528	545	519	535	500	518	521.29
8B	511	525	565	553	535	503	495	527.14
11B	538	288	565	528	535	497	499	527.14
12B	463	466	530	471	454	481	447	473.14
13B	452	449	446	468	454	475	467	458.71
14B	492	525	558	519	535	499	504	518.86
15B	463	504	471	484	463	489	467	477.29
17B	467	507	519	489	535	501	467	497.86
18B	431	466	490	471	454	483	447	463.14
19B	473	518	558	501	535	501	481	509.57
21B	498	521	519	476	535	496	504	507.00
22B	521	521	548	494	535	490	486	513.57

A two-sample t-test at 95% confidence was conducted to compare the μ Pre-Test Broad English Ability Cluster scores and the μ Post-Test Broad English Ability Cluster score for the experimental group. The null hypothesis and alternative hypothesis are as follows:

H_0 : μ Post-Test Broad English Ability Cluster =

μ Pre-Test Broad English Ability Cluster

H_a : μ Post-Test Broad English Ability Cluster >

μ Pre-Test Broad English Ability Cluster

Results revealed a t value of 3.1417 and a p value of .0019. Since $.0019 < .05$, the null hypothesis is rejected. There is significant evidence to conclude that the μ Post-Test Broad English Ability Cluster scores are greater than the μ Pre-Test Broad English Ability Cluster scores for the experimental group.

Question Five: Are the gains in student achievement for specific skills, as measured by the Woodcock Muñoz Language Survey – Revised (WMLS-R), of English language learners enrolled in English for Speakers of Other Languages I and II receiving tiered instruction couched within the Five Block Schedule (experimental group) greater than that of English language learners enrolled in English for Speakers of Other Languages I and II receiving instruction that follows the Sheltered Instruction Observation Protocol model (control group)?

Question 5a: Are the gains in the ability to produce English words for pictures of items, as measured by Test 1 Picture Vocabulary of the WMLS-R, greater for the experimental group?

A two-sample t-test at 95% confidence was conducted to compare the change in the μ Test 1 Picture Vocabulary scores for both the control group and the experimental group (Table 31). The null hypothesis and alternative hypothesis are as follows:

Table 31

Comparison of Gains for Test 1 Picture Vocabulary

<u>School A – Control Group</u>		<u>School B – Experimental Group</u>	
Participant Code	Post-- Pre-Test	Participant Code	Post-- Pre-Test
1A	3	1B	19
2A	16	3B	39
3A	11	4B	4
4A	16	5B	57
5A	6	6B	26
6A	0	7B	22
		8B	19
		11B	20
		12B	48
		13B	31
		14B	10
		15B	32
		17B	41
		18B	30
		19B	17
		21B	28
		22B	33

Ho: Change in the μ Test 1 Picture Vocabulary scores for experimental group =
Change in μ Test 1 Picture Vocabulary scores for control group

H_a: Change in the μ Test 1 Picture Vocabulary scores for experimental group >
Change in μ Test 1 Picture Vocabulary scores for control group

Results revealed a t value of 2.185 and a p value of 1.297. Since $1.297 > .05$, the null hypothesis is confirmed. There is no significant difference between the change in the μ Test 1 Picture Vocabulary scores for the experimental and the control group.

Question 5b: Are the gains in the ability to complete analogies, as measured by Test 2 Verbal Analogies of the WMLS-R, greater for the experimental group?

A two-sample t-test at 95% confidence was conducted to compare the change in the μ Test 2 Verbal Analogies scores for both the control group and the experimental group (Table 32). The null hypothesis and alternative hypothesis are as follows:

Ho: Change in the μ Test 2 Verbal Analogies scores for experimental group =
Change in the μ Test 2 Verbal Analogies scores for control group

H_a: Change in the μ Test 2 Verbal Analogies scores for experimental group >
Change in the μ Test 2 Verbal Analogies scores for control group

Results revealed a t value of 4.967 and a p value of 4.427. Since $4.427 > .05$, the null hypothesis is confirmed. There is no significant difference between the change in the μ Test 2 Verbal Analogies scores for the experimental and the control group.

Table 32

Comparison of Gains for Test 2 Verbal Analogies

School A – Control Group		School B – Experimental Group	
Participant Code	Post-- Pre-Test	Participant Code	Post-- Pre-Test
1A	3	1B	17
2A	7	3B	27
3A	0	4B	65
4A	20	5B	52
5A	4	6B	24
6A	0	7B	14
		8B	0
		11B	31
		12B	52
		13B	0
		14B	35
		15B	28
		17B	31
		18B	52
		19B	32
		21B	35
		22B	38

Question 5c: Are the gains in the ability to identify letters and decode words in English, as measured by Test 3 Letter-Word Identification of the WMLS-R, greater for the experimental group?

