ANALYSIS OF SECOND GRADE BILINGUAL CLASSROOM OBSERVATIONS USING THE TRANSITIONAL BILINGUAL OBSERVATION PROTOCOL: LANGUAGE OF INSTRUCTION, LANGUAGE CONTENT, COMMUNICATION MODE, AND ACTIVITY STRUCTURES

A Dissertation

by

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ABSTRACT

In public education in Texas, administrators, educators, and policymakers struggle with decisions on how to improve overall quality instruction to meet the needs of English language learner (ELL) student populations. Specifically, there is an ever-increasing need to provide effective teacher pedagogy to ELLs that promotes positive academic outcomes and to evaluate effectiveness of the quality of instruction in the bilingual classroom context. Therefore, researchers have asserted it is critical to collect observational evidence related to quality instruction that impacts to students' academic outcomes. It is also important to examine variables that relate to instructional practices and classroom occurrences with at-risk student populations such as ELLs. Through continued observation of teachers' pedagogical practices with ELL students, it is possible to determine the factors that may impact quality or lack of quality in classroom instruction that which in the long run may improve teacher development. The purpose of this study was to analyze the relationships among related variables within the domains of language of instruction, language of content, communication mode and activity structure from teacher observations conducted in second grade bilingual education classes. As part of original study, there was a treatment and control group that took part. The identified variables and domains serve as the foundation of a four-dimensional model known as the Transitional Bilingual Observation Protocol (TBOP) that was implemented in over 100 classrooms as part of a grant-funded project, ELLA. Data will be analyzed to see to what extent these variables are highly related within the process that allows English language learners (ELLs) to acquire language as well as literacy skills. The data used for this

study was pre-existing and taken from a randomized, longitudinal, federally funded research project (Project ELLA, U.S. Department of Education Award No. #R305P030032, 2003-2008). As part of this investigation, a non-parametric design implementing a Chi-squared test of independence and Cramer's V were used to analyze the relationship (significance and strength) between condition and categorical variables under each domain (language of instruction, language content, communication mode, and activity structure) that occurs within the context of transitional bilingual classroom. An additional analysis consisting of Odds Ratio (OR) was implemented to examine the effect size of specific category under each of the four domains.

DEDICATION

This dissertation is dedicated to all my family and friends that I hold close and all those students in the Rio Grande Valley and San Antonio that I had the privilege of teaching and mentoring. To all those students in the impoverished communities who continue to endure without proper educational resources and to the families who struggle every day working in the migrant fields to put food on the table, "*¡Sí se puede!*," we shall overcome (United Farm Workers, 2016). I would like to especially thank my parents, Salvador and Dora Jimenez, who have always been my rock solid foundation, and I love you both infinitely. Thank you for never letting me settle for just anything in life and always supporting me with your unconditional love, patience and wisdom. My profound respect for my father and mother, who sacrificed their blood, sweat and tears so that their four children could attend college. Thank you for not just being outstanding parents but my two greatest teachers. I have learned so much from both of you overtime about life, love and faith in God. To my siblings, Laurie, Sal and Dina for the love and prayers you have shown me throughout my life, I could not have asked for better siblings. I am privileged to have you in my life and love each one of you more than my than words can ever express. To Mando, Maribel, Tía Challo-- thank you for the support and much needed prayers. And to my nephew and nieces, A.J., Salma, Olivia, and Ava-- love you all to the moon and back. To my late grandparents, Jesusa Sauceda Jimenez, Manuel Davila, and Andrea Davila for constantly watching over me from the heavens.

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Contributors

This work was supervised by a dissertation committee consisting of Dr. Rafael Lara-Alecio [advisor] and Dr. Fuhui Tong [co-advisor] of the Educational Psychology Department, Dr. Beverly J. Irby of the Educational Administration & Human Resource Development, and Dr. Armando Alonzo of the Department of History.

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NOMENCLATURE

COI	Classroom Observation Instrument
ESSA	Every Student Succeeds Act
ELLA	English Language and Literacy Acquisition
ELL	English Language Learners
NCLB	No Child Left Behind Act
SEI	Structured English Immersion
TBE	Transitional Bilingual Education
TBOP	Transitional Bilingual Observation Protocol
TBP	Transitional Bilingual Pedagogical Theory
TEA	Texas Education Agency
TEKS	Texas Essential Knowledge and Skills

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CHAPTER I

INTRODUCTION

Background of the Study

In the current state of public education, there are many education issues that politicians, parents, and community stakeholders must work together to resolve so that the future generations of children in the United States can compete globally with other countries education systems. One major issue that these stakeholders must reach agreement is how to best educate language minority children whose native language is not English. According to the National Center for Education Statistics (NCES), the population of English language learners (ELLs) has increased over the span of ten years with an estimated 4.4 million students enrolled in public schools in the 2012-2013 academic year. In southwest states such as Texas, California, and others, ELL students make-up anywhere from 10 to 22% of the total student population (NCES, 2015).

In the 2014-15 academic year, Texas had an estimated 931,376 students that were being serviced in English language learner (ELL) program. The percentage of students receiving bilingual or English as a second language instructional services increased from 14.4 % in 2004-05 to 17.8 % in 2014-15, and the percentage of students identified as English language learners grew from 15.5%to 18.1%population (Texas Education Agency, 2016d). Thus, it is evident that administrators, educators and policy makers have to come together and make well informed decisions as they relate to the lives of culturally linguistically diverse students. Particularly, when it comes to how to best to provide quality instruction to meet the needs of ELL students in public schools.

One avenue that may improve classroom instruction and increase student achievement levels, particularly for ELLs, is by evaluating teacher pedagogy within the context of the bilingual classroom. As well-known researchers, Foorman et al. (2006), Lara-Alecio, et al. (2009) and Waxman and Padron (2004) have asserted, it is of critical importance to collect observational evidence related to quality instruction and how it relates to students' academic outcomes. In addition, it is even more vital to observe instructional practices, including evaluating language of instruction, language content and activity structure in the classroom where there exists high levels of at-risk students who are constantly vulnerable at falling through the cracks of local education systems and adding to the ever increasing dropout rate (Bruce et al, 1997; Lara-Alecio & Parker, 1994; Lara-Alecio et al., 2009). By carrying out a systematic approach of observation that takes into account teachers' pedagogical practices while working with ELLs, it is possible to determine the variables that may impact quality or lack of quality in classroom instruction and which ultimately may improve teacher development (Lara-Alecio, Irby, & Tong, 2013, p. 1130).

Definition of Terms

The corresponding terms were mentioned and referred to throughout my dissertation study.

Academic Language

Academic Language is the combination of vocabulary, grammatical constructions, and language skills a student will be exposed to and acquire through the K-12 formal education years, (Cummins, 2008).

Academic Achievement

Academic Achievement relates to the comprehension of concepts of content-based instruction, conceptual development or specific skills required in a school environment (Pray, 2005).

Basic Interpersonal Communication Skills

Basic Interpersonal Communication Skills (BICS) are language skills necessary to communicate needs in a social setting (Cummins, 1980).

Bilingual Education Programs

Bilingual Education Programs are programs where the students' native language and English are utilized in together in combination for instruction. In these programs, the native language may serve as a bridge for instruction in English (Bruce, Lara-Alecio, Parker, Hasbrouck, Weaver, & Irby, 1997; Peregoy & Boyle, 1993; Trueba, 1979, 1984).

Cognitive Academic Language Proficiency

Cognitive Academic Language Proficiency (CALP) refers to the skills associated with literacy and the development of critical thinking skills in an academic context (Cummins, 1980).

English Language Learners

English language learners are students who are learn English at the beginning stages and/or have demonstrated proficiency in English (Padron & Waxman, 1999).

L1

L1 is first or native language spoken by the individual (Bruce, et al., 1997). For purpose of my study, L1 is Spanish.

L2

L2 is second language spoken by the individual (Bruce, et al., 1997). For purpose of my study, L2 is English.

Structured English Immersion (SEI)

Structured English Immersion is a program that provides students of limited English proficiency exposure to an English-only curriculum where subject matter is taught at a flexible level that is comprehensible for students. (Baker & de Kanter, 1981; Baker & de Kanter, 1983; August & Hakuta, 1997).

Transitional Bilingual Education (TBE)

Transitional Bilingual Education is a program in which subject matter is at least partially taught in the student's primary language (L1) until their second language (L2), English, is at an adequate level for them to participate and function successfully in a regular classroom (Baker & de Kanter, 1981).

Typical Transitional Bilingual Education (TBE-T) Model

For purpose of this study, TBE-T refers to the typical practice model in school with regard to transitional bilingual education.

Enhanced Transitional Bilingual Education (TBE-E) Model

Enhanced Transitional Bilingual Education was an alternate model implemented as part of the ELLA project that took place in a central Texas school district. This model incorporated an intervention to increase English language and literacy skills with students (primarily Spanish-speaking) in grades K-3 that provided instruction in the ELL students' native language for concept development as well as an increase in English

instruction as the students' advanced grade levels. As part of its execution, TBE-E model required extended time spent on components such as ESL strategies, innovative curriculum, classroom observation, professional development and parental training (Lara-Alecio, Irby, & Mathes, 2003; Tong et al., 2008).

Enhanced Structured English Immersion (SEI-E) Model

Enhanced Structured English Immersion was an alternate model implemented as part of the ELLA project that took place in a central Texas school district. This model incorporated an intervention that provides primarily instruction in English to increase English language & literacy skills of ELL students (primarily Spanish-speaking). As part of its execution, SEI-E model required extended time spent on components such as ESL strategies, innovative curriculum, classroom observation, professional development and parental training (Lara-Alecio, Irby, & Mathes, 2003; Tong et al., 2008).

Transitional Bilingual Observation Protocol (TBOP)

Transitional Bilingual Observation Protocol is a four dimensional observation instrument that was developed by Lara-Alecio & Parker (1994) and based on the four-dimensional bilingual pedagogical theory (Lara-Alecio, Irby, & Tong, 2013, p. 1129). The purpose of the TBOP instrument is to identify and assess the interactions of four major instructional dimensions within the context of a bilingual classroom. These four major instructional dimensions are as follows: (a) language of instruction, (b) language of content, (c) communication mode, and (d) activity structure (Lara-Alecio, et al., 2013, pp. 1131-1133).

Activity Structure

This domain reflects the "teacher-structured, stable, recurring learning situations, each with its own expectations for teacher and student communication" (Bruce et al., 1997, p. 126). Activity structures are operationally defined in TBOP as combinations of "(a) type of teacher behavior (e.g., directing, leading, evaluating, observing), and (b) the expectation for student responding (e.g., listening, performing, discussing, asking questions, answering questions, cooperative learning)". Other classroom activity structures such as time spent disciplining, transitions between classes, etc. are considered nonacademic. (Lara-Alecio et al., 2009, pp. 86-87)

Communication Mode

"This domain distinguishes two receptive models (Aural, Reading) and two expressive language modes (Verbal, Writing)" (Lara-Alecio et al., 2009, p. 86).

Language Content

The domain is rooted in Cummin's (1979, 1980, 1981, 1986) language acquisition theory that demonstrates a distinction between Basic Interpersonal Communications Skills (BICS) and Cognitive-Academic Language Proficiency (CALP) language skills. Lara-Alecio and Parker (1994) expand on the BICS and CALP competencies to be more adaptable in evaluating levels of discourse. "The Theory includes four levels of language content: (1) Social Routines (e.g., social exchanges and conversation), (2) Classroom Routines (e.g., repetitive school-related tasks), (3) Light Cognitive Content (e.g. discussing community new and (4) Dense Cognitive Content

(e.g., entailing conceptually demanding, specialized vocabulary; critical thinking" (Lara-Alecio et al., 2009, pp. 84-85)

Language of Instruction

The domain exhibits "four progressive uses of students' first language (L1) and second language in the classroom: (a) content presented in L1, (b) L1 introduces L2, (c) L2 supported and clarified by L1, and (d) content presented in L2" (Lara-Alecio et al., 2009, p. 84). The concept of transition, as in transitional bilingual, is identified in this domain, while also reiterating the significance of content areas as they relate to language input and learning for ELLs. Language of instruction typically relates to the teacher's use of language. Subsequently, it may also be associated with reading text and/or language utilized by students in cooperative learning groups (Lara-Alecio et al., 2009, pp. 84-85).

Theoretical or Conceptual Framework

The theoretical framework for this study is based on is a four dimensional pedagogical theory pioneered by Lara-Alecio & Parker (1994). This four-dimensional bilingual theoretical model was originally developed to identify and assess the interactions of four major instructional dimensions within the transitional bilingual classrooms (Lara-Alecio, et al., 2009, p. 84). These four major instructional dimensions are as follows: (a) language of content, (b) language of instruction, (c) communication mode, and (d) activity structure (Lara-Alecio, et al., 2013, pp. 1131-33). The Framework is presented in Chapter II.

Statement of the Problem

Within the framework of the public education system in the United States, there is a handful of policies that hold all school districts accountable for the academic progression of each student in terms of reaching adequate learning levels in the content areas of reading, language arts, and mathematics. The U.S. Department of Education (2009) required that school districts all over the country follow guidelines that are aligned with the No Child Left Behind Act (NCLB) so that schools conform to stronger accountability standards in regards to the quality education of the students. From 2002 thru 2015, the NCLB Act was the federal educational policy that states had to adhere to and follow in order to receive federal funding. The NCLB Act outlined policy that mandated that all states design a standards and assessment system to meet high standards of Adequate Yearly Progress (AYP). In order for states and school districts to meet AYP, certain goals need to be achieved which include but are not limited to providing quality teaching and improving student achievement by bringing all students to grade level in reading and mathematics by 2014 (U. S. Dept. of Education, 2009).

For many states and school districts, the dilemma was how to comply with all NCLB requirements to improve student learning, provide high-quality classroom instruction and develop high-qualified teachers without adequate resources. Aside from lack of resources, continued emphasis on standardized testing and current student population growth has also hindered many school districts from successfully carrying out federal mandates outline by the NCLB.

If the intention of the No Child Left Behind Act was to promote equal and quality education for all students in the United States, the actual implementation caused many states to revamp their entire school systems because of the sanctions that the law puts on school districts with low-performing scores. These counterproductive sanctions are typically the result of poor performance of students on standardized-tests that carry a great deal of weight when an individual state is being measured against national AYP standards (Vornberg, 2008). This high-stake testing and one-size fits all approach in education has a direct effect on teachers and students, especially those that are labeled at-risk and as well as ELL. As Menken (2006) asserted the standardized tests that most states currently employ are unreasonable as "they rely heavily on language proficiency and were developed for assessment of native English speakers – not for ELLs" (p. 523). Furthermore, ELLs are also expected to test at the same level as native English speakers and meet the same academic standards in the given content areas.

Abedi (2002) brought to lights the challenges ELLs face with regards to low performing scores on reading, science, and math assessments compared to native English speaking students. In the article, Abedi reiterated that although standardized assessments are designed to evaluate knowledge of content that "may inadvertently function as English language proficiency tests" (p. 232) for ELLs. Furthermore, Calderon, Slavin, and Sanchez (2011) stated that research points out that some states due a poor job of serving the instructional and academic needs of English language learner student populations therefore resulting in these ELLs experiencing "lower academic performance and lower graduation rates in contrast to native white students and this has

affected the nation's overall educational attainment" (p. 104). This low academic achievement has led to need for more research to be conducted in regards to how to properly develop quality instruction and overall curriculum to strengthen literacy and academic needs more effectively of ELL students (pp.103-104).

Moreover, federal laws such as NCLB Act have put even more pressure on those school districts that are labeled Title I because if the schools do not meet state and national standards, the schools can be stripped of federal funding or even worse have the state education agency close the school permanently. As Cole-Malott & Malott (2016) reiterated, high-stakes standardized testing has perpetuated inequality, by being a testing instrument that "measures students' access to resources and proximity to dominant cultures, rather than ability or quality of teaching" (p. 51).

In the end, the communities of the socio-economic disadvantaged are the ones that really lose out because now the students are endeavoring to get a quality education with fewer resources (less federal funding, lack of highly-qualified teachers to assist growing special student populations, absence of high-tech professional development opportunities) or risk being bused to alternative charter schools (Harris, 2006; Menken, 2000, 2006; Verdugo & Flores, 2007). Therefore, students, educators and schools are financially being penalized for not reaching adequately obtaining a met-standard rating on state assessments (Verdugo, 2011). Due to this testing hysteria, school administrators have placed a large amount of their effort on supporting a water-downed curriculum that supports these standardized tests, since states such as Texas use these test scores as the cornerstone of evaluating a students' academic progress and a school's overall academic

performance, through Texas Accountability Rating System (Texas Education Agency, 2016).

In a study by Hirsh (2007), it was noted that standardized testing is imposed by most states because of the pressures brought on by federal governing policy. The No Child Left Behind Act has caused many states (including Texas) to rely more heavily on aggregate statistics from standardized testing that can be garnered fairly cheaply and rapidly by state education agencies. The standardized tests are used as a one-size-fits-all tool to assess all students regardless of economic, disability, language or cultural background. Additionally, this standardized testing philosophy has greatly affected classroom curriculum, teaching and students learning as documented by the Hirsh (2007) and Jones (2009) in their studies. In the her investigation, the researcher exposed how issues related to standardized tests have water-downed curriculum, consumed professional development trainings for teachers, and lowered student achievement levels (expectations) in general.

