

ASSESSING ENGLISH LANGUAGE LEARNERS: A CASE STUDY  
OF PRACTICES USED BY SECONDARY  
MATHEMATICS TEACHERS  
THESIS

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by

Ester Calderón Regalado, B.A.

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ASSESSING ENGLISH LANGUAGE LEARNERS: A CASE STUDY  
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MATHEMATICS TEACHERS

Committee Members Approved:

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J. Nathan Bond, Chair

---

Joyce F. Fischer

---

Kathryn S. Lee

Approved:

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J. Michael Willoughby  
Dean of the Graduate College

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## **DEDICATION PAGE**

I dedicate this thesis to my wonderful husband whose patience and caring made this and every accomplishment of mine possible.

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## TABLE OF CONTENTS

	<b>Page</b>
ACKNOWLEDGEMENTS .....	v
LIST OF TABLES .....	viii
LIST OF FIGURES .....	ix
ABSTRACT .....	x
CHAPTER	
I. INTRODUCTION .....	1
Statement of the Problem.....	2
Purpose of the Study .....	3
Significance of the Study .....	4
Definition of Terms.....	5
II. REVIEW OF POLICY AND LITERATURE .....	8
History of Language Minority Education Policy .....	8
Effective Instruction for ELL Students.....	10
Texas' ELL Students.....	12
Measuring ELL Student Achievement.....	14
Classroom Assessments .....	17
Why Mathematics? .....	18
Similar Studies on Classroom Assessment .....	19
Theoretical Framework.....	21
III. STUDY DESIGN AND PROCEDURES .....	22
Role of the Researcher .....	22
Description of Participants.....	23
Selection of Participants .....	24
Sources of Data .....	25
Data Analysis Procedures .....	25
Study Trustworthiness .....	26
Descriptive Statistics of Selected High School Campuses .....	27
Selected Urban School District.....	27

Erwin High School Campus: Standard Instruction Offering ESL Regular Instruction.....	28
Alton High School Campus: Alternative Instruction Offering ESL Regular Instruction.....	32
Sheldon High School Campus: Standard Instruction Offering ESL Sheltered Instruction .....	33
 IV. FINDINGS .....	 36
Erwin High School: Standard Instruction/ESL Regular Instruction.....	36
Alton High School: Alternative Instruction/ESL Regular Instruction.....	37
Sheldon High School: Standard Instruction/ESL Sheltered Instruction ...	38
Common Themes .....	39
Theme: Intensified State Assessment Focus.....	39
Decisions Against the Use of Authentic Assessments .	40
Individual Student Pressure for Assessment Results ...	40
Theme: Recent changes in ESL instruction .....	42
Lack of Instructional Continuity .....	42
Inconsistent Teacher and Student Support .....	43
Theme: Ineffective Assessments.....	43
State Linguistically Accommodated Testing (LAT) ....	43
Spanish Language Versions of Assessment Instruments .....	44
Theme: Problematic Student Identification .....	45
Identification of ELL Students .....	45
Identification of Special Education Students .....	45
 V. CONCLUSION.....	 47
Theoretical Framework of the Study .....	48
Threshold Hypothesis .....	48
Effective Instruction.....	48
Authentic Assessments .....	49
Assessment Choices and External Pressures .....	49
External Pressure on Case Study Sites.....	50
Recommendations.....	51
Future Research .....	52
Conclusion .....	53
 APPENDIX A: PARTICIPATION CONSENT FORM.....	 55
 APPENDIX B: TEACHER INTERVIEW GUIDE.....	 57
 LITERATURE CITED.....	 60

## LIST OF TABLES

<b>Table</b>	<b>Page</b>
1. <i>Case Study Participants</i> .....	24
2. <i>Selected High School Campuses: General School Characteristics</i> .....	28
3. <i>Selected High School Campuses: Percent of Students Meeting Proficiency Standard</i> .....	30
4. <i>Selected High School Campuses: Mathematics Assessments Results</i> .....	31
5. <i>Selected High School Campuses: State Accountability Results</i> .....	34
6. <i>Selected High School Campuses: Federal Accountability Results</i> .....	35

## LIST OF FIGURES

<b>Figure</b>	<b>Page</b>
1. <i>2006 Texas Academic Excellence Indicator System, Percent Met Standard</i> .....	13

## **ABSTRACT**

### **ASSESSING ENGLISH LANGUAGE LEARNERS: A CASE STUDY OF PRACTICES USED BY SECONDARY MATHEMATICS TEACHERS**

by

Ester Calderón Regalado, B.A.