A two-sample t-test at 95% confidence was conducted to compare the change in the μ Test 3 Letter-Word Identification scores for both the control group and the experimental group (Table 33). The null hypothesis and alternative hypothesis are as follows:

Ho: Change in the μ Test 3 Letter-Word Identification scores for experimental group = Change in the μ Test 3 Letter-Word Identification scores for control group

H_a: Change in the μ Test 3 Letter-Word Identification scores for experimental group > Change in the μ Test 3 Letter-Word Identification scores for control group

Results revealed a t value of 2.636 and a p value of .0081. Since $.0081 < .05$, the null hypothesis is rejected. There is significant evidence to conclude that the change in the μ Test 3 Letter-Word Identification scores for the experimental is greater than that of the control group. The experimental group made more gains in the ability to identify letters and decode words in English than did the control group.

Question 5d: Are the gains in the ability to produce written English dictated by the test administrator, as measured by Test 4 Dictation of the WMLS-R, greater for the control group?

A two-sample t-test at 95% confidence was conducted to compare the change in the μ Test 4 Dictation scores for both the control group and the experimental group (Table 34). The null hypothesis and alternative hypothesis are as follows:

Table 33

Comparison of Gains for Test 3 Letter-Word Identification

School A – Control Group		School B – Experimental Group	
Participant Code	Post-- Pre-Test	Participant Code	Post-- Pre-Test
1A	19	1B	20
2A	17	3B	67
3A	31	4B	86
4A	17	5B	207
5A	17	6B	55
6A	0	7B	29
		8B	11
		11B	11
		12B	88
		13B	0
		14B	62
		15B	0
		17B	48
		18B	38
		19B	93
		21B	0
		22B	55

Table 34

Comparison of Gains for Test 4 Dictation

School A – Control Group		School B – Experimental Group	
Participant Code	Post- – Pre-Test	Participant Code	Post- – Pre-Test
1A	18	1B	0
2A	3	3B	25
3A	5	4B	40
4A	13	5B	170
5A	10	6B	27
6A	31	7B	13
		8B	28
		11B	17
		12B	60
		13B	192
		14B	25
		15B	19
		17B	38
		18B	34
		19B	28
		21B	0
		22B	13

Ho: Change in the μ Test 4 Dictation scores for experimental group =

Change in the μ Test 4 Dictation scores for control group

H_a : Change in the μ Test 4 Dictation scores for experimental group >

Change in the μ Test 4 Dictation scores for control group

Results revealed a t value of 2.1461 and a p value of .0225. Since $.0225 < .05$, the null hypothesis is rejected. There is significant evidence to conclude that the change in the μ Test 4 Dictation scores for the experimental is greater than that of the control group. The experimental group made more gains in the ability to produce written English dictated by the test administrator than did the control group.

Question 5e: Are the gains in the ability to follow directions in English, as measured by Test 5 Understanding Directions of the WMLS-R, greater for the experimental group?

A two-sample t-test at 95% confidence was conducted to compare the change in the μ Test 5 Understanding Directions scores for both the control group and the experimental group (Table 35). The null hypothesis and alternative hypothesis are as follows:

H_o : Change in the μ Test 5 Understanding Directions scores for experimental group = Change in the μ Test 5 Understanding Directions scores for control group

H_a : Change in the μ Test 5 Understanding Directions scores for experimental group > Change in the μ Test 5 Understanding Directions scores for control group

Results revealed a t value of 3.5113 and a p value of .0010. Since $.0010 < .05$, the null hypothesis is rejected. There is significant evidence to conclude that the change in the μ Test 5 Understanding Directions scores for the experimental is greater than that of the control group. The experimental group made more gains in the ability to follow directions in English than did the control group.

Table 35

Comparison of Gains for Test 5 Understanding Directions

School A – Control Group		School B – Experimental Group	
Participant Code	Post- – Pre-Test	Participant Code	Post- – Pre-Test
1A	11	1B	0
2A	14	3B	62
3A	17	4B	32
4A	9	5B	48
5A	14	6B	0
6A	29	7B	58
		8B	31
		11B	26
		12B	35
		13B	29
		14B	47
		15B	13
		17B	74
		18B	29
		19B	65
		21B	24
		22B	49

Question 5f: Are the gains in the ability to retell stories in English, as measured by Test 6 Story Recall of the WMLS-R, greater for the experimental group?