Furthermore, other researchers have also contended that a direct result of NCLB's reliance on mandated-standardized testing is that school district administrators have become more obsessed with obligating teachers during instructional time to "teach to the test, and employ testing-taking strategies to instruct students on how to pass the state assessments (by teaching only state required objectives) in reading, writing, mathematics and science subjects (Schoen & Fusarelli, 2008; Lara, et al., 2012; Menken, 2006). The other downside to these problems associated with standardized testing are that students along with teachers become disenchanted and apathetic with learning and

instruction in the classroom setting. Also, subject areas of study and forms of learning like music, drama, the arts, social and moral development, physical education, oral language are usually devalued, if not completely ignored, since the subjects do not count toward state and national AYP standards (Hirsh, 2007).

Additionally, in some states across the country, teachers' are being annually appraised based on the performance of their students' on state assessments. This in turn is causing a high turnover among teachers working at low-income, underserved schools that are not meeting performance based standards every year (Hursh, 2013). By evaluating teachers primarily on the performance of student's test scores, many exceptional teachers have felt the need to jump ship to a more stable school district and or left the education field all together. In the end, it is the students, more so at-risk and culturally linguistically diverse students, such as the ELLs, who are adversely affected by state's reliance of standardized testing to assess one's academic achievement levels (Hursh, 2013; Schoen & Fusarelli, 2008). Other researchers have contended that NCLB Act all together has served as a vehicle to mislead stakeholders in public education to advocate for an English-only curriculum and discourage bilingual education throughout the United States (Cheung & Slavin, 2012).

On December 10, 2015, the Every Student Succeeds Act (ESSA) was signed into law by President Obama with a renewed hope that it would in turn "close the achievement gap, increasing equity, improve the quality of instruction and increase outcomes for all students" (U. S. Dept. of Education, 2015a, p. 4). This new federal law,

ESSA, provides more flexibility from the one-size-fits all mandates that defined the era of NCLB Act and marginalized schools that could not meet federal requirements.

Under ESSA, states are given the liberty to develop suitable assessment for their student populations, federal funds are provided to low-performing schools and additional resources are allocated to assist school districts in providing high-quality language instruction to ELLs (U. S. Dept. of Education, 2015a, 2015b). On the other hand, the Every Student Succeeds Act continues to mandate that ELLs satisfy the same academic standards as fellow native English speaking peers. Even though new ESSA education law has been recognized by educators throughout the country as an overall improvement to past federal policies (such as NCLB), it still falls short of providing a comprehensive solution and plan of action in how to provide ELL and at-risk students the best opportunities to succeed academically in school. The ESSA Act continues to perpetuate the marginalization of culturally and linguistically diverse students since it allows states to continue high stake testing and advocates for more assimilatory practices aimed at ELLs to acquire English skills and meet minimum state assessments scores (U. S. Dept. of Education, 2015b).

Collectively, researchers, such as Berlak (2005), Harris (2006), Hirsh (2007), and Vornberg (2008) have demonstrated that there a number of problems that states and local school districts need to solve to develop a well-rounded yet challenging school curriculum that promotes high students achievement levels among all students, including special populations, supports highly effective instruction and highly-qualified teachers. At the same time, states and school districts must consistently, abide by, and be aware of

constantly changing federal laws that are mandated by the U.S. Department of Education (2015a). In the current situation, the general question continuously asked is how can school districts across America comply with federal mandates and carry out school improvement plan goals that relate to developing highly-qualified teachers, who utilize the latest and best teaching practices, and construct a well-designed classroom curriculum that increases student achievement levels of all students, especially among special populations groups such as English language learners (ELLs).

One manner in which stakeholders in public education may improve classroom instruction and increase student achievement levels, particularly for ELLs, is by evaluating teacher pedagogy within the context of the bilingual classroom. By observing teachers' pedagogical practices with ELLs, it is possible to determine the variables that may impact classroom instruction and which ultimately may improve teacher development (Lara-Alecio, Irby, & Tong, 2013)

As Lara-Alecio and Parker (1994) asserted in their investigation and development of a four dimensional pedagogical model for transitional English bilingual classrooms known as the transitional bilingual observation (TBO) protocol. There continues to be a lack of demonstrable studies on the effectiveness of pedagogy in bilingual education. Particularly, when it comes to evaluating related variables such activity structure, language of instruction, language of content and communication mode. Therefore, it is important for state and school district officials to seriously consider providing a protocol that encourages evaluation and assessment of best teaching practices that are research-based. By employing such an instrument, perhaps

instructional practices can be improved, classroom climate can be enriched, and the academic achievement gap for many of culturally and linguistically diverse student populations can be decreased.

Purpose of the Study

The purpose of my study was to utilize pre-existing data derived from a previously funded federal project known as English Language and Literacy Acquisition (ELLA), to analyze the relationships among related variables such as language of instruction, language of content, communication mode and activity structure for teachers of second grade bilingual classes comparing experimental and control groups. The identified variables serve as the foundation of a four-dimensional model, Four Dimensional Bilingual Classroom Pedagogical Model (Lara-Alecio & Parker, 1994) and collected via the accompanying instrument, the Transitional Bilingual Observation Protocol (TBOP).

Research Questions

The research questions for my study were:

1. How did teachers in both treatment and control conditions allocate their instructional time in four domains of Activity Structure, Communication Mode, Language Content and Language of Instruction (teacher and student) as observed by TBOP?

2. Did teachers in treatment condition allocate their instructional time in four domains differently as compared with control teachers?

3. In what categories of each domain did teachers in treatment condition allocate their instructional time statistically significant different from control condition?

Significance of the Study

I have added new knowledge to the body of literature related to ELLs from their teachers' pedagogical practices. As Bruce et al. (1997) affirmed that most descriptive research in bilingual classrooms has only offered piece-meal descriptions, which only focus one or two aspects of real bilingual activity. Other researchers have inferred that there continues to be a lack of literature in relationship to knowledge base and empirical studies associated with documenting classroom pedagogical occurrences for ELLs, the quality of instruction by languages of instruction, and the interactions of pedagogy that may produce quality outcomes for such students (August & Shanahan, 2006; Lara-Alecio, et al., 2009; Slavin & Cheung, 2003; Thomas & Collier, 2003). Even after Lara-Alecio and Parker (1994) first introduced the transitional bilingual pedagogical theory (TBP), the pedagogical guidance from bilingual theory to classroom practice has been general nature" and not much has changed in 20 years (Lara-Alecio, Irby & Tong, 2013, p. 1129). As demographics are continuously increasing among culturally linguistically diverse students across the United States, it is important to collect observational evidence related to quality instruction that contributes to students' academic outcomes. Instructional practices, including evaluating language of instruction, language of content and activity structure in the classroom are even more critical for those students who are at risk of school failure such as ELL student populations (Foorman et al., 2006; Lara-Alecio, et al., 2009; Waxman & Padron, 2004). By observing teachers' pedagogical

practices with ELLs, it is possible to determine the variables that may impact quality or lack of quality in classroom instruction and which ultimately may improve teacher development (Lara-Alecio, et al., 2009).

Limitations

The research study included limitations that should be taken into consideration when examining the results. First, pre-existing data from a randomized control trial study were used in carrying out the research design and statistical analysis. Secondly, within the archived data, the sample was limited to the number of second grade teachers that participated in the 5-year research study sponsored by the U.S. Department of Education.

Delimitations

There is one delimitation of the study. The archived data that were used in the analysis were taken from a single urban school district located in southeast region of Texas.

Assumptions

An assumption of the present study was that when the initial 5-year study took place that there was fidelity of treatment for all participants in the sample.

Organization of the Study

The dissertation research study is presented in five consecutive chapters. Chapter I is comprised of the following sections: introduction (background of the study), definitions of terms, theoretical framework, statement of the problem, purpose of the

study, research questions, significance of the study, limitations, delimitations, and assumptions. Chapter II includes a literature review of how pedagogy and quality instruction are evaluated through classroom observation protocols within the context of a bilingual classroom. Specific variables associated with classroom observation protocols will be assessed that impact quality or lack of quality in classroom instruction. Chapter III comprises the method used for this research study, which includes the context of the study, research design and sampling, instrumentation, data collection, and data analysis procedures. Chapter IV is composed of the subsections related to data analysis and summary. Chapter V includes a summary of the findings, limitations, recommendations and conclusions.

CHAPTER II

NARRATIVE REVIEW OF LITERATURE

This chapter includes a two-part narrative literature review of classroom observation studies that have been carried out in bilingual classrooms and overview of the four major domains associated with the Transitional Bilingual Observation Protocol (TBOP) instrument. As part of this review of the literature, I attempt to bring to light the critical variables associated with classroom observations such as language of instruction of teacher and student, language of content, activity structure, teacher and student interactions, communication modes and how Basic Interpersonal Communication Skills and Cognitive Academic Language Proficiency relate to dense cognition in the bilingual classroom. For this narrative literature review (Davies, 2000), I conducted a search of published empirical studies that are peer-reviewed articles between the years 2001-2016. The reason I chose to focus my search for studies conducted over the past 15 years is due to the fact that several important empirical studies have since been carried out that relate to classroom observations and English language learners (ELLs) during this time period. These empirical and peer reviewed studies add to the body of literature in bilingual education that acknowledge the instructional shortcomings that continue to exist within the bilingual classrooms. Within this extensive search of articles, I was able to evaluate a total of 11 observation instruments that were relevant to my research. For a more detailed breakdown of this classroom observation instruments see Appendix A. The databases that I included in this review are: Academic Search Complete, Education Full Text, ERIC (EBSCO), JSTOR, PsychINFO and Google Scholar. I used the following

search word descriptors for classroom observation instrument: classroom observation, classroom observation techniques, classroom observation protocol, classroom observation instruments and teacher classroom observation instrument. For English language learner the succeeding search terms were applied: ELLs or English language learners, ESL or English as a second language, second language learners, limited English proficiency, bilingual education, second language instruction and second language acquisition. Other search descriptors that were utilized are as follows: teacher quality, teacher evaluation, teacher role, teacher behavior, classroom communication, and language of content, language of instruction, communication mode, activity structure, teacher interactions, and student interactions. As is common in a narrative review, I also incorporated any newspaper articles, books, and other web-based literature that is relevant to this time period and my topic.

Classroom Observation in Bilingual Classroom

Almost 20 years have passed since Bruce et al. (1997), in their evaluation of the literature, asserted that most descriptive research in bilingual classrooms has only offered piece-meal descriptions, with a focus on only few aspects of real bilingual classroom activity. Other researchers (e.g. August & Shanahan, 2006; Cheung & Slavin, 2005; Irby, Tong, Lara-Alecio, Meyer, & Rodríguez, 2007; Lara-Alecio, Tong, Irby, & Mathes, 2009) have affirmed that within fields such as bilingual education there still an ever-increasing need to develop more instruments that can measure various facets of the bilingual classrooms such as instructional events, daily observation and language of instruction and to test such instruments. As a result, there “continues to be a lack of

research on the knowledge base and empirical studies on teachers' pedagogical delivery, as well as the documented quality of teaching as shaped by instructional intervention" (Lara-Alecio et al., 2013, p. 1130). In Bruce et al. (1997), the scholars asserted that there are five major aspects of the bilingual classroom should be observed. These five variables are as follows: "a) which language of instruction is used, and for what content; b) how the first and second language may be used together; c) how students are physically grouped for instruction; d) what types of learning activities occur, and with what opportunity for student language use; e) how listening, speaking, writing and reading communication modes are utilized for language learning" (p. 123).

In the past few years, there have been newly developed studies (Echevarria, Vogt, & Short, 2012; Foorman, Goldenberg, Carlson, Saunders & Pollard-Durodola, 2004; Freedson, et al., 2009; Halle, Whittaker, & Anderson, 2010; Hamre, et. al, 2012; Holland-Coviello, 2005; Pianta, La Paro, Hamre, 2009; Rivera & Tharp, 2004;Rivera, Waxman, & Powers, 2012; Waxman & Padron, 2004) that reiterate the importance of effective classroom observation instruments as they evaluate classroom activities, quality of instruction, language and literacy, as well as social, behavioral, cognitive and linguistic development of students. Unfortunately, some of these research studies and observational tools are focused on: specific grade levels and content areas, students in the mainstream classroom, target only certain aspects of classroom activity, or language discourse. On the other hand, those that do take into account special populations such as ELLs are limited in only offering snippets of classroom and pedagogical factors that impact the learning and linguistic development of ELLs (Foorman, Goldenberg, Carlson,

Saunders & Pollard-Durodola, 2004; Rivera & Tharp, 2004; Rivera, Waxman, & Powers, 2012; Waxman & Padron, 2004). In addition, a good portion of the recently developed classroom observation instruments continue to be underdeveloped in terms of reliability and validity.

As Lara-Alecio, et al. (2009) inferred, scholarship in academia continues to be limited in effectively observing teachers' pedagogical practices with ELLs and accurately evaluating multiple facets that impact quality or lack of quality instruction in the bilingual classroom. In addition, there is a paucity of the literature in terms of long-term validation of observational instruments and empirical studies that relate to adequately assessing teachers' pedagogical delivery and how the instructional intervention (such as instructional activities, language of instruction) impacts the quality of teaching especially in the field of bilingual education(August & Shanahan, 2006; Cheung & Slavin, 2005; Irby, Tong, Lara-Alecio, Meyer, & Rodriguez, 2007; Lara-Alecio et al., 2009). Therefore, as Lara-Alecio et al. (2013) have noted there still needs to be more scholarship with relationship to classroom observation instruments and those that have been effective in measuring "classroom occurrences, teacher's pedagogical competence and how to improve teaching practices that impact students' academic performance used in a bilingual and ESL classrooms with ELLs" (Lara-Alecio et al., 2013, p. 1130).

Of those few studies, the classroom observation instrument known as the Transitional Bilingual Observational Protocol (TBOP) has garnered attention through various investigations (Lara-Alecio et al., 2012; Lara-Alecio, Tong, Irby & Mathes,

2009; Lara-Alecio, Irby & Mathes, 2003) as a comprehensive method of effectively measuring instructional aspects of the bilingual and/or ESL classroom. TBOP is a classroom observation instrument developed by Lara-Alecio and Parker (1994), which provides concrete rubric for observing and evaluating bilingual classroom activity. TBOP has four dimensions: (a) language content, (b) language of instruction, (c) activity structure, and (d) communication mode. The TBOP instrument was based on the four-dimensional bilingual pedagogical theory in response to lack of instructional and curriculum guidance tailored towards English Language Learners within the bilingual and ESL classroom. At the time, most research and empirical studies related to language development, and that evaluated the classroom environment were based on Krashen's (1985) and Cummins (1986) theories that are applied in a one-size natural situation, within the context of the classroom setting. In their investigation, Lara-Alecio and Parker (1994) put forth that the bilingual and English as Second Language (ESL) classroom must viewed as a much "more focused, directed, and more complex language learning environment than just natural situations" (p. 121).

One of the first observational studies to emphasize student outcomes and performance through systematic observation was Stallings (1973). As part of the studies, the researchers sought to include observations (e.g., record classroom occurrences) and evaluations of program effectiveness by focusing on the program-wide measures that encompassed numerous classroom variables (Stallings and Kashkowitz; 1974; Stallings (1973). As part of the Stanford Research Institute (SRI), researchers developed the SRI Classroom Observation Instrument (COI) with a broad focus of measuring the overall

effectiveness of an entire program, through the progression of program level objectives and degree of implementation as opposed to evaluating the individual students in the classroom setting or a specific target population such as ELLs (Waxman, Tharp, & Hilberg, 2004; Stallings & Freiberg, 1991). The SRI Classroom Observation Instrument (COI) as implemented in the Stallings (1973) investigation yielded results that outlined program level measures and effectiveness in contrast to outlining specific ELL measures to enhance ELL academic achievement. In addition, as noted in Stallings (1991) the SRI staff developed the COI as an observation system in "which a wide range of classroom behaviors could be recorded" as well as "procedures that were developed that could record activities, materials used, groupings and interactions" (p.109). Due the SRI COI of evaluating overall effectiveness of program models and wide-ranging amount of classroom variables excessive trainings were required for implementation of the protocol. These trainings required all observers to attend three training sessions with each training session lasting seven days (Stallings and Kashkowitz, 1974, p. 33). Also, the COI implemented by Stallings in various research studies (Stallings & Freiberg, 1991; Stallings & Kashkowitz, 1974; Stallings, 1973) was not grounded on a set theoretical framework since the instrument was primarily developed as part of the national program known as the Follow Through Program. Follow Through Program was established by Congress in 1967 during the President Lyndon B. Johnson years initially designed as service program to support efforts of Project Head Start with its primary goals of assisting economically disadvantage children in the early grades. Eventually, this federal program would evolve into a "social experiment as a longitudinal quasi-

experimental program that would evaluate the ability of an intervention program to enhance the educational achievement of economically disadvantaged children" (Stallings & Kashkowitz; 1974; p.3). As the main instrumentation of the Follow Through Program, the SRI COI was to be used as to systematically measure the effectiveness of this federal intervention program (implemented in districts, campuses, communities across the nation) as an entirety with a set of fidelity checks such as program level objectives and degree of implementation. In this case, the researchers implemented one of the first national studies that evaluated the overall effectiveness of an educational programs--based on divergent educational and developmental theories that brought to light the relationship between classroom processes to student outcomes in terms of performance (Stallings & Freiberg, 1991; Stallings & Kashkowitz, 1974; Stallings, 1973, 1976). Therefore as opposed to the TBOP instrument that is based on four-dimensional transitional bilingual pedagogical theory, the SRI Classroom Observation Instrument lacks a strong theoretical foundation and observes program effectiveness of the intervention program model that is centered on differing educational and developmental theories (Lara-Alecio, Irby, & Tong, 2013; Stallings & Kashkowitz, 1974).