Texas State University-San Marcos

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**SUPERVISING PROFESSOR: J. NATHAN BOND**

With the implementation in 2003 of the federal education law known as No Child Left Behind, students from all cultural and linguistic backgrounds, including English language learners (ELLs), are required to perform well on state assessments. Since the numbers of ELLs in schools are growing and since schools are held accountable for all students' scores, the identification of effective instruction and assessments for ELLs has become increasingly more important for educators. This qualitative, case study investigated the assessment practices of five mathematics teachers in three high schools to determine the assessment measures that they selected for ELLs and the factors that influenced their decisions. Emerging from the data were four themes: (a) an intensified focus on state assessments, (b) changes in ESL instruction at the campuses, (c) ineffective state assessments for ELLs and (d) problematic identification of ELLs.

Although research suggests that effective teaching practices will help ELLs to learn, these teachers felt pressure to help their ELLs to succeed on the state assessments and thus, adjusted or abandoned what they knew to be best practice. The study showed that classroom teachers are selecting classroom assessments which help students to do well on state assessments but which may not accurately measure ELL academic progress.

## CHAPTER I

### INTRODUCTION

Language minority education policy in the United States has gone through a number of changes over the last one hundred years. The 1906 Nationality Act required that immigrants coming into America speak English. This legislation eventually evolved with the help of federal courts into the policy of requiring bilingual education to be available to students attending public schools in the US (Texas Education Agency [TEA], 2004). Major state and federal policy events continued to emphasize the responsibility of public schools to provide education in the native language of recent immigrants when possible (TEA, 1998). The mid-1980s *English only* movement led to state restrictions on bilingual education, and eventually schools began to focus on alternative methods of educating a continually growing number of school-aged recent immigrants to the US. Changes to language minority education policy continue today through the No Child Left Behind Act (NCLB) federal mandate to annually evaluate student performance on state-wide standardized tests and impose interventions if schools do not show Adequate Yearly Progress (AYP) (US Department of Education [USDE], 2006).

When a standardized test is tied to negative consequences for failure, such as the risk of producing low school test scores or denying a diploma, it is called a high-stakes

test. High-stakes are involved in testing recent immigrant students who are limited English proficient (LEP) through standardized measures and holding schools responsible for the outcome (TEA, 2006b). Yet for both federal and state accountability procedures, the pressure to include measurements of the performance of LEP students continues to grow. Effective assessments for LEP students is a growing area of research and recent findings on the extent of language demand and cultural effects of test items help national leaders determine the best guidance for state assessment procedures (Abedi, 2004). Research suggests that LEP students, as well as all students, practice with assessments not only for the desired outcome on high-stakes assessments, but also for the recognition that classroom assessments play a critical role in student instruction (Kopriva & Saez, 1997). Effective instruction for LEP students in the content areas requiring the lowest level of language demand, such as mathematics, offers an opportunity to effectively assess students' mathematical potential and not their English language proficiency (Abedi, 2004). In addition, the performance of LEP students in secondary education continues to be a focus for school districts and the state (TEA, 2006c).

### Statement of the Problem

A general lack of research exists on the assessment practices of secondary teachers of LEP students or English language learners (ELLs). Secondary grade level mathematics encompasses an increasing demand on students to express content knowledge and the use of classroom assessments to provide continuous feedback to students necessary for them to gauge their own level of ability (Abedi, 2004; Kulm, 1993). Classroom assessment practices vary with each teacher, presenting a challenge to

understand current practices (McMillan, 2004). Despite that fact, a critical role in effective instruction of LEP students includes providing effective classroom assessments that enhance student performance (Echevarria & Short, 2000).

### Purpose of the Study

The purpose of this study was to determine the assessment practices that secondary mathematics teachers used with ELL students. The study focused on the practices of five secondary mathematics teachers at three high school campuses from an urban school district. Each campus was selected because it represented a distinct instructional program for ELL students. These include standard and alternative educational instruction, either of which provide instruction to ELL students in either English as a Second Language (ESL) instruction or sheltered instruction. The ESL programs provided intensive English instruction by ESL endorsed teachers while students also attended regular classrooms with other English proficient students taught by content area teachers. The sheltered instruction programs provided separate classes for ELL students taught by content area teachers who had ESL training and who followed the regular scope and sequence of the curriculum (TEA, 2005). The two main goals of the study were to (a) determine the assessment methods that secondary mathematics teachers select when assessing ELL students and (b) identify the factors that influence that selection.