A two-sample t-test at 95% confidence was conducted to compare the change in the μ Test 6 Story Recall scores for both the control group and the experimental group (Table 36). The null hypothesis and alternative hypothesis are as follows:

Table 36
Comparison of Gains for Test 6 Story Recall

School A – Control Group		School B – Experimental Group	
Participant Code	Post- – Pre-Test	Participant Code	Post- – Pre-Test
1A	0	1B	3
2A	39	3B	11
3A	2	4B	15
4A	-2	5B	11
5A	6	6B	7
6A	8	7B	6
		8B	6
		11B	10
		12B	8
		13B	2
		14B	7
		15B	12
		17B	22
		18B	10
		19B	28
		21B	7
		22B	11

Ho: Change in the μ Test 6 Story Recall scores for experimental group =
Change in the μ Test 6 Story Recall scores for control group

H_a: Change in the μ Test 6 Story Recall scores for experimental group >
Change in the μ Test 6 Story Recall scores for control group

Results revealed a t value of 1.1950 and a p value of .1316. Since .1316 > .05, the null hypothesis is confirmed. There is no significant difference between the change in the μ Test 6 Story Recall scores for the experimental and the control group.

Question 5g: Are the gains in the ability to comprehend passages written in English, as measured by Test 7 Passage Comprehension of the WMLS-R, greater for the experimental group?

A two-sample t-test at 95% confidence was conducted to compare the change in the μ Test 7 Passage Comprehension scores for both the control group and the experimental group (Table 37). The null hypothesis and alternative hypothesis are as follows:

Ho: Change in the μ Test 7 Passage Comprehension scores for experimental group = Change in the μ Test 7 Passage Comprehension scores for control group

H_a: Change in the μ Test 7 Passage Comprehension scores for experimental group > Change in the μ Test 7 Passage Comprehension scores for control group

Results revealed a t value of .1123 and a p value of .4558. Since .4558 > .05, the null hypothesis is confirmed. There is no significant difference between the change in the μ Test 7 Story Recall scores for the experimental and the control group.

Table 37

Comparison of Gains for Test 7 Passage Comprehension

School A – Control Group		School B – Experimental Group	
Participant Code	Post- – Pre-Test	Participant Code	Post- – Pre-Test
1A	32	1B	47
2A	5	3B	25
3A	28	4B	25
4A	44	5B	168
5A	18	6B	32
6A	52	7B	28
		8B	19
		11B	13
		12B	10
		13B	5
		14B	32
		15B	5
		17B	10
		18B	15
		19B	34
		21B	42
		22B	19

Question Six: Are the gains in overall student achievement, as measured by the Woodcock Muñoz Language Survey – Revised (WMLS-R), of English language learners enrolled in English for Speakers of Other Languages I and II receiving tiered instruction

couched within the Five Block Schedule (experimental group) greater than that of English language learners enrolled in English for Speakers of Other Language I and II receiving instruction that follows the Sheltered Instruction Observation Protocol model (control group)?

Question 6a: As measured by the Reading Cluster of the WMLS-R, is the reading ability of the experimental group greater than that of the control group?

The Reading Cluster of the Woodcock-Muñoz Language Survey-Revised is determined by taking the average of Test 3 Letter-Word Identification and Test 7 Passage Comprehension.

A two-sample t-test at 95% confidence was conducted to compare the change in the μ Reading Cluster scores for both the control group and the experimental group (Table 38). The null hypothesis and alternative hypothesis are as follows:

Ho: Change in the μ Reading Cluster scores for experimental group =
Change in the μ Reading Cluster scores for control group

H_a: Change in the μ Reading Cluster scores for experimental group >
Change in the μ Reading Cluster Comprehension scores for control group

Results revealed a t value of 1.6260 and a p value of .0602. Since .0602 > .05, the null hypothesis is confirmed. There is no significant difference between the change in the μ Reading Cluster scores for the experimental and the control group.

Table 38

Comparison of Gains for Reading Cluster

School A – Control Group		School B – Experimental Group	
Participant Code	Post- – Pre-Test	Participant Code	Post- – Pre-Test
1A	25.5	1B	33.5
2A	11	3B	46
3A	29.5	4B	55.5
4A	30.5	5B	187.5
5A	17.5	6B	43.5
6A	26	7B	28.5
		8B	15
		11B	12
		12B	49
		13B	2.5
		14B	47
		15B	2.5
		17B	29
		18B	26.5
		19B	63.5
		21B	21
		22B	37

Question 6b: As measured by the Writing Cluster of the WMLS-R, is the writing ability of the experimental group greater than that of the control group?