In the last several years, there have been newly developed COIs that are specific to quantifying teachers' pedagogy and measuring various aspects of the ELL classroom. A few of these observational instruments have been developed to measure teacher pedagogy and ELLs academic achievement level in the class setting (Calderón, Slavin, & Sánchez, 2011; Foorman et al., 2004; Foorman & Schatschneider, 2003; Gersten & Baker, 2000; Haager et al., 2003; Irby et al., 2007; Lara-Alecio et al., 2009; Saunders et

al., 2006). These studies have provided an avenue in which to quantify and analyze variables associated with teachers' pedagogy as well as teacher and student interaction behaviors during instructional time. Such observation studies have added to the body of literature in bilingual education by bringing to light the instructional deficits that exist with the context of the ELL classroom (Greene, 1997; Heras, 1994; Ramirez, 1992).

For example, in the study conducted by Haager, Gersten, Baker, and Graves (2003), researchers offered other alternatives to measure the quality of classroom instruction for teachers with beginning ELLs. The instrument referred to English-Language Learner Classroom Observation Instrument (ELLCOI) is rooted in reading instruction and cognitive research in academic learning that implements a set of pre-determined categories that encompass aspects of instructional practice, interactive teaching and adaptations for individual differences, English-language development and vocabulary development (Baker, Gersten, Haager, Dingle, & Goldenberg, 2005; Baker, Gersten, Haager, & Dingle, 2006; Graves, Gersten, & Haager, 2004; Haager et al., 2003). The reliability of the Haager et al. (2003) instrument has been limited to investigating Spanish speaking ELLs in an urban setting without the use of randomized approach for sampling purposes and restricted to measuring reliability through a 1-4 Likert rating scale. ELLCOI was field-tested in 1999 and 2000 in 43 Southern California first-grade classrooms which consisted of at least 50% ELL students (Gersten, Baker, Haager, & Graves, 2005). The median inter-observer agreement was 74%, with a range from 55% to 88%, which according to the researchers was "a conservative estimate of instrument reliability as it is based on item-by-item agreement" (p. 201).

Additionally, Baker et al. (2006) carried out a validation of study of the classroom instrument, ELLCOI, but for use only with ELLs in grade 1. The researchers acknowledged that observers were able to rate instructional practice in way that predicted classroom reading growth and yielded a promising correlations on the order of .6 to .75, indicating a relatively strong relation between ratings of instructional practice and student reading growth. Consequently, the investigators noted that interrater reliability of the observation instrument was lower than expected due to a combination of factors caused "by the length and complexity of the instrument, the nature of the rating procedure, or the limited training time observers had to learn to use the instrument in a common way" (Baker, et al., 2006, p. 203).

Furthermore, the underlying conceptual design of ELLCOI was based on the California Reading and Language Arts Framework that hypothesized the link between instructional practices and accelerated growth in reading for English Learners (Baker, et al., 2005, 2006; Gersten, et al., 2005). ELLCOI is focused on evaluating ELLs on reading instruction and merely taking into account the benefits of positively influenced reading interventions. This instrument is designed to target only the area of reading instruction and therefore limited outside this reading content area in terms of providing evaluation measures for other content areas such as math and science (Baker et al., 2005; Haager et al., 2003).

Moreover, within the research studies (Baker, et al., 2005, 2006; Gersten, et al., 2005; Graves, et al., 2004; Whitacre, et al., 2013), there was not much information with regard to the training process observers undertook before visiting and observing

classrooms. Other than training time was limited and observers with a "reasonable knowledge of beginning reading research were able to rate observed instructional practice validly" (Baker et al., 2006, p. 212). During classroom observations, the observers were expected to take qualitative detailed field notes as they related to the instrument categories (Graves, 2004; Gersten, et al., 2005; Whitacre, Diaz, & Esquierdo, 2013). These observations were very intensive requiring two observers in the classroom at the same time or within 2 instructional days of each other and "each observation lasted for 2 1⁄2 hours, and the goal was to obtain a rating of a teacher's typical instructional style and qualities" (Baker, et al., p. 207).

Moreover, in vast majority of studies such as (Baker et al., 2005; Baker et al., 2006; Gersten et al., 2005; Graves, Gersten, Haager, 2004) where the ELLCOI was implemented there was a tendency to mainly focus on assessing ELLs reading instruction at the early childhood level of only the grade 1. One of the few exceptions, was the Whitacre, Diaz, & Esquierdo, J. (2013), which implemented the ELLCOI instrument within a single case research study of pre-service teachers in early grade levels to assess instructional practices used with ELLs during a reading language arts lesson. These instructional practices which included reading and literacy development where monitored in high need districts that had dual language/bilingual classrooms. Although in this research study conducted by Whitacre et al. (2013), it was not clear noted to what grade levels each of the pre-service teachers was assigned as part of their bilingual student teaching position. In comparison to ELLCOI, the TBOP instrument developed by Lara-Alecio and Parker (1994) has been successfully implemented and

validated at every grade level as documented by various research studies (Bruce et al., 1997; Irby, et al., 2007; Lara-Alecio et al., 2009; Lara-Alecio et al., 2012; Tong et al., 2010).

Moreover, there are additional observation instruments that have contributed to bilingual education in quantifying language and literacy development, student behavior, teacher-student interactions, teachers' pedagogy and activities when in the ELL classroom setting (Freedson, Figueras-Daniel, & Frede, 2009; Foorman, et al, 2004; Rivera & Tharp, 2004; Waxman & Padron, 2004). In Foorman, et al., 2004 and Cirino (2007), the researchers used the Timed Observations of Student Engagement (TOSE), a time-sampling instrument, to quantify and evaluate language use during teacher and student engagement occurrences. This instrument observed aspects related to instructional delivery and rated the overall quality of instruction during time slots of reading/language arts and/or English language development (ELD) instruction within the given Bilingual/ESL program models (late-exit TBE; two-way dual language; and English immersion). Additionally, Waxman and Padron (2004) implemented the Classroom Observation Schedule (COS) to assess and record the individual student's classroom behavior, language use, teacher-students interactions, and academic engagement. COS has been implemented in several studies such as Waxman, Rivera, and Powers (2012); Padron, Waxman and Huang (1999); Rivera, and Waxman (2007). This classroom observation instrument can be depicted as being utilized to obtain a "reliable lower-inference data on students' classroom behaviors" (Waxman, Rivera, & Powers, 2012, p. 58). It should be noted that in the past COS has been used in collaboration with other

observation instruments due to its limitations in evaluating only certain variables associated with classroom behaviors and the individual students as units of analysis (Waxman, Tharp, & Hilberg, 2004. In other research studies (Padron, 1994; Waxman, Padron, Shin, & Rivera, 2008), COS has been integrated with the Teacher Roles Observation Schedule (TROS), an instrument used to evaluate and collect information about the instruction behaviors associated with the teacher and/or Classroom Observation measure (COM), another observation designed to collect data on classroom characteristics, teacher/student behaviors, and instructional strategies (Ross & Smith, 1996; Waxman, Tharp, & Hilberg, 2004; Waxman et al., 2009). Turkan and Buzick (2016), in their research on commonly used ELL teacher evaluation instruments, asserted that "although COS, TROS, and COM instruments have been found to be reliable and valid by empirical research, we are aware of only two recent empirical studies documenting the combined use of these three instruments for evaluation purposes" (p. 231). According to the investigators, "neither of the two studies (ie., Padron, 1994; Waxman, Padron, Shin, & Rivera, 2008) empirically illustrate the use of the TROS, COM, and COS observation instruments offer sufficient evidence to support the use of the instruments in building causal relationships between teacher effectiveness and student achievement" (Turkan & Buzick, p. 232).

Another evaluation instrument that has been utilized in the classroom setting with ELLs is the Activity Setting Observation System (ASOS). The ASOS classroom observation instrument is founded on the grounded of sociocultural theory. In other words, it perceives that classroom setting as a social organization and therefore evaluates

English Language Learners from a sociocultural context (Rivera & Tharp, 2004; Tharp, 2005). The purpose of this instrument is to provide an unbiased description of activity within the classroom setting. It was originally developed out of the Center for Research on Education, Diversity & Excellence (CREDE) with standards for effective pedagogy while observing and quantifying socio-cultural activities in the classroom (Rivera & Tharp, 2004; Tharp, 2005; Turner & Fulmer, 2013). Other observations instruments such as the CASEBA (Classroom Assessment of Supports for Emergent Bilingual Acquisition) evaluates the quality of language and literacy supports offered by teachers to ELLs in the dual language classroom setting (Freedson, Figueras-Daniel, & Frede, 2009). The CASEBA instrument is "currently undergoing research to determine the psychometric properties of the instrument, including concurrent and predictive validity" (Halle et al., 2010, p. 62).

An additional observation instrument Early Language and Literacy Classroom Observation: Addendum English Language Learners (ELLCO-ELL) was derived as a companion measure from the ELLCO toolkit. The original ELLCO was create as a standardized measure to evaluate the quality of the classroom practices (Castro, 2005, Smith et al., 2002). The ELLCO-ELL was particularly developed to assess "classroom and instructional factors that affect the experiences of English language learners in early childhood prekindergarten settings" (Halle et al, 2010, p. 168). The observational instrument focuses its research on Latino students who are native-Spanish speaking and enrolled in bilingual or dual language programs at the prekindergarten elementary level.

ELLCO-ELL utilizes an expanded set of observation measure to assess the extent to which teachers and specific classroom practices provide students optimal support to foster language and literacy development (Buysse, 2010; Castro, 2005; Halle et al., 2010).

Yet another observation protocol that is worth mentioning is defined as being the Sheltered Instruction Observation Protocol (SIOP). This instrument was originally designed as an observation and rating tool for the researchers to utilize in observing teachers while working with ESL students as opposed to bilingual or dual language students. Specifically, SIOP was developed to evaluate teacher's implementation of sheltered instruction within the context of only the ESL classroom setting (Echevarria & Short, 2011; Short & Echevarria, 1999; Short & Echevarria, 2005). The initial SIOP project was formulated at California State University-Long Beach by Jana Echevarria and Mary Ellen Vogt along with Deborah J. Short at the Center for Applied Linguistics. The project was funded by US Department of education through the Center for Research on Education, Diversity & Excellence (CREDE) from 1996 through 2003 (Short, Echevarria, & Richards-Tutor, 2011). However, during the course of the SIOP project the researchers with assistance of teacher participants discovered that the protocol could be could be also be used as a tool for lesson planning and reflection. Therefore, the original sheltered instruction (SI) observation protocol evolved as an instrumentation used to effectively evaluate sheltered instructional behaviors in the ESL classroom. But over time has coincidently garnered more attention in the context of sheltered instruction for its effectiveness as an instructional method to promote ELL academic achievement

within the classroom (Echevarria, Vogt, & Short, 2012). In other words, the SIOP model demonstrates that it can be used to supplement content-based and classroom instruction to support English language learners by making the subject matter concepts comprehensible to them in their daily lessons (Echevarria, et al., 2011).

Other than the TBOP instrument that has been used in multiple observation studies and research grants (Lara-Alecio et al., 1996, 2007, 2009), there are very few observation instruments that have been validated and effectively implement a randomized approach to evaluate language, literacy development, student-teacher interactions, teacher's pedagogy and classroom activities within the context of the ELL classroom. In addition, TBOP has been documented to be deemed appropriate applicable for all grade levels (e.g., Bruce et al., 1997; Kujawa et al., 2001; Lara-Alecio et al., 2012; Rodriguez et al., 2002). Furthermore, The TBOP protocol has been validated successfully through continued research studies with ELLs in various settings with reported Kappa values ranging from 0.65 to .98 (Breunig, 1998; Gomez et al., 1996; Irby et al., 2007; Kujawa, 2001; Lara-Alecio & Irby, 1996; Lara-Alecio et al., 1996, 2007, 2009). More specifically, TBOP has been applied successfully in differing Bilingual and ESL program models such Transitional Bilingual Education (TBE) and Structured English Immersion (SEI) classrooms (Lara-Alecio et al., 2009; Tong et al., 2008; Tong et al., 2010).

Although as expressed in the above sections the field of bilingual education and related ESL education has seen a growth as well as increase in new classroom observational methods that have been developed to measure certain aspects of

instructional delivery, classroom activity and pedagogical factors that affect the learning and language development of ELLs. Researchers (i.e., Atkins-Burnett et al., 2010; Atwater, Lee, Motagna, Reynolds, & Tapia, 2009; Castro, 2005; Castro, Espinosa, & Páez, 2011; Echevarria, Vogt, & Short, 2011; Freedson, Figueras-Daniel, & Frede, 2009; Holland-Coviello, 2005; Pianta, La Paro, & Hamre, 2009; Rivera & Tharp, 2004; Waxman & Padron, 2004) have provided an insurmountable amount of promise in how to improve overall classroom instruction, teaching practices and overall education for ELLs. But again many of these research studies and observation instruments can be characterized by one or a few of these elements: still in developmental stages; based on solely language developmental theory or lacking a theoretical framework altogether; requires additional validation and reliability measures; targets only certain childhood grade levels; assesses a limited amount of variables associated with classroom instruction and related activities within the bilingual/ESL classroom; focuses only in content areas or mainstream classrooms; and devoid of solid empirical data via randomized control trial (RCT) studies.

Transitional Bilingual Observation Protocol (TBOP)

Language Content: BICS and CALP

The first dimension of TBOP is "Language Content," which was directly derived from Cummins (1986) influential language acquisition theory distinguishing Basic Interpersonal Communications Skills (BICS) and Cognitive-Academic Language Proficiency (CALP). Lara-Alecio and Parker (1994) asserted that the two-tiered BICS/CALP distinction was too basic to describe various students' abilities observed in

the bilingual classroom (119-120). Therefore, the researchers restructured BICS and CALPS into the four-dimensional pedagogical theoretical framework that allows for more flexibility and changeability within levels of discourse (Lara-Alecio et al., 2013, p. 1132). As part of the four-dimensional pedagogical theory, the language content dimension was divided into four major levels of discourse to assess student progress in the continuum between the two competencies.

These four levels of language content are represented in the TBOP instrument as: (a) Social Routines (i.e. social exchanges and conversation); (b) Academic Routines (i.e. preparing for recess, returning books, learning strategies, handing in assignments, structuring homework); (c) Light Cognitive Content (i.e. current events, community/school news , discussion of the school fiesta, multicultural education issues, also repetitive drill or skills practice); and (d) Dense Cognitive Content (i.e. new content-area information, conceptually loaded communication with specialized vocabulary and procedure, critical thinking) (pp.1132-33). As part of TBOP instrument, Social and Academic routines are examined and re-characterized as BICS). Additionally, both Light and Dense Cognitive Content can be combined to measure total CALP or cognitive and academic language (Lara-Alecio & Parker, 1994). In Cummins (1981) the scholar made the clear distinction between Basic Interpersonal Communication (BICS) and Cognitive Academic Language Proficiency (CALP) in the context of second language acquisition. In the article, Cummins argued that CALP is the academic language a second language (L2) learner must acquire in order succeed academically in a school setting. He further elaborated on how CALP can be depicted as being “the ability

to make complex meanings explicit in either oral or written modalities by means of language itself rather than by means of contextual or paralinguistic cues" (Cummins, 2000, p. 69). Correspondingly, other researchers such as Dutro and Moran (2003) emphasized that students who are proficient in academic language can "interpret and infer meaning from oral and written language, discern precise meaning and information from texts, relate ideas and information, recognize the conventions of various genres, and enlist a variety of linguistic strategies on behalf of a wide range of communicative purposes" (pp. 230–231).

In the same way, Scarcella (2008) asserted teachers should engage students in content-specific knowledge, higher order thinking activities, and learning strategies to encourage ELLs development in cognitive aspects of the language. The author further emphasized that ELLs need a devoted time block to learn academic language with instructional support. Thus, as other researchers have outlined (Bowers, Fitts, Quirk, & Jung, 2010; Francis, Rivera, Lesaux, Kieffer, & Rivera, 2006a) developing learners' academic English is the prominent determinant in students' overall comprehension in language arts and content-area classrooms and overall academic success. As Francis, Rivera, Lesaux, Kieffer, and Rivera's (2006b) affirmed in their research, cognitive and academic language entails many aspects including vocabulary knowledge, the ability to handle increasing word complexity and length, and understanding complex sentence structures.

Moreover, the Meyer (2000) reiterated the importance of adjusting classroom elements to assist ELL students in problematic and predictable areas of confusion that

they experience when learning a new academic lesson taught through English. When ELL students find such find such lessons confusing and overwhelming, the teacher must intervene in providing instructional support to develop understanding and promote student participation. Through various teaching strategies and manipulatives, the instructor can "create classroom conditions that enable English learners to cross over the instructional divide from confusion into meaningful learning" (Meyer, 2000, p. 228). In addition, the Meyer (2000) brought to light how Vygotsky's scholarship emphasized the "social and cultural nature of the development of children's language and of their higher mental processes, and the crucial importance of instruction and collaboration with adults in these processes" (p. 228). As Vygotsky (1962) inferred, through this adult collaboration and conversation with adults, children create "verbal thought" through the transfer of their experiences from the plane of physical action to that of words (pp. 88-89). In opposition of Piaget and other prominent psychologists such of that era, Vygotsky conveyed that "collaboration with adults who explain, supply information, question, correct, and make children explain provides the structures of adult language and rational thought that children will finally internalize" (Meyer, 2000, p. 228). Thus, this adult collaboration "invisibly present" enables children in due time to solve problems verbally and cognitively on their own (Vygotsky, 1962, p. 107).