## Significance of the Study

Since student performance on mathematics assessments is least affected by language demands compared to other content area assessments, the potential for LEP students to perform at their true level of content knowledge on assessments provides teachers a unique window of opportunity for effective instruction (Abedi, 2004). That is, LEP students have the greatest potential to reach higher achievement levels in mathematics over other subject areas. Guidance from the National Council on Teachers of Mathematics states that every student should have equitable opportunities to learn and that LEP students “should receive mathematics instruction in their first language as they work to acquire English proficiency” (NCTM, 2005, p. 1). Mathematics teachers nationwide should be aware of and prepared to provide the supports needed for LEP students to achieve mathematics content proficiency.

The increasing number of recent immigrants to this country and growing need for research to inform educators of effective and accurate measures of ELL student progress (Center for Research on Education, Diversity & Excellence [CREDE], 2003) guided this study. The findings of this study will provided information on classroom assessment practices that complements ongoing research on effective assessment of LEP students. These findings may be used by teachers to shape instruction and by school leaders to guide assessment practices. Research on assessment practices also contributes to the accurate measurement of LEP student achievement in state or federal accountability systems.

## Definition of Terms

1. Biased Test Items: the systematic under-measurement or over-measurement of a student's "true" skill (Kopriva & Saez, 1997).
2. Bilingual Education (BE): education instruction that uses and promotes two languages, although there are varying degrees of formal instruction in both languages and varying degrees of fostering of bilingualism within each bilingual education program (Baker, 2006).
3. Current LEP - students identified as LEP and currently served through the LEP (Bilingual or ESL) program (Texas Administrative Code [TAC], 2006).
4. English Language Learner (ELL): term used in most current education research to describe students with limited English proficiency.
5. English as a Second Language (ESL): required in the Texas Education Code, English as a second language programs enable LEP students to become competent in the comprehension, speaking, reading, and composition of the English language through the use of second language methods, and emphasize the mastery of English language skills, as well as subject area academic skills (Texas Education Code [TEC], 2006).
6. Language Proficiency Assessment Committee (LPAC): required by the Texas Education Code, the LPAC committee is formed for each LEP student comprised of a campus administrator, LEP program teacher and parent; whose role is to initiate, articulate, deliberate, and determine the best instructional program for the student; and make appropriate decisions regarding placement, instructional practices, assessment, and special programs that impact the student (TEA, 2004).

7. Limited English Proficiency (LEP): students who have a home language other than English are identified as limited English proficient (LEP) and are required by the Texas Education Code to be provided with a full opportunity to participate in a bilingual education or English as a second language program (TEC, 2006).  
These students are also known as English language learners (ELL).
8. Linguistically Accommodated Testing (LAT): an alternative assessment process that enables recent immigrant English language learners to have assistance in understanding the language used on the statewide achievement test (TEA, 2007a).
9. Monitored LEP - students who have met the criteria to exit the LEP (Bilingual or ESL) program and are no longer classified as LEP but are in their first or second year of monitoring as required by state statute (TAC, 2006).
10. Objective Test Items: test items that avoid any bias, offensiveness or unfair penalization (McMillan, 2004).
11. Reading Proficiency Tests in English (RPTE) – state assessments specifically designed for LEP students to measure English language proficiency in reading aligned to state reading content standards and English language proficiency standards (TEA, 2007c).
12. Sheltered Instruction: a model of educational instruction using a series of methods and techniques to help English language learners more easily understand and acquire English and content area knowledge and skills (Echevarria & Short, 2000).
13. Sheltered Instruction Observation Protocol (SIOP): a research-based framework for the sheltered instruction model that identifies several indicators of effective

instruction and can be used to guide teachers' lesson planning and training (Echevarria & Short, 2000).

14. Spanish Texas Assessment of Knowledge and Skills (TAKS) assessments: eligible LEP students who meet the state testing requirements with Spanish versions of the TAKS assessments. The assessment is available in Grades 3 through 6 for specific subject areas (Texas Student Assessment Results, 2006).
15. Texas Assessment of Knowledge and Skills (TAKS): mandated by the state legislature in 1999, TAKS measures the statewide curriculum in reading, writing; English Language Arts, mathematics, science, and social studies (Texas Student Assessment Results, 2006).
16. Texas English Language Proficiency Assessment System (TELPAS): the expanded system of Texas English language proficiency assessments were implemented to address the testing requirements of the federal No Child Left Behind Act, and is comprised of two assessments—the Reading Proficiency Tests in English (RPTE) and the Texas Observation Protocols (TOP) (TEA, 2007c).
17. Years in U.S. schools - the number of years of enrollment in U.S. schools of LEP students is reported on each assessment document submitted as part of the testing requirement for these students (TEA, 2007c).