The Writing Cluster scores are determined by participants' scores on Test 4 Dictation.

A two-sample t-test at 95% confidence was conducted to compare the change in the μ Writing Cluster scores for both the control group and the experimental group (Table 39). The null hypothesis and alternative hypothesis are as follows:

Table 39

Comparison of Gains for Writing Cluster

School A – Control Group		School B – Experimental Group	
Participant Code	Post- – Pre-Test	Participant Code	Post- – Pre-Test
1A	18	1B	0
2A	3	3B	25
3A	5	4B	40
4A	13	5B	170
5A	10	6B	27
6A	31	7B	13
		8B	28
		11B	17
		12B	60
		13B	192
		14B	25
		15B	19
		17B	38
		18B	34
		19B	28
		21B	0
		22B	13

Ho: Change in the μ Writing Cluster scores for experimental group =
Change in the μ Writing Cluster scores for control group

H_a: Change in the μ Writing Cluster scores for experimental group >
Change in the μ Writing Cluster scores for control group

Results revealed a t value of 2.1461 and a p value of .0225. Since .0225 < .05, the null hypothesis is rejected. There is significant evidence to conclude that the change in the μ Writing Cluster scores for the experimental is greater than that of the control group. The experimental group made more gains in the ability to produce written English dictated by the test administrator than did the control group.

Question 6c: As measured by the Language Comprehension Cluster of the WMLS-R, is the comprehension ability of the experimental group greater than that of the control group?

The Language Comprehension Cluster includes Test 6 Story Recall and Test 7 Passage Comprehension of the Woodcock-Muñoz Language Survey-Revised.

A two-sample t-test at 95% confidence was conducted to compare the change in the μ Language Comprehension Cluster scores for both the control group and the experimental group (Table 40). The null hypothesis and alternative hypothesis are as follows:

Ho: Change in the μ Language Comprehension Cluster scores for experimental group = Change in the μ Language Comprehension Cluster scores for control group

H_a: Change in the μ Language Comprehension Cluster scores for experimental group > Change in the μ Language Comprehension Cluster Comprehension scores for control group

Table 40

Comparison of Gains for Language Comprehension Cluster

School A – Control Group		School B – Experimental Group	
Participant Code	Post- – Pre-Test	Participant Code	Post- – Pre-Test
1A	16	1B	25
2A	22	3B	18
3A	15	4B	20
4A	21	5B	89.5
5A	12	6B	19.5
6A	30	7B	17
		8B	12.5
		11B	11.5
		12B	9
		13B	3.5
		14B	19.5
		15B	8.5
		17B	16
		18B	12.5
		19B	31
		21B	24.5
		22B	15

Results revealed a t value of .2646 and a p value of .3969. Since $.3969 > .05$, the null hypothesis is confirmed. There is no significant difference between the change in the μ Language Comprehension Cluster scores for the experimental and the control group.

Question 6d: As measured by the Applied Language Proficiency Cluster of the WMLS-R, is the ability of the experimental group to use language to acquire new information greater than that of the control group?

The Applied Language Proficiency Cluster includes Test 4 Dictation, Test 5 Understanding Directions, Test 6 Story Recall, and Test 7 Passage Comprehension of the Woodcock-Muñoz Language Survey-Revised.

A two-sample t-test at 95% confidence was conducted to compare the change in the μ Applied Language Proficiency Cluster scores for both the control group and the experimental group (Table 41). The null hypothesis and alternative hypothesis are as follows:

H_0 : Change in the μ Applied Language Proficiency Cluster scores for experimental group = Change in the μ Applied Language Proficiency Cluster scores for control group

H_a : Change in the μ Applied Language Proficiency Cluster scores for experimental group > Change in the μ Applied Language Proficiency Cluster scores for control group

Results revealed a t value of 2.2922 and a p value of .0165. Since $.0165 < .05$, the null hypothesis is rejected. There is significant evidence to conclude that the change in the μ Applied Language Proficiency Cluster scores for the experimental is greater than

that of the control group. The experimental group made more gains in the ability to use English to acquire new knowledge and skills than did the control group.