As Dutro and Moran (2003), Meyer (2000), Scarcella (2008), and Vygotsky (1987) demonstrated through their research close attention needs to be placed on the practical and theoretical importance of adjusting classroom elements to enhance the learning of all students, including ELL students, in problematic areas as they learn new

content. Lara and Parker (1994) in their TBP theory formulated these critical elements to classroom observation as outlined in the four levels of language content a) Social Routines (i.e., social exchanges and conversation); b). Academic Routines (i.e., preparing for recess, returning books, learning strategies, handing in assignments, structuring homework); c). Light Cognitive Content (i.e., current events, discussion of the school fiesta, multicultural education issues, also repetitive drill or skills practice); and d). Dense Cognitive Content (i.e., new content-area information, conceptually loaded communication with specialized vocabulary and procedures) .

Language of Instruction on Teacher and Student Language Use in Bilingual Classrooms

The second dimension of TBOP is organized as "Language of Instruction". Lara-Alecio and Parker (1994) reiterated that content area can provide a rich source of input for limited English proficiency (LEP) children (Cummins, 1986) and a subject matter can serve as the content vehicle for language learning (Krashen, 1985). In this dimension, "there are four progressive uses of students' first language (L1) and second language (L2) in the classroom that are as follows: (a) content presented in L1, (b) L1 introduces L2, (c) L2 supported and clarified by L1, and (d) content presented in L2" (Lara-Alecio et al., 2013, p. 1132). The domain of language of instruction takes into account the "concept of transition as such in transitional bilingual and reemphasizes the importance of content areas" as vital sources of language input for ELL students (Lara-Alecio, Tong, Irby, & Mathes, 2009, p.85). For the most part, language of instruction usually refers to the teacher's use of language, but in certain situations it can be

interpreted to describe reading text used or language used by students in cooperative learning groups (Lara-Alecio et al., 2013, p. 1132). The domain of Language of Instruction has been studied in classrooms for ELLs has been determined to play an essential role in the classroom behavior and achievement for ELLs (Cummins, 1992; Irby, Tong, Lara-Alecio, Meyer, & Rodriguez, 2007). Additionally, when instruction is provided through the use of ELLs' native language it is as equally as effective as, or as beneficial as, an English-only approach (Cheung & Slavin, 2005; Goldenberg, 2008; Francis, Lesaux, & August, 2006; Rolstad, Mahoney, & Glass, 2005; Tong, Lara-Alecio, Irby, Mathes, & Kwok, 2008).

Communication Mode: Reading, Writing, Speaking, and Listening or Combinations

The third dimension of TBOP is referred to as "Communication Mode'. In developing his observational instrument, Lara-Alecio and Parker (1994) took into consideration Cummins' (1986) *reciprocal interaction mode*l and Diaz et al.'s (1986) *context-specific* mode to support the practice of multiple modalities within the activity structures. As part of the TBOP instrument, modalities such as reading, writing, listening, and verbal expressing are used as one or combination of two or three to indicate the various communication modes taking place in real-time within the bilingual classroom. "These modalities can be mutually supportive and are often integrated within lesson" (Lara-Alecio et al., 2013, p. 1133). However, this modalities may differ within the TBOP model in terms of how English facility progress within in each mode, particularly since each mode is permitted to progress at the fastest rate possible. In this

context, this may mean that students are permitted to produce an assignment in L1 on a difficult topic following a lecture presented in English (Lara-Alecio et al., 2013, p. 1133).

Additionally, Mehan (1998) through his research asserted that all including low-income, ethnic and linguistic minority students are compelled to adhere to conventional rules of classroom culture as they master the language of the classroom. For this mastery of the language to take place students in the classroom may need to be offered opportunities in "academic discourses through modeling, participation in meaningful communicative endeavors within discourse communities" and discussing subject matter with experts (p. 249). Mehan (1988) also explained how sociocultural research has shown the conditions under which children can benefit from interaction with more experienced members of their culture. Moreover, Moll (1992b) highlighted one of the important contributions of Vygostky (1987) as the social organization of instruction and how it manifested via an educational process. As part of this educational phenomena, interaction process takes place where "knowledge is transferred to the child in a definite system" (Vygostky, p.169). This interaction process is associated with modes of discourse that promote new forms of thinking (Moll, 1992b). Vygostky before becoming a renowned psychologist was an educator for several years, which was evidently reflected in his early writings with regard pedagogical concerns (i.e., methods of teaching literature, use of translation in language comprehension, and the education of special needs populations) (Moll,1992b, p. 2). Furthermore, Vygotsky's most influential concept of zone of proximal development is relevant to the domain of communication

mode in a broader sense in that it brings to light the relationship of child and "social situation of learning and development" (Moll, 1992b, p.3). As the researcher, Valsiner (1988), expressed in a larger scope ZPD can be depicted as the "interdependence of the process of child development and the socially provided resources for that development" (p. 145).

In an additional study, Goodman (1989) suggested through a whole-language approach it is important to view literacy as the understanding and communication of meaning. The whole language reiterates that "reading comprehension and written expression must be developed through functional, relevant and meaningful uses of language" (Moll, 1992b, p. 8). In other words from an instructional standpoint, "classrooms must be literate environments in which many language experiences can take place and different types of literacies can be developed and learned" (p.8).

According to Goodman (1989), people internalize language from social interaction as suggested by Vygotsky and therefore both oral and written language are learned best and most easily in authentic speech acts and literacy events that serve real functions in and out of school settings. Similar to the Cummins' (1986) *reciprocal interaction model* and Diaz et al.'s (1986) *context-specific* mode, the whole-language approach acknowledges that classrooms are communities of learners where there is a reciprocal interaction with differing communication modes. In this sense, "teachers serve as mediators who facilitate learners transactions" as they learn with and collaborate with pupils to solving problems seeking answers to questions (Goodman, 1989, p. 209).

As exemplified by TBP Theory (Lara-Alecio & Parker, 1994) dimension modalities such as reading, writing, listening and verbal expressing are used as one or in combination to indicate the various communication modes taking place in real-time within the activity structure of the bilingual classroom. In his investigation of bilingual classrooms, Moll (1992a) noted that it is essential to create social and cultural conditions for socialization to become authentic literacy practices. The role of the teacher is "critical to enable and guide activities that involve students as thoughtful learners in socially and academically meaningful tasks" (Moll, 1992a, p .21). In the classroom, students are actives learners that utilize language and literacy, in L1 or L2 (English or Spanish) as "tools for inquiry, communication, and thinking" (Moll, 1992a, p.21).

In his case study of Latino children households and classrooms, Moll (1992a) reiterated the importance of a sociocultural approach to instruction to foster new possibilities in the area of bilingual education and facilitate a critical redefinition of bilingual education in Tuscon, Arizona (Moll & Greenberg, 1990; Moll et al., 1990).

As the prior-mentioned researchers demonstrated, emphasis in classroom instruction should not only be limited to remediating students' English language limitations. Rather, educators need to take advantage of available resources (student's language and knowledge) to produce new advanced instructional circumstances for the students' academic development in and outside the school setting (ie., school, home, etc.). Therefore, a central goal of teaching is to create classrooms that exemplify highly literate environments in which many language experiences can take place and "different types of literacies can be practiced, understood, and learned" (Moll, 1988, p. 466).

In the research conducted by Moll (1988) in which two fifth grade classrooms (one bilingual and other English-monolingual) the nature of classroom instruction was observed. Using the sociocultural perspective, the investigation highlighted the teacher's social mediations, which can be expressed as the "the way they arranged, changed, improved, or modified social situations to teacher at the highest level possible" (p. Moll, 465). Findings from the study revealed that Latino students' where reaching high levels of academic success in teacher assessments and state tests. From the sociocultural perspective, success of these students was contingent on the fact that there was a creation of classroom contexts in which children learned to use, try out, and manipulate language in the service of making sense or creating meaning. Therefore, as asserted by socio-cultural theorists, an instructor should not "break up reading and writing into isolated skill sequences to be taught in a successive, stage-like manner, since children through own efforts assume full control of the purposes and uses oral and written language" (Moll, 1988, p. 467). In this social scenario, the teacher should serve as guide and provide additional instructional support when necessary. Through these and other studies (Diaz, Moll, & Mehan 1986; Moll & Diaz, 1987; Trueba, Moll, Diaz, & Diaz, 1984), there has been a re-emphasis on the important role social interactions plays in student learning and classroom instruction. Furthermore, the above findings support the critical role the various communication modes such as reading, writing, listening and verbal expressing play within the context of a classroom instruction and a student's learning development. Also, as described by (Lara-Alecio et al., 2013) in the TBP theory, these

modes take place in real-time within the bilingual classroom and are often mutually supportive as well as integrated within the lesson (p. 1133).

Activity Structures: Teacher and Student Interaction in Bilingual Classrooms

The fourth dimension of TBOP is known as "Activity Structure". Activity structure refers to a combination of: (a) types of teacher behavior, such as directing, leading, evaluating and observing and (b) the expectation for student responding (e.g. listening, performing, discussing, asking questions) (Bruce, et al., 1997). Although it is important to mention that there are some non-academic activities, such as: time spent disciplining and transitions between classes. According to Vygotsky (1978a), notion of zone of proximal development brought to light the importance of requiring educators to pay attention to the participation in the social and task structure of each learning activity (Cole & Griffin, 1983). In the past, researchers such as Doyle (1986) suggested that traditionally, there has been more emphasis on classroom pedagogy, lesson and objectives, curriculum content, as well as assignments. As a result, the realm of activity structures has often been put on the back burner. According to Brophy and Everston (1978), activity structures are teacher-structured learning situations each with its own expectations for teacher and student communication that are relative stable, recurring periods of activities each with a recognized purpose and opportunities for communication.

As noted in Meyer (2000), that it is crucial to understand that in second language theory and practices, there exists a strong interdependence among language development, cognition, and instructional collaboration with adults as outlined in

previous works (Diaz, Moll, & Mehan, 1986; Moll, 1992b; Tough, 1985; Vygotsky, 1962). Even though such studies have been carried out, there still continues to be a belief that a teacher's role in the second language acquisition process is for the most part a passive one in which they are to supplement ESL classroom instruction with *comprehensible input* developed by Krashen (1981). Thusly, Meyer (2000) indicated to too much attention has been placed on the learner's process of English acquisition as opposed to the impact that teaching strategies may have on classroom instruction. Such teaching strategies are as follows: "effective teacher talk, teacher-student interaction, and adult support for students' developing oral and written language production" (Meyer, p. 228). Approaches such as Krashen's *comprehensible input* have been challenged by social interactionist theories (Diaz, Moll, & Mehan, 1986; Tough, 1985), which "stress the teacher's active role in modeling and scaffolding the learner's developing language skills" (Meyer, 2000, pp. 228-229).

Scaffolding is a concept that was taken from Vygotsky's (1978b) notion of the Zone of Proximal Development (ZPD) and is an activity structure (approach) that is commonly used by instructors in the all content area classrooms, to differentiate learning, and make it comprehensible to all learners. In his work, Vygotsky proposed that with an adult's assistance, children could accomplish tasks that they ordinarily could not perform independently. ZPD is the difference between what a child can accomplish alone and what he or she can accomplish with assistance of an adult (Vygotsky, 1980). While using scaffolding in a learning environment students are given teacher support until they themselves can apply new skills and work independently. In other words,

scaffolding allows for students to be given more assistance as they are learning new and rigorous material. Once the students begin to exhibit task mastery, teacher support is gradually decreased so as to shift the responsibility for learning from the teacher to the students. Eventually, students begin to receive less support from the teacher and thus assume more responsibility for their own learning.

Two types of scaffolding that can be implemented in the science (and other content-areas) classroom and used with all students, especially special populations such as English learners, are verbal scaffolding and procedural scaffolding. In using verbal scaffolding, teachers are aware of the ELL existing levels of language development. Here teachers implement strategies that relate to prompting, questioning, and elaboration to facilitate students' movement to higher levels of language proficiency, comprehension, and thinking. According to Echevarria, Vogt, and Short (2008), if effective teacher-student interaction is implemented throughout scaffolded instruction, the students will gain more confidence in their language competence (p. 84-86). Examples of verbal scaffolding are paraphrasing, using think-alouds and reinforcing contextual definitions. Paraphrasing is basically restating a student's response in order to model correct English usage and grammar. Think-aloud is a structured model that aids the teacher in monitoring how well a student thinks and comprehends a text or reading excerpt. Reinforcing contextual definition helps English learners by supplementing them with the meaning of a word or words within the context of the sentence. Procedural scaffolding is an instructional strategy that promotes further development of a student's knowledge of concepts and language through explicit teaching, modeling, practice

opportunities, and expectations of independent application. Examples of procedural scaffolding are one-one teaching, coaching, modeling; as well as working with small group instruction, and partnering students. The advantages of one-one teaching is that students are given a great deal of support through teacher instruction. Small group instruction can entail children practicing a newly learned strategy with other more experienced students. Partnering students for reading activities with more experienced readers can aid in developing students overall reading skills and build confidence in English language proficiency.

Other notable activity structures strategies that can be used to advance the learning process for all students include word wall words, foldable models, and cooperative learning groups. Word banks or word walls can be placed around the room or hung from the ceiling with fish string, so that students can scan their surroundings and read words they have learned. The idea behind word walls is to refresh students' minds of the newly learned vocabulary and demonstrate to them how each word is spelled. As Calderon, Slavin, and Sanchez (2011) expressed such vocabulary instruction contributes to the overall effective instruction by developing students' phonological awareness and reading comprehension. This is particularly useful for English language learners, since it provides an avenue so that students expand and register new vocabulary for the long term as well as properly pronounce and spell word parts. Furthermore, foldable mini-books are another activity teachers can use to introduce new concepts or ideas to students. They create a tangible method for students to reproduce science concepts in a manner of drawing, coloring, and labeling of terminology that is at times difficult to

understand. Many times students can place these foldable mini-books in their binders and refer to them when preparing for a quiz or major exam. In essence foldables can be seen as folded paper that is used as a graphic organizer to explain key concepts, or even cause and effect scenarios.

CHAPTER III

METHODS

The purpose of this study was to analyze the relationships among related variables within the domains of language of instruction, language of content, communication mode and activity structure from teacher observations conducted in second grade transitional bilingual education classes. As part of these bilingual classrooms, there was a treatment and control group that took part in the study. The identified variables and domains serve as the foundation of a four-dimensional model known as the Transitional Bilingual Observation Protocol (TBOP) that was implemented in over 100 classrooms as part of the ELLA project. Data were analyzed to see to what extent these variables are related within the process that allows English language learners (ELLs) to acquire language as well as literacy skills. The data used for this study were pre-existing and taken from a randomized, longitudinal, federally funded research project (Project ELLA, U.S. Department of Education Award No. #R305P030032, 2003-2008). This chapter includes research design, participants, instrumentation, data collection and data analysis.

Context of the Study

Project ELLA was a longitudinal randomized controlled trial study that took place over a 5-year period in a large urban school district in southeastern Texas that addressed issues related to the literacy and language acquisition of approximately 800 native-Spanish speaking English language learners. Background on the district is that it provides special services to more than 45% of its student population whose first language is Spanish. In

addition, over 60% of student population was classified as being of Hispanic origin and majority of students qualify for free or reduced-price lunch (Tong, Lara-Alecio, Irby, Mathes, & Kwok, 2008, pp. 1019-20). ELLA was implemented in these urban district campuses in an effort to evaluate Spanish-speaking English language learners enrolled in both structured English immersion and transitional bilingual models from kindergarten thru third grade. The district was an ideal for the project due to its widespread success with serving ELL and closing achieving gap for low socio-economic disadvantaged students. Due to this extensive success the district has receive distinctions as the two-time Broad Prize Finalist and its continued nationwide partnership as a Learning First Alliance District (Lara-Alecio, Irby, & Mathes, 2006).

Sample

Twenty-three second grade bilingual teachers' archived data (three observations per subject) were used to complete the study. Approaches to the aggregate data and pseudonyms were used in any related reports as well as publications so that the archived data and the former participants cannot be identified. This archived pre-existing data were derived from the Project ELLA, which was a 5-year research study and sponsored by the IES Office, U.S. Department of Education. Data from these teachers are taken from one year of participation in the second grade year. The teacher participants were all part of the transitional bilingual education program that encompassed 23 classrooms across the school district. Of these classrooms, 10 received an enhanced version of transitional bilingual education (TBE-E), while the other 12 classrooms received only typical practice of what district outlines as transitional bilingual education as part of

school curriculum. TBE-E consisted of: 50% (Spanish instruction)/50% (English instruction) and 90 minutes of ESL instruction (Project ELLA Intervention). TBE-T or typical practice of transitional bilingual education program as part of school curriculum consists of: 70% (Spanish instruction)/30% (English instruction) and ESL intervention for 45 minutes. As part of TBE-E, the 90 minutes ESL intervention was intensive and structured from three major components a) 45 minutes *Early Interventions in Reading (EIR--Proactive Level II)* (Mathes & Torgeson, 2005), (b) 10 minutes Daily Oral and Written Language [DOWL] researcher developed, (c) 35 minutes for *Story Retelling and Higher Order Thinking Skills for English Language and Literacy Acquisition [STELLA]* (Irby, Lara-Alecio, Mathes, Rodriguez, Quiros, & Durodola, 2004). TBE-T or typical practice of transitional bilingual education program as part of school curriculum consists of: 70% (Spanish instruction)/30% (English instruction) and ESL intervention for 45 minutes.