## CHAPTER II

### REVIEW OF POLICY AND LITERATURE

#### History of Language Minority Education Policy

The history of language minority education policy in the United States began at the turn of the 20<sup>th</sup> century. The 1906 Nationality Act required immigrants to speak English in order to be naturalized into this country (Baker, 2006). In 1918, a Texas statute was implemented that made it a misdemeanor for any teacher to use a language other than English in school (TEA, 1998). Both federal and state English immersion policies persisted until 1954 with the US Supreme Court ruling of *Brown v. the Board of Education*. This landmark Supreme Court decision reversed the 1896 ruling that allowed racial segregation within facilities of equal quality, declaring that separate public schools for black and white students were inherently unequal (Walsh, 2005). The mandate paved the way for public school integration and laid a foundation for future legislation. In 1968, the Bilingual Education Act, Title VII of the Elementary and Secondary Education Act (ESEA), established the first federal policy for bilingual education and allocated funds for innovative programs to rectify the unique disadvantages faced by non-English speaking students (Walsh, 2005). Texas state legislation was passed in 1968 that allowed school districts to provide bilingual instruction, although no state funds were appropriated for implementation (TEA, 1998; TEA, 2004).

Several events followed from 1971 to 1978 that would “dramatically change the course of bilingual education in the United States” (TEA, 1998, p. 4). An ongoing federal court case on desegregation, *United States vs. State of Texas*, (1971) required two Texas school districts to consolidate and implement a comprehensive program of bilingual/bicultural education (Walsh, 2005). Shortly after, the Texas Bilingual Education and Training Act reinforced bilingual education services for students identified as limited English proficient (LEP). In 1974, the US Supreme Court ruling in *Lau v. Nichols* found that identical education does not constitute equal education under the Civil Rights Act (TEA, 2004). The passage of the Equal Opportunity Educational Act of 1974 (EEOA) allowed an individual to initiate civil action if he or she was denied equal educational opportunity (TEA, 1998).

As a results of these historical events, along with Texas legislation, federal policy, and federal court rulings from 1980 to 1995, the bilingual education policy in place for Texas public schools was strengthened. Beginning in 1986, Texas legislation and administrative rules focused on curriculum and assessment of LEP students and established a Spanish-language version of the statewide assessment. At the same time, state administrative rules were established to allow school districts under certain circumstances to exempt students from the statewide test (TEA, 1998). In 1995, the Reading Proficiency Test in English (RPTE) was required for LEP students who were previously exempt from the statewide assessment and was developed to evaluate their progress in English language attainment. Four years later the RPTE was required of all LEP students (TEA, 1998).

Even with legislative emphasis on bilingual education programs and equal educational opportunities for LEP students, both Texas and federal rules failed to address the educational needs of LEP students in secondary grades. In 1973 and 1981, when presented with the opportunity to specify the grade levels of bilingual education program requirements, LEP students in grades 7-12 were either not discussed or a consensus could not be reached on the best methods of instruction (TEA, 1998).

Legislative advances in providing effective educational programs for LEP students prescribed the use of bilingual education programs nationwide. In 1983, national policy debates began on the passage of legislation to establish English as a dominant national language. In 1998, California Proposition 227, along with similar legislation in Arizona and Massachusetts, implemented restrictions on native-language instruction, impacting bilingual education (TEA, 2004). Educational research efforts began to focus on alternative methods of instruction for LEP students.

#### Effective Instruction for ELL Students

Researchers of bilingual education consider the term itself “a simplistic label for a complex phenomenon” (Baker, 2006, p. 213). Baker described the range of bilingual education instruction from that which seeks to transition a student to a dominant, majority language, to that which attempts to maintain the home language of a child, and even attain dual language proficiency. Since 1985, Cummins' research on second language development has served as a major source of several language acquisition theories that support the positive impact of bilingual education (National Association for Language Development in the Curriculum [NALDIC], 2007). Cummins' threshold hypothesis

suggested that continued conceptual and linguistic development of a student's first language helps him learn a second language. Threshold hypothesis assumes that a child needs to "achieve a certain level of proficiency or competence in the first language." A minimum threshold of linguistic and conceptual knowledge in the first language is needed in order to successfully add a second language (NALDIC, 2007, p. 4).