Table 41

Comparison of Gains for Applied Language Proficiency Cluster

School A – Control Group		School B – Experimental Group	
Participant Code	Post- – Pre-Test	Participant Code	Post- – Pre-Test
1A	15.25	1B	12.5
2A	15.25	3B	30.75
3A	13	4B	28
4A	16	5B	99.25
5A	12	6B	16.5
6A	30	7B	26.25
		8B	26.25
		11B	21
		12B	16.5
		13B	28.25
		14B	57
		15B	27.75
		17B	12.25
		18B	36
		19B	22
		21B	38.75
		22B	18.25

Question 6e: As measured by the Oral language Cluster of the WMLS-R, is the oral language proficiency of the experimental group greater than that of the control group?

The Oral Language Cluster includes Test 1 Picture Vocabulary, Test 2 Verbal Analogies, Test 5 Understanding Directions, and Test 6 Story Recall of the Woodcock-Muñoz Language Survey-Revised.

A two-sample t-test at 95% confidence was conducted to compare the change in the μ Oral Language Cluster scores for both the control group and the experimental group (Table 42). The null hypothesis and alternative hypothesis are as follows:

Ho: Change in the μ Oral Language Cluster scores for experimental group =
Change in the μ Oral Language Cluster scores for control group

H_a: Change in the μ Oral Language Cluster scores for experimental group >
Change in the μ Oral Language Cluster Comprehension scores for control group

Results revealed a t value of -5.2605 and a p value of .9999. Since .9999 > .05, the null hypothesis is confirmed. There is no significant difference between the change in the μ Oral Language Cluster scores for the experimental and the control group.

Question 6f: As measured by the Broad English Ability-Total Cluster of the WMLS-R, is the overall English proficiency of the experimental group higher than that of the control group?

The Broad English Ability-Total Cluster includes Test 1 Picture Vocabulary, Test 2 Verbal Analogies, Test 3 Letter-Word Identification, Test 4 Dictation, Test 5 Understanding Directions, Test 6 Story Recall, and Test 7 Passage Comprehension of the Woodcock-Muñoz Language Survey-Revised.

Table 42

Comparison of Gains for Oral Language Cluster

School A – Control Group		School B – Experimental Group	
Participant Code	Post- – Pre-Test	Participant Code	Post- – Pre-Test
1A	4.25	1B	9.75
2A	19.00	3B	34.75
3A	7.50	4B	24.00
4A	10.75	5B	42.00
5A	7.50	6B	14.25
6A	9.25	7B	25.00
		8B	14.00
		11B	21.75
		12B	35.75
		13B	15.50
		14B	24.75
		15B	21.25
		17B	42.00
		18B	30.25
		19B	35.50
		21B	23.50
		22B	32.75

A two-sample t-test at 95% confidence was conducted to compare the change in the μ Broad English Ability Cluster scores for both the control group and the experimental group (Table 43). The null hypothesis and alternative hypothesis are as follows:

Table 43

Comparison of Gains for Broad English Ability-Total Cluster

School A – Control Group		School B – Experimental Group	
Participant Code	Post- – Pre-Test	Participant Code	Post- – Pre-Test
1A	12.28	1B	15.14
2A	14.43	3B	36.57
3A	13.43	4B	35.29
4A	16.71	5B	101.86
5A	10.71	6B	37.43
6A	17.14	7B	24.29
		8B	55.28
		11B	18.28
		12B	43
		13B	37
		14B	31.15
		15B	15.58
		17B	34.72
		18B	29.71
		19B	42.43
		21B	19.43
		22B	31.14

Ho: Change in the μ Broad English Ability Cluster scores for experimental group
= Change in the μ Broad English Ability Cluster scores for control group

H_a: Change in the μ Broad English Ability Cluster scores for experimental group
> Change in the μ Broad English Ability Cluster Comprehension scores for
control group

Results revealed a t value of 4.3479 and a p value of 2.0988. Since $2.0988 > .05$,
the null hypothesis is confirmed. There is no significant difference between the change
in the μ Broad English Ability Cluster scores for the experimental and the control group.

CHAPTER FIVE

Conclusions, Summary, and Discussion

Review of Procedures

The purpose of this study was to determine the effectiveness of tiered instruction couched within the Five-Block Schedule on the English language proficiency of English language learners enrolled in English for Speakers of Other Languages I and II as compared to that of English language learners enrolled in similar courses following the tenets of the Sheltered Instruction Observation Protocol.

Participants for this study were chosen based upon their enrollment in either English for Speakers of Other Language I or II at one of two high schools in a mid-size suburban school district. Students were enrolled in such classes due to low English proficiency. Participants at School A received instruction following the Sheltered Instruction Observation Protocol model and therefore served as the control group. Participants at School B received tiered instruction couched within the Five Block Schedule, and therefore served as the experimental group.