As part of these 22 classrooms, we had a total of 140 students in the TBE-E classrooms and 136 students in the TBE-T classrooms take part in the investigation. TBE-E consisted of 10 classrooms, while TBE-T consisted of 12 classrooms, as part of the ESL instruction allotted time. To minimize contamination of intervention, the schools that all 22 classrooms were taken from were randomly selected to either receive the intervention or not as part of the broader ELLA Project.

Research Design

I used a quantitative, non-parametric design study. Within this a non-parametric design study, I implemented a Chi-squared test of independence (also known as Chi-

square of association) was used as initial statistical analysis to identify if there is a relationship between categorical variables. Then I followed the significance statistic with a strength of relationship statistic known as Cramer's V. Through this non-parametric design, I measured the frequency that each variable (language of instruction, language of content, communication mode and activity structure) occurs within the context of the transitional bilingual classroom. In order to examine the effect size of each specific category under four domains, Odds Ratio (OR) was adopted.

Program Intervention

In general, the Project ELLA intervention that was implemented across grades K-3 over a five-year period was comprised two overarching levels. All participating teachers were high qualified as deemed necessary by state and federal standards. Level 1 related to professional development (PD) and level 2 was designated as student instruction. For the purpose of my study, I will discuss the second grade intervention in detail that was carried in the transitional bilingual classrooms of TBE-E and TBE-T.

Level 1: Professional Development

Treatment. At the second grade level, teachers were provided with on-going training workshops every 2weeks, with each session lasting 3 hours, for a total of 6 hours per month and an average of 50 hours per school year.

Typically, trainings took place after school and were carried out by principal investigators, coordinators of the project, and guest speakers. For treatment teachers, each training was tailored to focus on intervention implementation, second language instructional methodologies, and bilingual/ESL teacher professional development needs.

These trainings provided guidance for teachers in the enhanced practice (TBE-E) group were highly trained and maintained the standard of the curriculum and research. Teachers received professional development in the implementation and continued delivery of the intervention throughout the school year. This PD was bi-monthly and consisted of three hours per session. To ensure that teachers were knowledgeable with regard the curriculum scope and sequence four full-time coordinators participated in all of these bi-monthly sessions. During these training, teachers were coached on upcoming lessons and provided with feedback on prior lessons. When a new lesson activity format was being implemented, teachers received additional training on these activities (Lara-Alecio, 2003, 2007; Tong, et al. 2008).

Treatment teachers were provided opportunities to present intervention activities within the second grade transitional bilingual classroom. Through this experience teachers had the opportunity to be exposed to the following topics: (a) enhanced instruction via planning, (b) support for student involvement, (c) vocabulary building and fluency, (d) oral language development, (e) literacy development, (f) reading comprehension, (g) academic language development strategies, (h) incorporating ESL strategies, and (i) parental support and involvement. ESL strategies covered academic language scaffolding-visual and modeled talks, flexible grouping, shared reading, leveled questions, manipulatives, and total physical response (Tong et al., 2015).

In addition, itemized lesson plans for the intervention components were provided to treatment teachers to be utilized verbatim as scripts. As part of the interventions teachers were only to use minimal native Spanish language (L1) for clarifications of

instruction but not translate or code-switch between L1 and L2. These lesson plans reflected the curriculum alignment between the state, district, and instructional program academic standards and objectives. As part of this PD teachers were also introduced to second-language acquisition theories of Krashen and Cummins' that relate to how to differentiate between social and academic language in the context of an ELL classroom. Teachers were also supplemented with a copy of Herrell and Jordan's (2004) book on effective ESL strategies for ELLs to be used as an additional resource as part of the intervention. Moreover, during bi-monthly PD sessions, teachers and coordinators had face-to-face meetings to discuss experiences with the Project ELLA curriculum and any immediate concerns. In these sessions teachers were also surveyed, provided with feedback and able to reflect on components of the intervention.

Control. As per the teachers that formed the control group, they had to comply with local, state and federal rules that require being highly-qualified by completing continuing education hours. In this case, the control teachers (TBE-T) were required to complete a total of 48 hours of professional development trainings that included topics as such: norm-referenced and criterion-referenced assessment, cultural issues and teaching strategies. These trainings were typically provided locally or with the district by certified personnel.

Level 2: Student Instruction

Treatment. The second level of the intervention was the student instruction, delivered during a 90-min ESL block in second grade for the classroom treatment group (TBE-E).

In these enhanced classrooms of transitional bilingual education (TBE-E), TBE-E consisted of: 50% (Spanish instruction)/50% (English instruction) and 90 minutes of ESL instruction. As part of this 90 minutes the ESL intervention was intensive and structured from three major components a) 45 minutes *Early Interventions in Reading (EIR--Proactive Level II)* (Mathes & Torgeson, 2005), (b) 10 minutes Daily Oral and Written Language [DOWL] researcher developed, (c) 35 minutes for *Story Retelling and Higher Order Thinking Skills for English Language and Literacy Acquisition [STELLA]* (Irby, Lara-Alecio, Mathes, Rodriguez, Quiros, & Durodola, 2004).

With respect to EIR, a typical second grade lesson consisted of various content strands that were intertwined such as: phonemic awareness, letter knowledge, word recognition, fluency and comprehension strategies. During these lessons students were observed practicing sounding-out and reading words, spelling words from dictation based on their sound-symbol correspondences, reading and rereading decodable connected text, and applying comprehension strategies. As students showed progression and comprehension, lessons changed in nature to focus on decoding multisyllabic and irregular words, and fluency building of connected texts. For some of the later lessons, students were introduced to timed readings and partner reading of narrative stories and engaged in retelling. Throughout the entire curriculum teachers routinely were found modeling new content, providing guided practice for students, and implementing independent practice for every activity.

As part of the STELLA component, teachers introduced one book a week accompanied by a script which included a few vocabulary words per book, a pre-

selected combination of ESL strategies aligned to the story, and a set of different leveled questions identified as easy, moderate, and difficult. During this 35 minutes slot, teachers introduced the academic vocabulary, modeled and provided students opportunities to participate in discussion, asked leveled questions, and encouraged students to work in pairs and/or small groups. Here teachers provided direct and indirect vocabulary instruction that included repetition of the story, cloze sentences and retelling in order to increase listening comprehension. To reinforce STELLA, teachers providing scaffolding learning opportunities to guide students in comprehending challenging words.

During the 10-minutes of DOWL teachers focused on promoting academic language in order to improve student learning in the forms of: scaffold concept development, oral language and stimulate written language through use of science-related visuals (Irby, et al., 2007; Lara-Alecio, 2003, 2007; Tong et al., 2015).

Control. In the control classrooms, students received only typical practice (TBE-T) of what district outlines as transitional bilingual education as part of school curriculum. The typical practice, during ESL instruction, of each control classroom followed the district's scope and sequence and was aligned with state standards. TBE-T as part of school curriculum consisted of: 70% (Spanish instruction)/30% (English instruction) and ESL intervention for 45 minutes.

Research Questions

The research questions for my study were:

1. How did teachers in both treatment and control conditions allocate their instructional time in four domains of Activity Structure, Communication Mode, Language Content and Language of Instruction (teacher and student) as observed by TBOP?

2. Did teachers in treatment condition allocate their instructional time in four domains differently as compared with control teachers?

3. In what categories of each domain did teachers in treatment condition allocate their instructional time statistically significant different from control condition?

Instrumentation

The instrumentation that I used as part of the dissertation study is the Transitional Bilingual Observation Protocol (TBOP) instrument that was included in Project ELLA from which the archived data are derived. The observational instrument is considered to be low-inference by nature due to its structure that maintains a time-sampling technique that captures specific events and instructional characteristics in the classroom. The time-sampling technique is used in the classroom observation to code and calculate instructional occurrences in the four domains (activity structure, communication mode, language content, and language of instruction). This technique is administered repeatedly throughout the observation as a 20-second timed interval. This low-inference instrumentation has been used in several studies to investigate teachers' perceived instructional time allocation in two languages in relation to students' academic

performance (Bruce, 1997; Irby, et al., 2007; Lara-Alecio et al., 2009). TBOP is an observation instrument that was developed by Lara-Alecio and Parker (1994) and based on the Four Dimensional Transitional Bilingual Pedagogical Model. This pedagogical model was initially operationalized and validated as a protocol in Lara-Alecio and Parker (1994) investigation. The purpose of the TBOP instrument was to identify and assess the interactions of four major instructional dimensions within the context of a bilingual classroom. These four major instructional dimensions are as follows: (a) language of content, (b) language of instruction, (c) communication mode, and (d) activity structure. The TBOP instrument has been validated and field tested in variety of investigative studies as well as state and federal research grant projects (Breunig, 1998; Gomez et al., 1996; Irby et al., 2007; Kujawa, 2001; Lara-Alecio & Irby, 1996; Lara-Alecio et al., 1996, 2007, 2009).

The observation instrument known as the Transitional Bilingual Observation Protocol (TBOP) has been validated through several studies and research projects (Bruce et al., 1997; Breuning, 1998, Irby et al., 2007; Lara-Alecio et al., 2009; Lara-Alecio & Parker, 1994). The protocol was implemented the following longitudinal randomized trial studies: Project English Language and Literacy Acquisition (funded by Institute for Education Sciences, PR/Award Number R305P030032); National Science Foundation randomized trial study, Project MSSELL (PR/Award Number DRL-0822343); and currently Project English Language and Literacy Acquisition – Validation (ELLA-V--PR/Award Number U411B120047) funded by US Department of Education, Investing in Innovation Fund (i3) (Lara-Alecio, Irby, & Tong, 2013).

As reported in more detail by Lara-Alecio and Parker (1994), the Four Dimensional Transitional Bilingual Pedagogical (TBP) Theory originally was developed to identify the interactions of four major instructional dimensions within bilingual classrooms; however, since that time, the Bilingual Observation Protocol that was developed and validated from the Theory (Bruce et al, 1997; Bruenig, 1998), has been applied successfully to evaluation research in, of course, transitional classrooms, but also, dual language and SEI classrooms with Kappa values ranging from .65 to .98 (Breuning, 1998, Irby et al., 2007; Lara-Alecio et al., 2009; Lara-Alecio & Parker, 1994).

In reference to the TBOP observations, each class observation was recorded by a trained observer during ESL instruction. A total of 60 entries were recorded using a PDA to increase accuracy, each individual entry lasted 20-seconds. To ensure higher levels of reliability as Rowley (1978) inferred requires researchers to employ "a more representative sampling of occasions, and this is best achieved by using a larger number of shorter observation periods" (p. 172). All observers were trained and inter-rater reliability was initially taken at .89 with a final reliability established at .98.

This four-dimensional Theory, in Figure 1, provided a framework for me to evaluate the occurrences of instructional activity structures, language of instruction (teacher and student), in relationship to communication mode, language content (cognitive response levels), as observed by TBOP within the classroom context. Permission to use four-dimensional transitional bilingual theory was granted from the Principal Investigator of Project ELLA (see Appendix C).

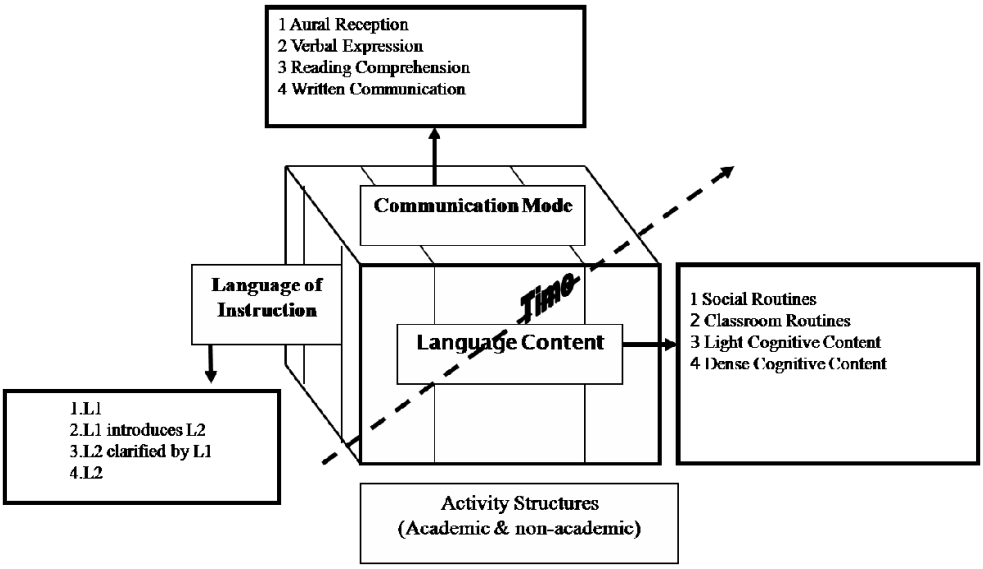

Figure 1: Four-dimensional Transitional Bilingual Pedagogical Theory (Lara-Alecio & Parker, 1994)

Data Collection

This archived pre-existing data were derived from the 5-year longitudinal randomized trial research study sponsored by the IES Office, U.S. Department of Education. 22 teacher subjects' observations (three observations per teacher for a total of 69 observations) were used derive the data from the archived records. All study materials were pre-existing. Approaches to the aggregate data with teacher numbers (no names were in the database) were used in the databased. These are archived data, and the former participants are non-identifiable. There was no risk to the participants as this is archived, anonymous data. Originally, for Project ELLA, participants provided informed consent during initial collection of data. The process of using the archived data follows all requirements as stated by IRB Office and regulations of the University. Permission

to use the archived data was granted from the Principal Investigator of Project ELLA (see Appendix C).

Data Analysis

As part of this dissertation study, I examined the critical relationship between the following variables: activity structure, communication mode, language of content, language of instruction and activity structure in the second grade. It was hypothesized that language of instruction, communication mode, and activity structure are highly related variables in the process of allowing ELLs to acquire language as well as literacy skills (Bruce et al., 1997; Lara-Alecio & Parker, 1994; Lara-Alecio et al, 2009). Specific analytic processes follow each research question. SPSS 23, a statistical software, was used to analyze the archive data.

1. How did teachers in both treatment and control conditions allocate their instructional time in four domains of Activity Structure, Communication Mode, Language Content and Language of Instruction (teacher and student) as observed by TBOP? The analysis to respond to this research question included descriptive statistics of a cross tabulation of observed frequency and percentage will be presented by condition and by category in each domain.

2. Did teachers in treatment condition allocate their instructional time in four domains differently as compared with control teachers? The analysis to respond to this research question included a Chi-Square test of independence analysis between and on the domains of teacher's Activity Structure, Communication Mode, Language of

Instruction (teacher and student), and Language Content. Effect size in the form of Cramer's V will be reported.

3. In what categories of each domain did teachers in treatment condition allocate their instructional time statistically significant different from control condition? The analysis to respond to this research question included an Odds Ratio (OR) analysis to detect differences between conditions using control condition as reference.

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CHAPTER IV

RESULTS

This chapter presents the results of the data analysis to answer four major research questions. Each question is presented with the results following.

Research Question One

Research question one was-- How did teachers in both treatment and control conditions allocate their instructional time in four domains of Activity Structure, Communication Mode, Language Content and Language of Instruction (teacher and student) as observed by TBOP?

Activity Structure

The first research question examined the results of instructional time allocated in four domains. The results of the domain of Activity Structure are demonstrated in Table1. In total, 5220 observation clips were collected: 2580 in control condition and 2640 in treatment condition. The frequency of each observed practices (e.g. lecture/listen, lecture/performance, et al) and its percentage within the condition were reported in Table 1. Teachers in treatment condition were observed to use the following five practices more often: Ask/answer (34.3%), Direct/perform (24.3%), Lecture/listen (12.8%), Observe/perform (9.5%) and Lecture/perform (6.6%), which accounted 85.7% of total instructional time. Teachers in control condition were observe to use the following five practices more often: Ask/answer (46.4%), Direct/perform (18.6%), Observe/perform (9.8%), Lecture/listen (7.1%), and NA-Transition (4.1%), which accounted 86.0% of total instructional time.

Table 1
Crosstabulation of Conditions and Type of Activity Structure

	Condition			
Type of Activity Structure	Control (n, %)		Treatment (n, %)	
Lecture/listen	184	7.10	338	12.80
Lecture/perform	70	2.70	174	6.60
Direct/listen	24	0.90	9	0.30
Direct/perform	481	18.60	641	24.30
Demonstrate/listen	21	0.80	4	0.20
Lead/perform	22	0.90	75	2.80
Ask/perform	0	0	7	0.30
Ask/answer	1197	46.40	906	34.30
Answer/ask	104	4.00	31	1.20
Evaluate/perform	2	0.10	58	2.20
Observe/perform	252	9.80	252	9.50
Evaluate/perform	12	0.50	4	0.20
Evaluate/cooperate	37	1.40	7	0.30
Observe/discover	0	0	14	0.50
Observe/cooperate	22	0.90	0	0
NA-feedback	3	0.10	7	0.30
NA-transition	107	4.10	105	4.00
NA-interrupt	24	0.90	8	0.30
NA-out	18	0.70	0	0

Note. Numbers represent observed frequencies.

While reviewing the findings, the teacher treatment group (TBE-E) had a much better balance of activity structure by assessing the most frequent practices that were observed: Ask/answer (34.3%), Direct/perform (24.3%), Lecture/listen (12.8%), Observe/perform (9.5%) and Lecture/perform (6.6%), which accounted 85.7% of total instructional time. On the other hand, the teacher in control group (TBE-T) were not as balanced with time allocation in terms of activity structure during ESL instruction class time. TBE-T were observed as implementing the following practices more often: Ask/answer (46.4%), Direct/perform (18.6%), Observe/perform (9.8%), Lecture/listen

(7.1%), and NA-Transition (4.1%), which accounted 86.0% of total instructional time. Additionally, I both the TBE-E and TBE-T, the activity type most observed was the teacher-ask/answer. The activity of ask/answer is aligned with academic scaffolding and leveled questions, it is implemented in classrooms as one of the more popular ESL strategies to increase student interaction with fellow peers. Moreover, several researchers (Echevarria, et al., 2008; Gersten & Baker, 2000; Gray & Fleischman, 2004; Lara-Alecio et al., 2009) have inferred this type of activity structure, such as academic visual scaffolding activity, is critical to reinforcing concept, vocabulary, and overall oral-language development for ELLs. For more detailed information on what each observed practice constitutes, as noted by TBOP code, please refer to the table found in Appendix B.

Teacher Language and Student Language

The results of the domain of Language of Instruction (Teacher & Student) as observed by TBOP are demonstrated in Tables 2 and 3. In total, 5220 observation clips were collected: 2580 in control condition and 2640 in treatment condition. The frequency of instruction content presented by different language/language combination (e.g. Spanish, English, Spanish introducing English and English clarified by Spanish) and its percentage within the condition were reported in Table 2 (teacher language) and Table 3 (student language). Teachers in both conditions were observed to allocate majority of instruction time in English (87.6% in control and 97.5% in treatment). Teachers in control condition were observed use much more time in Spanish (5.6%), Spanish introducing English (6.6%) and English clarified by Spanish (.3%), as compared

with teachers in treatment condition (0%, 2.4%, and 0% respectively).

Table 2

Crosstabulation of Conditions and Teacher Instruction Language

Teacher Instruction Language	Condition			
	Control (n, %)		Treatment (n, %)	
Spanish	144	5.6	1	.0
English	2259	87.6	2575	97.5
Spanish introducing English	170	6.6	64	2.4
English clarified by Spanish	7	0.3	0	.0

Note. Numbers represent observed frequencies.

Table 3

Crosstabulation of Conditions and Student Instruction Language

Student language	Condition			
	Control (n, %)		Treatment (n, %)	
Spanish	217	8.4	150	5.7
English	2199	85.2	2471	93.6
Spanish introducing English	150	5.8	19	0.7
English clarified by Spanish	14	0.5	0	

Note. Numbers represent observed frequencies.

In general, more content was presented in Spanish in control condition as compared with treatment condition. Students in both conditions were observed to speak in English in majority of instruction time (85.2% in control and 93.6% in treatment). Students in control condition were observed use much more time in Spanish (8.4%), Spanish introducing English (5.8%) and English clarified by Spanish (.5%), as compared with teachers in treatment condition (5.7%, 0.7%, and 0% respectively). After examining the data collected in Table 2, it is evident that teachers in the both conditions were observed to allocate majority of instruction time in English (87.6% in control and 97.5%

in treatment). Consequently, it was noted that the treatment (TBE-E) teacher group was had a higher percentage of English usage (97.5%) within the ESL instructional time for related classroom activities. In addition, as indicated in Table 3 students in control condition were observe to speak more Spanish and less English as compared with students in treatment condition. It was also observed that students mirror their teachers regarding the amount of specific language was used in the classroom: teachers' higher percentage of English time with students' higher percentage of English time in treatment condition and teachers' higher percentage of Spanish time with students' higher percentage of Spanish time in control condition. For more detailed information on what each observed practice constitutes, as noted by TBOP code, please refer to the table found in Appendix B.

Communication Mode

The results of the domain of Communication Mode (Student) as observed by TBOP are demonstrated in Table 4. In total, 5220 observation clips were collected: 2580 in control condition and 2640 in treatment condition. The frequency of each observed modes (e.g. aural-reading, reading-verbal, et al) and its percentage within the condition were reported in Table 4. Students in treatment condition were observed to use the following eight modes more often: Verbal (35.1%), Verbal-writing (16.3%), Verbal-aural (16.2%), Verbal-reading (11.5%), Reading (6.6%), Aural-reading (5.7%), Reading-aural (3.7%) and Aural-writing (3.4%), which accounted 97.8% of total instructional time. Students in control condition were observe to use the following eight modes more often: Verbal (58.9%), Verbal-aural (11.9%), Verbal-reading (7.6%), Verbal-writing

(6.9%), Aural-reading (5.6%), Aural-writing (2.6%), Reading (1.9%) and Aural-verbal (.9%), which accounted 96.1% of total instructional time.

Table 4

Crosstabulation of Conditions and Students' Mode

	Condition			
Mode	Control (n, %)		Treatment (n, %)	
Writing	15	0.6	4	0.2
Reading	48	1.9	157	5.9
Aural	15	0.6	10	0.4
Verbal	1519	58.9	927	35.1
Writing-reading	3	0.1	5	0.2
Writing-aural	18	0.7	15	0.6
Writing-verbal	0	0	5	0.2
Reading-aural	22	0.9	97	3.7
Reading-verbal	15	0.6	10	0.4
Aural-writing	66	2.6	89	3.4
Aural-reading	144	5.6	150	5.7
Aural-verbal	24	0.9	6	0.2
Verbal-writing	177	6.9	430	16.3
Verbal-reading	195	7.6	304	11.5
Verbal-aural	307	11.9	427	16.2
Aural-reading-verbal	12	0.5	2	0.1
NA	0	0	2	0.1

Note. Numbers represent observed frequencies.

Through the analysis of data, it was observed that in general, among the eight most adopted communication modes, students in control condition allocated more time in verbal-related activities (86.1%) as compared with students in treatment condition (79.3%). Students in treatment condition allocated more time in writing-related activities (19.7%) as compared with control students (9.4%). More specifically, in both conditions, the single mode verbal (speaking) had a higher percentage observed in treatment

classrooms (35.1%) as opposed to (58.9%) in control classrooms. Additionally, the most frequent combination of modes observed was verbal-writing (speaking-writing) with it more frequently observed in treatment classrooms (16.3%) in comparison to control group (6.9%). These results demonstrate that students in treatment group are getting a more balanced exposure to verbal and writing experiences, therefore instruction is promoting the student's development of critical communication and literacy skills. As Cummins' (1986) reciprocal and Diaz et al. (1970) context-specific models reiterate the importance of exposing student to high levels of through modalities such as reading, writing and verbal expression to foster second language acquisition. The second most frequent combination of modes observed for the treatment group was verbal-aural (speaking-listening) with it observed (16.2%) of the time as opposed to control group (11.9%). For more detailed information on what each observed practice constitutes, as noted by TBOP code, please refer to the table found in Appendix B.

Language Content

The results of the domain of Language Content as observed by TBOP are demonstrated in Table 5. In total, 5220 observation clips were collected: 2580 in control condition and 2640 in treatment condition. The frequency of different degrees of language content (Social, Academic, Light cognitive and Dense Cognitive) and its percentage within the condition were reported in Table 5. Teachers in both conditions were observed to allocate majority of instruction time in CALP, a combination of Light and Dense cognitive (70.2% in control and 79.9% in treatment).

In addition, it was concluded that teachers in treatment condition were observed to allocate much more time in Dense cognitive (20.1%) as compared with control teachers (6.4%). Also, TBE-E group was observed as allocating less time in Light cognitive (59.8%) as compared with control teachers (63.8%). Control teachers were observed to allocate more instruction time in CALP (29.8%), a combination of social exchanges and academic routines, as compared with treatment teachers (20.1%). It was also observed that control teachers spent more time in academic routines (27.8%, e.g. preparing for recess et al) than treatment teachers did (19.7%). Control teachers were also observed to spend more time in social exchanges and conversation (2.0%) as compared with treatment teachers (.4%).

Table 5

Crosstabulation of Conditions and Language Content

	Condition			
Language Content	Control (n, %)		Treatment (n, %)	
Social exchanges	52	2.0	10	0.4
Academic routines	717	27.8	520	19.7
Light cognitive	1646	63.8	1579	59.8
Dense cognitive	165	6.4	531	20.1

Note. Numbers represent observed frequencies.

The findings in Table 5 show that the teachers participating in the treatment or enhanced intervention, TBE-E, are spending more time promoting instruction that incorporates higher order thinking skills (dense cognitive skills) in the classroom as opposed to TBE-T control teachers that are spending the majority of time in light cognitive level. Therefore, TBE-E teaches are allowing ELL students more opportunities

to develop critical thinking skills through instructional that promote new content-area information, rigorous concept development, and specialized vocabulary. For more detailed information on what each observed practice constitutes, as noted by TBOP code, please refer to the table found in Appendix B.

Research Question Two

Research question two was-- Did teachers in treatment condition allocate their instructional time in four domains differently as compared with control teachers? The second research question examined the results of the chi-square test that was applied to condition relative to activity structure, communication mode, language of instruction (student & language), and language content. The results as observed by TBOP are demonstrated in Table 6.

Table 6

Chi-square Values Applied to Conditions Related to Activity Structure, Mode, Teacher Language, Student Language and Language Content.

	Chi-square	*df*	Cramer's V	*p* value
Activity structure by condition	386.36	18	0.272	<.001
Mode by condition	434.37	16	0.288	<.001
Teacher language by condition	216.04	3	0.203	<.001
Student language by condition	142.95	3	0.165	<.001
Language content by condition	253.03	3	0.22	<.001

A chi-squared test of independence (also known as test of association) was conducted between condition and teachers' Activity Structure, Mode, Teacher Language, Student Language and Language Content. To interpret Chi-square and Cramer's V, I used the standards developed by Cohen (1988) as guidelines to measure

effect size they are as follows: small=.10, medium=.30 and large=.50. It was observed in the domain of Activity Structure, teachers in different conditions statistically differently adopted pedagogical practices χ^2 (18) = 386.36, p<.001. The effect size was more on the medium range as indicated by Cramer's V = .288. It was observed that students in treatment condition responded statistically different to teachers' pedagogical practices in the domain of Mode χ^2 (16) = 434.372, p<.001. There were statistically significant differences between control and treatment teachers regarding their time allocation of using different language in the classroom χ^2 (3) = 216.04, p<.001. The effect size was small to medium, Cramer's V = .203. It was observed that there were statistically significant differences of students' using different languages (L1, L2, L1-L2 and L2-L1) between control and treatment condition χ^2 (3) = 142.95, p<.001. The effect size was small, Cramer's V = .165. Teachers in treatment condition statistically differed from teachers in control condition regarding time allocation in different levels of language content χ^2 (3) = 253.03, p<.001. The effect size was small to medium, Cramer's V = .22. This small range effect size (.165) in domain of student language is the result of the high frequency that both conditions reflected and exposed to during instructional time. In this case, students had more exposure to English, and thus students mirrored the language most frequently practiced and utilized by the teacher throughout the ESL classroom timeframe. With regard to small to medium effect size (.203), teachers in treatment condition different slightly due the fact that there was more frequency of dense cognitive activity demonstrated between teacher and student, as opposed to the control group that focused more on instruction related to light cognitive, academic routines and social

exchanges. Therefore, the control group, or TBE-T, was consumed by instruction that resembled repetitive drills, skills practice, or reviewing past lesson material. As opposed to the enhanced group or TBE-E that providing additional learning opportunities through new content, sophisticated vocabulary building activities that all together promoted higher order thinking skills.

Research Question Three

Research question three was-- In what categories of each domain did teachers in treatment condition allocate their instructional time statistically significant different from control condition? This third research question examined the results of the Odds Ratio that was applied to both conditions in all four domains. Table 7 presents the results of the Odds Ratio (OR) that was applied to detect the teacher groups' difference using control condition as the reference group in the domain of activity structure.

Table 7

Odds Ratio (OR) Contrast in the Domain of Activity Structure

Activity Structure	Control (n=2580)	Treatment (n=2640)	OR	95%CI	*p* value
Lecture/listen	184	338	1.91	1.58-2.31	< 0.0001
Lecture/perform	70	174	2.53	1.91-3.36	< 0.0001
Direct/listen	481	641	1.40	1.23-1.60	< 0.0001
Demonstrate/listen	21	4	0.18	0.06-0.54	= 0.0020
Lead/perform	22	75	3.40	2.11-5.49	< 0.0001
Ask/answer	1197	906	0.60	0.54-0.67	< 0.0001
Answer/ask	104	31	0.28	0.19-0.42	< 0.0001
Evaluate/perform	2	58	28.96	7.06-118.68	< 0.0001
Evaluate/cooperate	37	7	0.18	0.08- 0.41	< 0.0001
NA-interrupt	24	8	0.32	0.15-0.72	< 0.0001

In total, there were 5220 observation clips collected with 2580 in control and 2640 in treatment. In the previous question 2 section, we identified that there was statistically significance time allocation between treatment and control teachers regarding their instructional activities in the domain of activity structure. We further identified that teachers in treatment condition differed statistically significant in ten activities when compared with teachers in control condition: lecture/listen (odds ratio, 1.91; 95% CI, 1.58-2.31; $p<.0001$), lecture/Performance (odds ratio, 2.53; 95% CI, 1.91-3.36; $p<.001$), direct/listen (odds ratio, 1.40; 95% CI, 1.23-1.60; $p<.0001$), demonstrate/listen (odds ratio, 0.18; 95% CI, 0.06-0.54; $p=.002$), lead/perform (odds ratio, 3.4; 95% CI, 2.11-5.49; $p<.0001$), ask/answer (odds ratio, .60; 95% CI, 0.54- 0.67; $p<.0001$), answer/ask (odds ratio, 0.28; 95% CI, 0.19-.42; $p<.0001$), evaluate/perform (odds ratio, 28.96; 95% CI, 7.06-118.68; $p<.0001$), evaluate/cooperate (odds ratio, .18; 95% CI, 0.08- 0.41; $p<.0001$), and NA-interrupt (odds ratio, .32; 95% CI, 0.15-0.72; $p<.0001$). The results indicated that teachers in treatment condition were observed to use lecture/listen, lecture/Performance, direct/listen, lead/perform, evaluate/perform, statistically more frequently when compared with control teachers, while teachers in control condition were observed to use demonstrate/listen, ask/answer, answer/ask, evaluate/cooperate, and NA-interrupt statistically more frequent when compared with treatment teachers.

With regard to instructional activities the Odds Ratio analysis indicated that teachers in treatment condition differed significantly in ten activities when compared with teachers in control condition. To be more specific, when teachers in control

condition were observed to use 100 times of lecture/listen, treatment teachers were expected to use 191 times of this practices. When teachers in control condition were observed to use 100 times of lecture/Performance, treatment teachers were expected to use 253 times of this practices. When teachers in control condition were observed to use 100 times of direct/listen, treatment teachers were expected to use 140 times of this practices. When teachers in control condition were observed to use 100 times of lead/perform, treatment teachers were expected to use 340 times of this practices. When teachers in control condition were observed to use 100 times of evaluate/perform, treatment teachers were expected to use 2896 times of this practices. As for the practices that control teachers adopted statistically significantly more often, results indicated that when teachers in control condition were observed to use 100 times of demonstrate/listen, treatment teachers were expected to use 19 times of this practices. When teachers in control condition were observed to use 100 times of ask/answer, treatment teachers were expected to use 60 times of this practices. When teachers in control condition were observed to use 100 times of answer/ask, treatment teachers were expected to use 28 times of this practices. When teachers in control condition were observed to use 100 times of evaluate/cooperate, treatment teachers were expected to use 18 times of this practices. When teachers in control condition were observed to use 100 times of NA-interrupt, treatment teachers were expected to use 32 times of this practices. Table 8 presents the results of the Odds Ratio (OR) that was applied to detect the groups' difference using control condition as the reference group in the domain of communication mode.

Table 8

Odds Ratio (OR) Contrast in the Domain of Communication Mode

Mode	Control (n=2580)	Treatment (n=2640)	OR	95%CI	*p* value
Reading	48	157	3.34	2.40-4.63	< 0.0001
Verbal	1519	927	0.38	0.34-0.42	< 0.0001
Reading-Aural	22	97	4.44	2.78-7.07	< 0.0001
Aural-verbal	24	6	0.24	0.10-0.59	< 0.001
Verbal-writing	177	430	2.64	2.20-3.18	< 0.0001
Verbal-reading	195	304	1.59	1.32-1.92	< 0.0001
Verbal-Aural	307	427	1.43	1.22-1.67	< 0.0001

In total, there were 5220 observation clips collected with 2580 in control and 2640 in treatment. In the previous question 2 section, we identified that there was statistically significance time allocation between treatment and control students regarding their classroom activities in the domain of mode. We further identified that students in treatment condition differed statistically significant in seven activities when compared with students in control condition: reading (odds ratio, 3.34; 95% CI, 2.40-4.63; $p<.0001$), verbal (odds ratio, .38; 95% CI, 0.34-0.42; $p<.0001$), reading-aural (odds ratio, 4.44; 95% CI, 2.78-7.07; $p<.0001$), aural-verbal (odds ratio, 0.24; 95% CI, 0.10-0.59; $p<.001$), verbal-writing (odds ratio, 2.64; 95% CI, 2.20-3.18; $p<.0001$), verbal-reading (odds ratio, 1.59; 95% CI, 1.32-1.92; $p<.0001$), and verbal-aural (odds ratio, 1.43; 95% CI, 1.22-1.67; $p<.0001$). The results indicated that students in treatment condition were observed to use reading, reading-aural, verbal-writing, verbal-reading and verbal-aural statistically more frequently when compared with control students,

while students in control condition were observed to use verbal and aural-verbal statistically more frequently when compared with treatment teachers.