The researcher hypothesized that members of the experimental group would make greater gains of English language proficiency as measured by the Woodcock-Muñoz Language Survey-Revised than would members of the control group.

The Woodcock-Muñoz Language Survey-Revised was administered to participants at both School A and School B at the beginning of the second grading period of the 2009-2010 academic year in order to group students for instruction in School B as well as establish a baseline for the English language proficiency in both School A and

School B. Participants then received six weeks of instruction following either the Sheltered Instruction Observation Protocol model or tiered instruction couched within the Five Block Schedule. At the end of the second grading period of the 2009-2010 academic year, the Woodcock-Muñoz Language Survey-Revised was administered a second time. Results of the pre-test and post-test were subjected to statistical analysis in order to determine the relative efficacy of the instructional methods employed by School A and School B.

Findings

Results indicated that participants at School A, those students who received instruction following the tenets of the Sheltered Instruction Observation Protocol and therefore served as the control group, made no significant gains in all areas of English proficiency as measured by the Woodcock-Muñoz Language Survey-Revised. In general, there was no significant improvement in participants' reading ability, writing ability, comprehension ability, ability to use English as the medium for acquiring new information, oral language proficiency, and overall English proficiency. Specifically, there was no significant improvement in participants' ability to produce the word for pictures of items, complete verbal analogies, identify letters and decode words, produce written text, follow directions, retell stories, as well as comprehend passages in English.

Alternately, results indicated that participants at School B, those students who received tiered instruction couched within the Five Block Schedule and therefore served as the experimental group, made significant gains in all areas of English proficiency measured by the Woodcock-Muñoz Language Survey-Revised. In general, there was significant improvement in participants' reading ability, writing ability, comprehension

ability, ability to use English as the medium for acquiring new information, oral language proficiency, and overall English proficiency. Specifically, there was significant improvement in participants' ability to produce the word for pictures of items, complete verbal analogies, identify letters and decode words, produce written text, follow directions, retell stories, as well as comprehend passages in English.

A comparison of the results for School A (control group) and School B (experimental group) was conducted. In terms of general abilities, there was no difference in the gains made by participants in the control group and those in the experimental group in the areas of reading ability, comprehension ability, oral language proficiency, and overall English proficiency. However, participants in the experimental group made greater gains in the areas of writing ability and the ability to use English as the medium for acquiring new information. In terms of specific abilities, there was no difference in the gains made by participants in the control group and those in the experimental group in the ability to produce the word for pictures of items, complete verbal analogies, retell stories, and comprehend passages in English. However, participants in the experimental group made greater gains in the ability to identify letters and decode words, produce written text, as well as follow directions in English.

Conclusions and Implications

The individualization and the predictable structure of tiered instruction couched within the Five Block Schedule appear to support the academic achievement of English language learners in terms of establishing basic phonics skills, equipping learners with the skills necessary for written expression, helping learners be able to understand and follow directions, as well as preparing learners to use English as the medium for

acquiring knowledge of subject area content. The findings of this study would therefore seem to imply that English language learners may benefit personalized instruction that regularly attends to phonics, writing, and comprehension strategies.

First of all, individualized or differentiated instruction refers an instructional approach that varies lesson content, process, or product according to unique student needs (Tomlinson, 2004). Instruction can be differentiated at all grade levels for all student populations. Indeed, students in special education (Laurence-Brown, 2004), remedial programs (Cooper, Charlton, Valentine, & Muhlenbruck, 2000), regular education (Tomlinson), and gifted programs (Olenchak, 2001) can benefit from differentiated instruction as long as the teacher values educational equity, provides for student choice, and commits to the intellectual pursuits of her academic discipline (Simpson & Ure, 1994). Many educators command insufficient knowledge on appropriate methods for differentiation (Tomlinson, 1994) and could therefore benefit from this study in terms of its example of the implementation of personalized instruction for English language learners.

Secondly, explicit instruction in phonics may be both crucial and beneficial for English language learners (Barone & Xu, 2007). Without proper phonics instruction, English language learners stand to fall further and further behind their monolingual peers. Disparities in terms of phonics skills between monolingual and bilingual students contribute to an ever-widening achievement gap that ultimately culminates in dropping out in many cases (Brice & Brice, 2009). An increase in phonics skills is directly related to an increased in reading performance for English language learners (Neufeld, Amendum, Fitzgerald, & Guthrie, 2006; Vanderwood, Linklater, & Healy, 2008) in terms

of oral fluency (Dansereau, 1995) and comprehension (Araju, 2002). Hence, an instructional approach that neglects phonics might hinder students' oral language proficiency and ability to comprehend both spoken and written language.