In evaluating the communication mode, the Odds Ratio analysis identified that students in treatment condition differed significantly in seven activities when compared with students in control condition: To be more specific, when students in control condition were observed to use 100 times of reading, treatment students were expected to use 334 times of this activity. When student in control condition were observed to use 100 times of reading-aural, treatment students were expected to use 444 times of this practices. When students in control condition were observed to use 100 times of verbal-writing, treatment students were expected to use 264 times of this practices. When students in control condition were observed to use 100 times of verbal-reading, treatment students were expected to use 159 times of this practices. When students in control condition were observed to use 100 times of verbal-aural, treatment teachers were expected to use 143 times of this practices. As for the practices that control students adopted statistically significantly more often, results indicated that when students in control condition were observed to use 100 times of verbal, treatment students were expected to use 38 times of this practices. When students in control condition were observed to use 100 times of aural-verbal, treatment students were expected to use 24 times of this practices. Students in treatment condition were more likely to interact with teachers in all speaking-, listen-, reading- and writing-related activities. Tables 9 and 10 present the results of the Odds Ratio (OR) that was applied to detect the groups'

difference using control condition as the reference group in the domain of Language of Instruction (Teacher and Student).

Table 9

Odds Ratio (OR) Contrast in the Domain of Instruction Language (Teacher)

Instruction language (Teacher)	Control (n=2580)	Treatment (n=2640)	OR	95%CI	*p* value
Spanish	144	1	0.01	0.00-0.05	< 0.0001
English	2259	2575	5.63	4.29-7.39	< 0.0001
Spanish introducing English	170	64	0.35	0.26-0.47	< 0.0001

Table 10

Odds Ratio (OR) Contrast in the Domain of Instruction Language (Student)

Instructure language (Student)	Control (n=2580)	Treatment (n=2640)	OR	95%CI	*p* value
Spanish	217	150	0.66	0.53-0.81	< 0.0001
English	2199	2471	2.53	2.09-3.07	< 0.0001
Spanish introducing English	150	19	0.12	0.07-0.19	< 0.0001

In total, there were 5220 observation clips collected with 2580 in control and 2640 in treatment. In In the previous question 2 section, we identified that there was statistically significance time allocation between treatment and control students regarding instruction language (teacher and student). We further identified that students in treatment condition differed statistically significant in three language option/combination when compared with students in control condition: Spanish (odds ratio, .01; 95% CI, 0.00-0.05; $p<.0001$), English (odds ratio, 5.63; 95% CI, 4.29-7.39; $p<.0001$), and Spanish introducing English (odds ratio, .35; 95% CI, 0.26-0.47;

p<.0001). We also identified that students in treatment condition differed statistically significant in the same language option/combination when compared with students in control condition: Spanish (odds ratio, .66; 95% CI, 0.53-0.81; *p*<.0001), English (odds ratio, 2.53; 95% CI, 2.09-3.07; *p*<.0001), and Spanish introducing English (odds ratio, 0.12; 95% CI, 0.07-0.19; *p*<.0001). The results indicated that students and students in treatment condition were observed to use English statistically more frequently when compared with students and students in control condition, while students and students in control condition were observed to use Spanish and Spanish introducing English statistically more frequently when compared with students and students in treatment condition. I also identify the pattern that students mirrored teachers' language choices.

It was further identified that students in treatment condition differed significantly in three language option/combination when compared with students in control condition. To be specific when treatment teachers used more English in the classrooms, their students used more English as compared with control condition. When control teachers used more Spanish in the classrooms, their students used more Spanish too as compared with treatment condition. To be more specific, when students in control condition were observed to use 100 times of Spanish, treatment students were expected to use 1 time of this language. When students in control condition were observed to use 100 times of English, treatment students were expected to use 563 time of this language. When students in control condition were observed to use 100 times of language combination (Spanish introducing English, treatment students were expected to use 35 time of this language. To be more specific, when students in control condition were observed to use

100 times of Spanish, treatment students were expected to use 66 time of this language. When students in control condition were observed to use 100 times of English, treatment students were expected to use 253 time of this language. When students in control condition were observed to use 100 times of language combination (Spanish introducing English, treatment students were expected to use 12 time of this language.

Table 11 presents the results of the Odds Ratio (OR) that was applied to detect the groups' difference using control condition as the reference group in the domain of Language Content to evaluate cognitive response levels.

Table 11

Odds Ratio (OR) Contrast in the Domain of Language Content

Language Content	Control (n=2580)	Treatment (n=2640)	OR	95%CI	*p* value
Social	52	10	0.18	0.09-0.36	< 0.0001
Academic	717	520	0.64	0.56-0.73	< 0.0001
Light	1646	1579	0.84	0.76-0.94	< 0.01
Dense	165	531	3.69	3.07-4.43	< 0.0001

In total, there were 5220 observation clips collected with 2580 in control and 2640 in treatment. In the previous question 2 section, we identified that there was statistically significance time allocation between treatment and control students regarding the level of language content: social, academic, light and dense. We further identified that teachers in treatment condition differed statistically significant in all four levels when compared with teachers in control condition: social (odds ratio, 0.18; 95% CI, 0.09-0.36; $p<.0001$), academic (odds ratio, .64; 95% CI, 0.56-0.73; $p<.0001$), light

(odds ratio, .84; 95% CI, 0.76-0.94; $p<.01$), and dense (odds ratio, 3.69; 95% CI, 3.07-4.43; $p<.0001$). The results indicated that teachers in treatment condition were observed to allocate statistically significant more instructional time in dense cognitive content, while teachers in control condition were observed to allocate statistically significant time in social, academic and light cognitive. It was further identified that teachers in treatment condition differed significantly in all four levels when compared with teachers in control condition: social, academic, light, and dense cognition. To be more specific, when teachers in control condition spend 100 units of time in social content, the treatment teachers would spend only 18 units of time in the same content. When teachers in control condition spend 100 units of time in academic transition, the treatment teachers would spend only 64 units of time in some content. When teachers in control condition spend 100 units of time in light cognitive content, teachers in treatment condition would spend 84 units of time in the same content. When control teachers spend 100 units of time in dense cognitive content, the treatment teachers would spend 369 units of time in the same content.

Summary

The purpose of this study was to analyze the relationships among related variables within the domains of language of instruction, language of content, communication mode and activity structure from teacher observations conducted in second grade transitional bilingual education classes. As part of these bilingual classrooms, there was a treatment and control group that took part in the study. The noted variables were observed and then collected into data pieces using the validated

classroom observation instrument, Transitional Bilingual Observation Protocol (TBOP). Data were analyzed to see to what extent these variables are highly related within the process that allows English language learners (ELLs) to acquire language as well as literacy skills. The data used for this study were pre-existing and taken from a randomized, longitudinal, federally funded research project (Project ELLA, U.S. Department of Education Award No. #R305P030032, 2003-2008).

To achieve this purpose, I intended to investigate (a) How did teachers in both treatment and control conditions allocate their instructional time in four domains of Activity Structure, Communication Mode, Language Content and Language of Instruction (teacher and student) as observed by TBOP? (b) Did teachers in treatment condition allocate their instructional time in four domains differently as compared with control teachers? (c) What instructional activities (teacher), communication mode (student), degree of language content and choice of instruction language/language combination of treatment condition are statistically significant different from control condition? (As part of this investigation, a non-parametric design implementing a Chi Square test statistical analysis. Then I followed the significance statistic with a strength relationship statistic known as Cramer's V. By way of this non-parametric design, I measured the frequency that each variable (language of instruction, language of content, communication mode and activity structure) occurs within the context of the transitional bilingual classroom. In order to examine the effect size of each specific category under four domains, Odds Ratio was adopted. In the succeeding chapter, I will present the discussion of the findings, limitations, recommendations and conclusions.

CHAPTER V

SUMMARY, LIMITATIONS, RECOMMENDATIONS, CONCLUSIONS

To improve classroom instruction and increase student achievement levels, particularly for ELLs, is critical we evaluate teacher pedagogy within the context of the bilingual classroom. As Cirino, Pollard-Durodola, Foorman, Carlson, & Francis (2007); Foorman et al. (2006), Lara-Alecio, et al. (2009) and Waxman and Padron (2004) have affirmed in their scholarship, it is crucial to collect observational evidence related to quality instruction and how it relates to students' academic outcomes. Furthermore, it is even more critical to observe instructional practices, including evaluating language of instruction, language content and activity structure in the classroom where there exists high levels of at-risk students who are constantly vulnerable at falling through the cracks of local education systems and adding to the ever increasing dropout rate (Bruce et al, 1997; Lara-Alecio & Parker, 1994; Lara-Alecio et al., 2009). By carrying out a systematic approach of observation that takes into account teachers' pedagogical practices while working with ELLs, it is possible to determine the variables that may impact quality or lack of quality in classroom instruction and which ultimately may improve teacher development (Lara-Alecio, Irby, & Tong, 2013, p. 1130).

To achieve the purpose, I assessed the relationships among related variables (categories) within the domains of language of instruction, language of content, communication mode and activity structure for teachers of second grade bilingual classes comparing experimental and control groups by evaluating pre-existing archive data derived from the ELLA Project. The identified variables serve as the foundation of

a four-dimensional model, Four Dimensional Bilingual Classroom Pedagogical Model (Lara-Alecio & Parker, 1994) and collected via the accompanying instrument, the Transitional Bilingual Observation Protocol (TBOP).

The participants in this investigation were comprised of teachers who were all part of the transitional bilingual education program that encompassed 22 second grade classrooms across the urban school district. Of these classrooms, 10 received an enhanced version of transitional bilingual education (TBE-E), while the other 12 classrooms received only (TBE-T) typical practice of what district outlines as transitional bilingual education as part of school curriculum. TBE-E consisted of: 70% (Spanish instruction)/30% (English instruction), 70 minutes of ESL intervention, and an extra 10 minutes of tutoring for struggling students. TBE-T or typical practice of transitional bilingual education program as part of school curriculum consists of: 80% (Spanish instruction)/20% (English instruction) and ESL intervention for 45 minutes. As part of these 22 classrooms, we had a total of 140 students in the TBE-E classrooms and 136 students in the TBE-T classrooms take part in the investigation. TBE-E consisted of 10 classrooms, while TBE-T consisted of 12 classrooms, as part of the ESL instruction allotted time. To minimize contamination of intervention, the schools that chose to participate had all 22 classrooms randomly selected to either receive the intervention or not as part of the broader ELLA Project. The results of this study were examined utilizing a non-parametric design, a Chi Square test statistical analysis, to be followed with a strength relationship statistic known as Cramer's V. By way of this non-parametric design, I measured the frequency that each category (language of instruction,

language of content, communication mode and activity structure) occurred within the transitional bilingual classroom. To examine the effect size of each specific category under four domains, odds ratio (OR) was adopted.

Discussion

Research Question 1

How did teachers in both treatment and control conditions allocate their instructional time in four domains of Activity Structure, Communication Mode, Language Content and Language of Instruction (teacher and student) as observed by TBOP?

Activity Structure

Teachers in treatment condition were observed to use the following five practices more often: Ask/answer (34.3%), Direct/perform (24.3%), Lecture/listen (12.8%), Observe/perform (9.5%) and Lecture/perform (6.6%), which accounted 85.7% of total instructional time. Teachers in control condition were observe to use the following five practices more often: Ask/answer (46.4%), Direct/perform (18.6%), Observe/perform (9.8%), Lecture/listen (7.1%), and NA-Transition (4.1%), which accounted 86.0% of total instructional time.

In both, the conditional and treatment groups the teacher-ask/answer type of activity was most observed. Initially, this phenomenon may demonstrate passive learning is taking place but in fact it is aligned with academic scaffolding and leveled questions. The ask/answering activity is one of the more frequently used ESL strategies to engage students in interacting with fellow peers. Academic scaffolding, as an

instructional activity (e.g., visual aids), can be critical to reinforcing concept, vocabulary, and overall oral-language development for ELLs (Echevarria, et al., 2008; Gersten & Baker, 2000; Gray & Fleischman, 2004).

Teacher Language & Student Language

Teachers in both conditions were observed to allocate majority of instruction time in English (87.6% in control and 97.5% in treatment). Teachers in control condition were observed use much more time in Spanish (5.6%), Spanish introducing English (6.6%) and English clarified by Spanish (.3%), as compared with teachers in treatment condition (0%, 2.4%, and 0% respectively). In general, more content was presented in Spanish in control condition as compared with treatment condition. Students in both conditions were observed to speak in English in majority of instruction time (85.2% in control and 93.6% in treatment). Students in control condition were observed use much more time in Spanish (8.4%), Spanish introducing English (5.8%) and English clarified by Spanish (.5%), as compared with teachers in treatment condition (5.7%, 0.7%, and 0% respectively).

In general, students in control condition were observe to speak more Spanish and less English as compared with students in treatment condition. It was also observed that students mirror their teachers regarding the amount of specific language was used in the classroom: teachers' higher percentage of English time with students' higher percentage of English time in treatment condition and teachers' higher percentage of Spanish time with students' higher percentage of Spanish time in control condition. Therefore, after examining the findings, there was essentially more opportunities for students in

treatment group to learn English since they were exposed to more to the language through daily practice through classroom instruction. In other words, the students' high % use of language (L2) in TBE-E reflected the teachers' language of instruction. This finding may demonstrate that if teachers implement meaningful academic-related language in L2, students will respond in a similar manner. This instructional practice opens opportunities for students to engage in the target-language learning.

Communication Mode

Students in treatment condition were observed to use the following eight modes more often: Verbal (35.1%), Verbal-writing (16.3%), Verbal-aural (16.2%), Verbal-reading (11.5%), Reading (6.6%), Aural-reading (5.7%), Reading-aural (3.7%) and Aural-writing (3.4%), which accounted 97.8% of total instructional time. Students in control condition were observe to use the following eight modes more often: Verbal (58.9%), Verbal-aural (11.9%), Verbal-reading (7.6%), Verbal-writing (6.9%), Aural-reading (5.6%), Aural-writing (2.6%), Reading (1.9%) and Aural-verbal (.9%), which accounted 96.1% of total instructional time. It was also observed that among the eight most adopted modes, students in control condition allocated more time in verbal-related activities (86.1%) as compared with students in treatment condition (79.3%). Students in treatment condition allocated more time in writing-related activities (19.7%) as compared with control students (9.4%).

After reviewing the findings above, it is evident that students in treatment group, TBE-E, has a much higher levels of expose to verbal-writing, which correlate to Cummins' (1986) ―reciprocal interaction model and the context-specific‖ model of

Diaz et al (1970) that support the practice of multiple modalities for second language acquisition. Modalities such as reading, writing, and verbal expression also are important skill areas teachers should foster within the class curriculum. Their differentiation within the TBP Theory indicates that English facility may not be unitary, but may vary by communication mode (Lara-Alecio, 1994). In addition, students in treatment group are getting a more balanced exposure to verbal and writing experiences, and therefore instruction is promoting the development of critical communication and literacy (ability to read and write) skills. Also, verbal and writing skills are formulated as being important expressive language modes.

Language Content

Teachers in treatment condition were observed to allocate much more time in Dense cognitive (20.1%) as compared with control teachers (6.4%). Teachers in treatment condition were observed allocate less time in Light cognitive (59.8%) as compared with control teachers (63.8%). Control teachers were observed to allocate more instruction time in CALP (29.8%), a combination of social exchanges and academic routines, as compared with treatment teachers (20.1%). It was also observed that control teachers spent more time in academic routines (27.8%, e.g. preparing for recess et al) than treatment teachers did (19.7%). Control teachers were also observed to spend more time in social exchanges and conversation (2.0%) as compared with treatment teachers (.4%). In other words, the findings indicate that TBE-E teachers are promoting instruction that adheres to higher order thinking skills (dense cognitive skills) in comparison to TBE-T control teachers that are only scratching the surface with light

cognitive development with regard to student learning. Light cognitive content, as part of the study, was observed as being repetitive drill or skills practice, or reviewing content previously introduced. Dense cognitive content was characterized as resembling new content-area information, conceptually demanding, specialized vocabulary, and critical thinking.

Research Question 2

Did teachers in treatment condition allocate their instructional time in four domains differently as compared with control teachers?

A chi-square test of independence was conducted between condition and teachers' Activity Structure, Mode, Teacher Language, Student Language and Language Content. It was observed in the domain of Activity Structure, teachers in different conditions statistically differently adopted pedagogical practices χ^2 (18) = 386.36, p<.001. The effect size was small to medium (Cohen, 1988), Cramer's V = .288. It was observed that students in treatment condition responded statistically different to teachers' pedagogical practices in the domain of Mode χ^2 (16) = 434.372, p<.001. There were statistically significant differences between control and treatment teachers regarding their time allocation of using different language in the classroom χ^2 (3) = 216.04, p<.001. The effect size was small to medium (Cohen, 1988), Cramer's V = .203. It was observed that there were statistically significant differences of students' using different languages (L1, L2, L1-L2 and L2-L1) between control and treatment condition χ^2 (3) = 142.95, p<.001. The effect size was small to medium (Cohen, 1988), Cramer's V = .165. Teachers in treatment condition statistically differed from teachers in control

condition regarding time allocation in different levels of language content χ^2 (3) = 253.03, p<.001. The effect size was small to medium (Cohen, 1988), Cramer's V = .22.

Research Questions 3

In what categories of each domain did teachers in treatment condition allocate their instructional time statistically significant different from control condition?

Regarding, instructional activities, teachers in treatment condition differed statistically significant in ten activities when compared with teachers in control condition. The results indicated that teachers in treatment condition were observed to use lecture/listen, lecture/Performance, direct/listen, lead/perform, evaluate/perform, statistically more frequently when compared with control teachers, while teachers in control condition were observed to use demonstrate/listen, ask/answer, answer/ask, evaluate/cooperate, and NA-interrupt statistically more frequent when compared with treatment teachers.