Next, setting aside time for daily writing practice is essential for English language learners. Daily differentiated writing instruction has been successfully implemented with English language learners (Bantis, 2008). In fact, failure to provide writing instruction commiserate with students' various English proficiency levels may stunt growth in the area of written expression (Schultz, 2009). Appropriate writing instruction can have a positive impact on English language learners' reading skills (Cohen, 2007) and academic literacy (Curry, 2004). Research also indicates that writing instruction may be even more beneficial if lesson activities intertwine writing instruction with comprehension strategies instruction (Olson & Land, 2007) as well as involve parents or guardians in students' writing endeavors (Wollman-Bonilla, 2000).

Finally, simultaneous instruction in English and comprehension strategies is essential in order to enable English language learners to use English as the means for apprehending subject area content. The comprehension strategies taught to English language learners should encompass listening, speaking, reading, and writing (Pollard-Durodola, Mathes, Vaughn, Cardenas-Hagan, & Linan-Thompson, 2006). If executed thoughtfully, comprehension strategy instruction may lead an increased ability to understand spoken and written texts in English (Proctor, Dalton, & Grisham, 2007).

Limitations

Research Context

The results of this study may have been hindered by the research context. The study was confined to one school district in north central Texas. The researcher took into consideration the implementation of tiered instruction within the Five Block Schedule in only one school. Investigation was conducted solely at the high school level, and did not incorporate elementary and middle schools.

Duration of the Study

The study spanned a period of only six weeks. Hence, the experimental group received treatment for a limited amount of time. Results may have varied if participants were exposed to the treatment for a longer period of time.

Participants

English language learners at the secondary level demonstrate some unique challenges to educators. Such factors may have limited the results of this study.

First of all, the participants of the study came from a highly transient population. Transiency can lead to gaps in education. The families of such students frequently relocate both within and without the United States. A student who is here today may be gone tomorrow. Furthermore, because their families have relocated so often, students may have significant gaps of time during which they were not enrolled in school and therefore receiving instruction neither in their home language nor in English. A student may be of the proper age to be in ninth grade, but have only six years of formal school under her belt. The educator is tasked with both facilitating English proficiency and

elevating said student's content area knowledge to a level commiserate with her grade-level peers (Beatty, Neisser, Trent, & Heubert, 2001; Sarmiento, 2008).

Second, low attendance rates also present a challenge. English language learners tend to be absent more often for a myriad of reasons. Some students work long hours after school either in a business establishment engaging in manual labor or within the home caring for younger siblings while parents work a second job. Such students miss school frequently due to the exhaustion afforded them by having too many balls in the air. Other students are overwhelmed by the requirements of negotiating the acquisition of a new language, the shock of a new culture, and the demands of an academically rigorous environment. Their frustration leads them to remain in the comfort of the familiar at home. Still other students get involved in detrimental activities. Involvement in a fast lifestyle often makes success in education unattainable. Taken altogether, acquisition of new knowledge and skills may be incomplete due to frequent absences (Beatty, Neisser, Trent & Heubert, 2001; Sarmiento, 2008).

Next, the number of participants may also have influenced the results of this study. The researcher initially anticipated the participation of approximately forty students, twenty from School A and twenty from School B. However, because participation was voluntary, the researcher fell short of her goal. Only six individuals from School A and seventeen individuals from School B participated in the study. Further gains in English proficiency made by participants in School A may have been hidden by the disparity between the numbers of participants at each school.

Finally, the majority of English language learners participating in the study were of Latin heritage and therefore Spanish speakers. Very few participants spoke languages

of non-Latin roots. Results may have varied had participants' home languages been more disparate.

Role of the Researcher

The researcher in this study was also the teacher to the treatment group. Results may have been skewed as a result of the researcher's intimate involvement in the research context.

Recommendations for Further Research

Further research into the effectiveness of tiered instruction couched within the Five Block Schedule may vary according to sample size, context of instruction, duration of the investigation, characteristics of participants, and methodological elements. First of all, the sample size for this study was small. By incorporating more participants, future studies may yield even more reliable results. Secondly, the context of instruction for this investigation was limited to the high school level. By conducting research into the effectiveness of the instructional methods of this inquiry at the elementary and middle school level, researchers may be able to determine its relative applicability in said contexts. Next, participants in this study received instruction according to their given methods for a period of six weeks. Should the study be replicated, researchers may want to increase the amount of time between pre-test and post-test administrations. Furthermore, the overwhelming majority of participants in this study speak Spanish as a first language. It may be erroneous to assume that the same results yielded for a Spanish speaking population will be yielded for a population consisting of speakers of other native languages. Hence, research should expand to compare the relative effectiveness of

the methods explored in this study on native speakers of languages other than Spanish.

Finally, this study paired tiered instruction with the Five Block Schedule as it is used with English language learners. At present, very little research has examined the effectiveness of these methods alone or in concert with English language learners. Future research into the effectiveness of tiered instruction, the Five Block Schedule, or both within the context of an English as a second language program environment could be advantageous.

APPENDICES

APPENDIX A

Certification of Informed Consent – English

Baylor University
Certification of Informed Consent
Principal Investigator: Leslie Hancock, M.Ed., Ed.D. Candidate, School of
Education, Department of Curriculum and Instruction

This form asks for your consent to allow your child to participate in educational research. For this research, you child will participate in regular classroom activities as well as submit to pre- and post-evaluation of his or her English language proficiency.

There will be no physical risks at any time. You may elect, either now or at any time during the study, to withdraw your child from participation, with no penalty or loss of benefits. You should understand that your child's participation is completely voluntary.

For the purposes of this study, we have no interest in how a specific individual performs on the assessment. There will be no identifying codes used, so your child is guaranteed anonymity.

The results should be calculated in the ensuing months, and will be available for review, if you want to see the outcome. Because all individual data will be coded, there will be no way that we can tell you exactly how your child performed. The data will inform us on the merit of potential innovations for English language learners in the secondary educational setting.

You may decide to share this information with your child. While only you as a parent or legal guardian are capable under the law to consent to your child's participation in this study, it is preferable that your child be made aware (consistent with your child's age and level of understanding) that they are part of a study. If you discern that your child is not comfortable with participating in the study, you may consider (as a parent or legal guardian) not consenting to your child's participation in the study.

Please direct all inquiries to Mrs. Leslie Hancock, School of Education, Department of Curriculum and Instruction, 321 Old York Road, Irving, TX 75063. Mrs. Hancock may be reached at (817)975-7420.

I have read and understood this form, am aware of my rights as a parent or guardian of a participant, and have agreed to allow my child to participate in this research.

NAME (signature)

Date

APPENDIX B

Certification of Informed Consent - Spanish

Baylor University
Certification of Informed Consent
Principal Investigator: Leslie Hancock, M.Ed., Ed.D. Candidate, School of
Education, Department of Curriculum and Instruction

Esta forma pide por su permiso de su niño/a para participar en investigaciones enseñanza. Su hijo/a participará en actividades regulares de mi salón y tomará dos evaluaciones, uno antes de intrusiones y otro después de instrucciones. Su hijo/a no será dañado/a. Usted le puede decir a su hijo/a que lo puede retirar cualquier momento que usted quiera, sin sanciones ni pérdida de beneficios. Usted debe entender que la participación de su niño/a es completamente voluntaria.

A los efectos de este estudio, no tenemos ningún interés en saber cómo un individuo específico realiza en la evaluación. El anonimato y podrá ser utilizado los códigos de identificación, de modo que se garantiza su hijo. Los resultados se calcularán en los meses siguientes y estará disponible para su revisión, si desea ver el resultado. Debido a que todos los datos de los individuos serán codificados, no habrá manera de que podamos decir exactamente cómo su hijo acabó. Los datos que nos informará sobre los méritos de posibles innovaciones de instrucción para los estudiantes del idioma Inglés en el entorno de la educación secundaria.

Usted puede decidir compartir esta información con su hijo/a. Mientras que sólo Usted como su padre son capaces en virtud de la ley para el consentimiento a la participación de su hijo/a en este estudio. Si su hijo/a no se siente cómodo con la participación en el estudio, puede considerar la posibilidad (como un padre o tutor legal) su consentimiento a la participación de su hijo/a en el estudio.

Por favor, dirija todas las preguntas a la Sra. Leslie Hancock, la escuela de Educación, Departamento de Currículo e Instrucción, 321 York Road de edad, Irving, TX 75063. La Sra. Hancock puede ser localizada en el numero (817) 975-7420.

Yo he leído y entendido este formulario, soy consciente de mis derechos como padre o tutor de un participante, y han acordado permitir que mi hijo participe en esta investigación.

NAME (signature)

Date

APPENDIX C



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March 31, 2009

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Leslie Hancock
Baylor University
321 Old York Road
Irving, TX 75063

Dear Ms. Hancock:

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