Findings regarding the domain of communication mode showed that students in treatment condition differed statistically significant in seven activities when compared with students in control condition. The results indicated that students in treatment condition were observed to use reading, reading-aural, verbal-writing, verbal-reading and verbal-aural statistically more frequently when compared with control students, while students in control condition were observed to use verbal and aural-verbal statistically more frequently when compared with treatment teachers.

With relationship to domain of instruction language (teacher & student), the results indicated that students and students in treatment condition were observed to use

English statistically more frequently when compared with students and students in control condition, while students and students in control condition were observed to use Spanish and Spanish introducing English statistically more frequently when compared with students and students in treatment condition. We also identify the pattern that students mirrored teachers' language choices. Evidence relative to the domain of language content indicated that teachers in treatment condition were observed to allocate statistically significant more instructional time in dense cognitive content, while teachers in control condition were observed to allocate statistically significant time in social, academic and light cognitive.

Limitations

A limitation of the study is that only teachers in experimental classrooms received ongoing training and feedback as part of the intervention (TBE-E). Therefore, the treatment group of teachers were guided through a 90-minute ESL intervention through Project ELLA which incorporated additional curriculum materials and additional time (10 minutes) of tutoring for struggling students. On the other hand, control teachers primarily implemented the scope and sequence and curriculum ancillaries that were traditionally used with ESL students in the school district. Additionally, for the purpose of our study only observed instructional practices from Grade 2 were analyzed and therefore the sample is constrained to only depicting and representing one grade level, as opposed to across grade levels. Also, the pre-existing data that was utilized for the sample, was collect in the academic year (2006-2007). Although the data was collected, archived and organized exceptionally, it was still 10

years old could be considered outdate due to constantly changing circumstances and advances in school curriculum. At the time this ESL intervention, as part of Project ELLA had only been implemented in one urban school district in central Texas.

Conclusions and Recommendations

In the 2015-16 academic year, Texas had an estimated 980,487 students that were identified as being English language learners (ELLs). Of these ELL student populations total, 885,460 were recognized as having Spanish as their home language (Texas Education Agency, 2016a). The percentage of students receiving bilingual or English as a second language instructional services increased from 14.6 percent in 2005-06 to 18.3 percent in 2015-16, and the percentage of students identified as English language learners grew from 15.7 to 18.5 percent population (Texas Education Agency, 2016b, 2016c). By examining these statistics, it is clear that educators and policy makers have to make better informed decisions as they relate to the lives of our ELL student populations, especially considering the demographics in Texas.

In particular, these community stakeholders must be prepared to deal with increase of ELL student populations and how to provide quality instruction to meet the needs of these students in public schools. There also must be continued research as to how to improve teaching practices and overall classroom instruction when working with special populations such as ELL students. Researcher such as Lara-Alecio and Parker (1994) have provided a foundation with regard to the four dimensional pedagogical model for transitional English bilingual classrooms known as the transitional bilingual observation (TBO) protocol that assess elements that relate to classroom pedagogy.

As indicated in several studies the TBOP instrument has been successfully implemented and validated at every grade level when evaluating ELLs students in ESL and bilingual classrooms (Bruce et al., 1997; Irby, et al., 2007; Lara-Alecio et al., 2009; Lara-Alecio et al., 2012; Tong et al., 2010).

Therefore, it is important for state and school district officials to seriously consider providing a protocol that encourages evaluation and assessment of best teaching practices that are research-based. By employing such an instrument, perhaps instructional practices can be improved, classroom climate can be enriched, and the academic achievement gap for many of students, including ELLs. In addition, by employing such an observation instrument, we can expand the knowledge base and associated with documenting classroom pedagogical occurrences for ELLs, the quality of instruction by languages of instruction, and the interactions of pedagogy that may produce quality outcomes for such students (August & Shanahan, 2006; Lara-Alecio, et al., 2009; Slavin & Cheung, 2003; Thomas & Collier, 2003). Through such valuable information, local education decision-makers--educators, policymakers and other community stakeholders may be able to curb the ever increasing dropout rate, through a better understanding of issues and complexities that are affecting students daily within the context of the classroom. Furthermore, by expanding the knowledge base with regard to instructional issues affecting ELLS, pre-service programs at the university level can use this new found information to effectively prepare future teachers for working with new generations of culturally, linguistically and diverse students.

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APPENDIX A

Classroom Observation Instruments identified for use with English Language Learners

Classroom Observation Instrument	Documented in Research Studies	Theoretical Framework	Reliability & Validity	Measurement/Evaluate	Grade Level	Training Time
Activity Setting Observation System (ASOS)	(Rivera & Tharp, 2004); Tharp, et al., 1999; Tharp, 2005)	Based on sociocultural theory	Reliability: Activity Structure (AS) $R = 0.99$ Cohen's kappa ranges for the following instrument measures: 0.73 to 0.74 Validity was established by CREDE researchers	Measures the basic categories of activity setting	Elementary Grades	Not provided
English-Language Learner Classroom Observation Instrument (ELLCOI)	Baker, et al., 2005, 2006; Graves, et al., 2004; Haager et al., 2003	California Reading and Language Arts Framework	Reliability: Inter-observer agreement median = 74%, ranging from 55% to 88% (Gersten, et al. (2005)–based on item-by-item agreement (Whitacre, Diaz, & Esquierdo, 2013). Validation study conducted by Baker, et al. (2005, 2006)	This instrumentation evaluates instruction quality on several dimensions for ELL	Grade 1	Not provided
Timed Observations of Student Engagement (TOSE)	(Foorman & Schatschneider, 2003;Foorman, et al., 2004; Cirino, 2007)	Developed for an NICHD-funded study on early reading interventions (K-4) and was given a	Reliability: was not specifically found, but reliability of the Timed Observations of Student Engagement (TOSE) is reported at over 80% interrater reliability	Evaluates using a time-sampling instrument on instruction components, student engagement, and language	(K-4)	2 days

		language component	Validity: Modified from original TOSE			
Classroom Observation Schedule (COS)	(Padrón, Waxman, & Huang, 1999; Waxman & Padrón, 2004)	Student-mediating paradigm	Reliability: interrater reliability recorded as $r > 0.95$ Validity: reported in previous studies (Waxman & Huang, 1999)	Records student behavior during the instruction learning process. Used in combination with instruments such as TROS, COM.	Across Elementary Grade levels	a few hours
Teacher Roles Observation Schedule (TROS)	(Waxman, et al., 2004)	Teacher centered observation	Used in combination with instruments such as COM, COS.	Records instruction settings, interactions, and content. Used in combination with instruments such as COM, COS.	Across Elementary Grade levels	a few hours
Classroom Observation Measure (COM)	(Waxman, Tharp, & Hilberg, 2004; Ross & Smith, 1996)	Over 30 classroom indicators to target six areas to observer instructional processes	Reliability: Researches in past studies have reported high consistency ratings of reliability relative to percentage of interrater agreement, Validity: validated in past studies such as (Ross & Smith, 1996)	Evaluates and observes instruction strategies. Used in combination with instruments such as TROS, COS.	Across Elementary Grade levels	Not provided
Classroom Assessment of Supports for Emergent Bilingual	(Freedson, et al,, 2009)	There is a framework to evaluate teacher and classroom for	Not available—Still undergoing further development	Measures development/levels of the social, cognitive, and linguistic development of English language learners	Pre-school	At least 4 days

Acquisition (CASEBA)		L1 an L2 students				
Early Language and Literacy Classroom Observation: Addendum English Language Learners (ELLCO-ELL)	(Castro, 2005; Halle et al., 2010)	Based on framework that targets specific classroom practices relative to promoting language and literacy development	Reliability: Training criterion = 90% agreement; Cohen's kappa = 0.46 mean for each item on the classroom observation scale; 94% agreement on Literacy Environment Checklist; 100% mean value for percent exact agreement for each item on the Literacy Activities Rating Scale	Measures classroom and pedagogy elements that affect the experiences of English language learners	Pre-kindergarten to 3rd grade	Minimum 9 hours
Sheltered Instruction Observation Protocol (SIOP)	(Guarino, et al., 2001;Echevarria, et al., 2004; 2011)	Sheltered Instruction Model	Reliability: Alpha ranges from 0.959 (Preparation) to 0.914(Lesson Delivery) Validity: Validity was tested on three factors accounting for 98.4% of the variance); Validated via Guarino, et al.(2004)	Evaluates the degree to which sheltered instruction is implemented in the classroom with ELLs	K-12	Teachers training Time-frame not clear
SRI Classroom	(Stallings, 1973; Stallings &	Systematic Framework	Reliability: 84% of the 140 coefficients	Wide-ranging Instrumentation and	Elementary School	3 training sessions,

Observation Instrument	Kashkowtiz, 1974)	implemented as part of federal program that: records classroom occurrences and behaviors, procedures, and interactions	computed resulted in a value of. .70 or more (Stallings & Kashowitz, 1974)	adapted forms–measures a wide variety of educational components	Grades, but does not target individual or specific special population	each session lasted 7 days
Transitional Bilingual Observation Protocol (TBOP)	Lara-Alecio & Parker, 1994	Four Dimensional Transitional Bilingual Pedagogical Model (Lara-Alecio & Parker, 1994)	Reliability: 40 hours of Parker et al. (1994) found reliability at 0.82 - 0.98 (Cohen's Kappa) Validity: Utility of the pedagogical model/theory and validation (Lara-Alecio & Parker, 1994); Validated at every grade levels as such studies: (Bruce et al., 1997; Irby, et al., 2007; Lara-Alecio et al., 2009; Lara-Alecio et al., 2012; Tong et al., 2010).	Describes the pedagogical occurrences by four instruction domains in the classrooms for English language learners	K-12 all grades	Teacher training sessions lasted 3 hours every 2 weeks after school

APPENDIX B

TBOP Code Descriptions

TBO Model Instructional Practice Codes Continued

Teacher Behaviors	Activity Structure Descriptions
Lectures (Lec)	teacher lectures instructing students about content/subject matter/skills, presents info verbally or on chart, overhead, or AV materials, explains how something works
Directs (Dir)	teacher gives directions, orders, directives, procedures to follow for academic assignments
Demonstrates (Dem)	teacher demonstrates or models desired student academic performance, demonstration/modeling something students will later perform themselves
Leads (Led)	teacher leads students through a desired performance while students perform the task with or slightly behind the teacher
Asks (Ask)	teacher verbally asks questions related to content/subject matter/skills; asks/directs students to perform a content/subject matter/skills related task. Teacher's behavior during a teacher-led/controlled discussion.
Evaluates (Ev)	any overt teacher behavior which is part of a judgment of correctness or quality of a content/subject matter/skills response or performance, including teacher giving academic feedback to students and making verbal corrections
Answers (Ans)	verbally answering content/subject matter/skills area questions from students; making clarifications. Teacher's behavior during a student led/controlled discussion
Observes (Obs)	observing or supervising students during academic activities including informal socializing with students, including those times when a teacher may be physically in the room but is not actively engaged in overt observation or supervision
Student Behaviors	**Activity Structure Descriptions**
Listens (Lis)	student is passively listening, watching
Asks (Ask)	student asking questions related to content/subject matter/skills. Student behavior during student-led/controlled discussion
Performs (Per)	student performs an academic task; a response to a directive; note-taking; paraphrasing

TBO Model Instructional Practice Codes Continued

Answers (Ans)	fairly brief verbal response to a content/subject matter/skills area question. Student answers questions related to skill/subject area; student behavior during a teacher-led/controlled discussion
Discovers (Dis)	discovering an answer to a content/subject matter/skills question or problem/ involves trial and error, exploratory learning. Students work individually
Cooperates (Cop)	cooperatively learning or helping each other, students work in groups of 2 or more
Non-Academic Activities	
Feedback (NA feed)	giving positive or negative verbal feedback to students about their non-academic behavior, includes activities related to discipline of students
Free Time (NA free)	free time or play
Transition (NA tran)	housekeeping-beginning and end-of-day activities including managerial routines such as taking attendance, collecting money, lunch count, cleaning desks, etc.: setting up or preparing for an activity, putting materials away. Also includes non-academic discussion, demonstration, directives for social behaviors which occur within the classroom
Interruption (NA int)	any interruption to the classroom instruction activity including fire drills, intercom messages, unplanned visitors, child becoming ill, etc.
Outside (NA out)	of the classroom-activity on the playground, hallway, bus area, cafeteria, in assemblies, etc.
Interactive Instruction (Interact)	teaching with active student responding, typical of direct instruction lessons. Teacher models, leads, tests students and students perform and orally respond to questions as an integral part of instruction

Activity Structure		
	Code	Teacher Behavior / Student Behavior
	1	lectures / listens
	2	lectures / performs
	3	directs / listens
	4	directs / performs
	5	demonstrates / listens
	6	leads / performs
	7	asks / performs
	8	asks / answers
	9	answers / asks
	10	evaluates / performs

TBO Model Instructional Practice Codes Continued

	11	observes / performs
	12	evaluates / discovers
	13	evaluates / cooperates
	14	observes / discovers
	15	observes / cooperates
	16	Not Applicable–feedback
	17	Not Applicable–free time
	18	Not Applicable–transition
	19	Not Applicable–interruption
	20	Not Applicable–outside
	21	interactive instruction
Mode		
	Code	Description
	1	Writing
	2	Reading
	3	Aural
	4	Verbal
	5	writing–reading
	6	writing–aural
	7	writing–verbal
	8	reading–writing
	9	reading–aural
	10	reading–verbal
	11	aural–writing
	12	aural–reading
	13	aural–verbal
	14	Verbal–writing
	15	verbal–reading
	16	verbal–aural
	17	Aural–reading–verbal
	18	Not Applicable (NA)
Language Content		
	Code	Description
Social Routines (Social)	1	social exchanges and conversation
Academic Routines (Academic)	2	preparing for recess, returning books, learning strategies, handing in assignments, structuring homework
Light Cognitive (Light Cog)	3	current events, discussion of the school fiesta, multicultural education issues, repetitive drill or skills practice, reviewing content already introduced

TBO Model Instructional Practice Codes Continued

Dense Cognitive (Dens Cog)	4	new content-area information, conceptually loaded communication with specialized vocabulary and procedures
Language of Instruction		
	Code	Description
Content Presented in L1 (L1)	1	(native language)-indicates Spanish-only introduction, a beginning point for students with very low English-proficiency
Content Presented in L2 (L2)	2	(second language)-indicates English-only instruction
L1 Introduces L2 (L1-2)	3	indicates instruction primarily in L1, but additionally, English vocabulary is taught for key ideas, concepts, and procedures
L2 Clarified by L1 (L2-1)	4	indicates instruction primarily in English, but with L1 used as "back-up" as needed to ensure understanding
	5	Not Applicable (NA)

Source. Lara-Alecio, R., Irby, B. J., & Mathes (2003). English language and literacy acquisition (Project ELLA). U.S. Department of Education, Washington, D.C., 20202. Contract No R305P030032.

APPENDIX C

Letter of Permission to reproduce Transitional Bilingual Pedagogical Theory

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To whom it may concern.

I hereby grant Mr. David Daniel Jimenez permission to reproduce the Model/theory of the four-dimensional bilingual pedagogical theory in his dissertation study, Analysis of Second Grade Bilingual Classroom Observations using the Transitional Bilingual Observation Protocol: Language of Instruction, Language Content, Communication Mode, and Activity Structures.

Name: Dr. Rafael Lara-Alecio

Signed: Rafael La

Date: March 10, 2017

For permission to use this theory/model, contact

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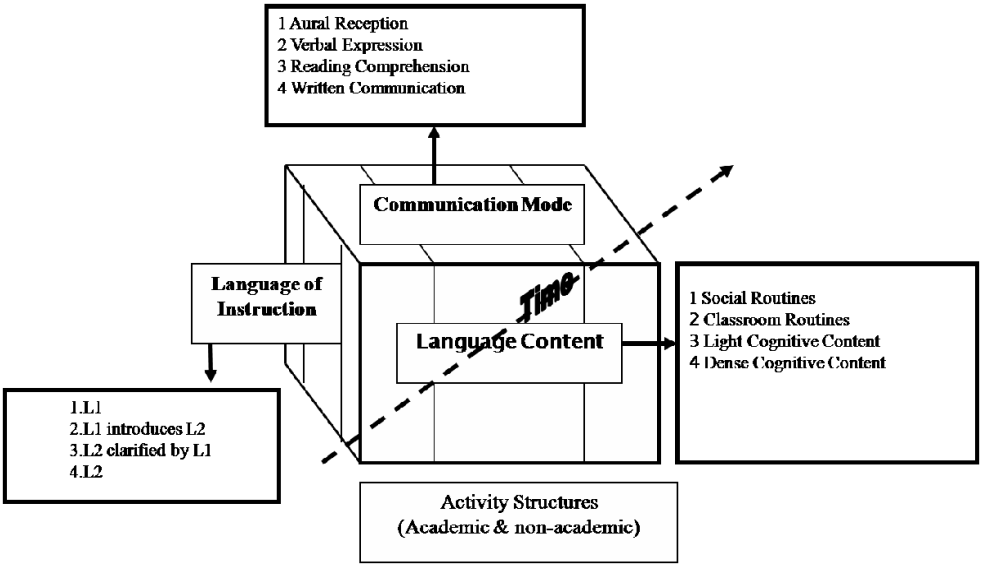

Four-dimensional Transitional Bilingual Pedagogical Theory (Lara-Alecio & Parker, 1994)

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