Recently, strong evidence was presented to support the effectiveness of dual language programs (Collier & Thomas, 2005). This federally funded longitudinal study, the National Study of School Effectiveness for Language Minority Students—Long-term Academic Achievement, was conducted over the course of 20 years and based on over 2 million student records. The study compared seven instructional programs in an effort to identify the most effective for LEP students. The programs were: (a) English immersion in language classes, (b) ESL taught by pullout from a mainstream classroom, (c) ESL taught through academic content, (d) transitional bilingual education (TBE) and ESL taught traditionally, (e) TBE and ESL taught through academic content, (f) one-way developmental bilingual education, and (g) two-way bilingual immersion. Collier and Thomas concluded that two-way bilingual immersion or dual language methods are the most effective form of instruction for LEP student in the long term. Collier and Thomas also provided evidence that the least effective method for LEP students is mainstream English-only, and that students in bilingual education programs outperform students schooled in English only (CREDE, 2003).

Research on instructional methods for secondary school LEP programs includes work by Freeman (2003), who studied middle and secondary students. The key elements

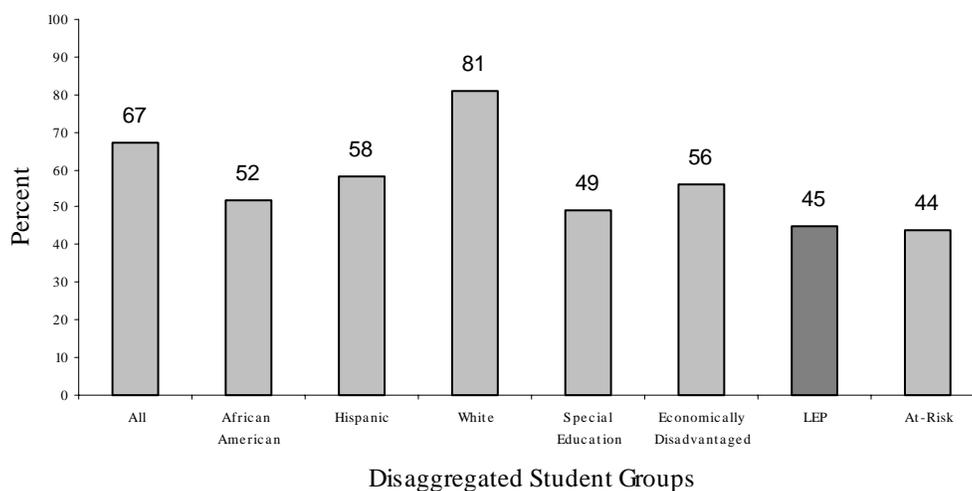
of his suggestions for effective instructional programs in higher-grade levels included: (a) using theme-based curriculum, (b) drawing on students' background and culture, (c) using collaborative instructional strategies and scaffolded instruction, and (d) creating confident and valued students. His research was motivated by the concern among educators of the growing number of older recent immigrant students in the middle and high school grades who were unprepared for school. He outlined three distinct types of older English language learners as (a) recent arrivals with adequate formal schooling, (b) recent arrivals with limited formal schooling, and (c) US schooled students without adequately developed language skills in either their first language or English.

Echevarria and Short (2000) also investigated effective LEP student instruction. Their sheltered instructional model incorporates many forms of effective teaching strategies that, taken together, are useful for instructing LEP students. The model requires no use of the student's native language and may be used by any content area teacher. The same research team introduced the Sheltered Instruction Observation Protocols (SIOP), a tool used by school districts to assess the instructional methods of ESL content area teachers and gauge their effectiveness.

#### Texas' ELL Students

In many states nationwide, school districts are required to identify LEP students by the use of a home language survey administered upon school enrollment (Celedon-Pattichis, 2004). In Texas, bilingual education programs are required for school districts with at least 20 LEP students through grade 6 but are optional in secondary grades (TAC, 2006). The Texas Administrative Code also requires school districts with less than 20

students to offer ESL instructional program; however, waivers are offered for compelling reasons such as lack of sufficient staff or resources. Based on a longitudinal cohort study conducted in 2002 by the Texas Education Agency, most LEP students in Texas by the time they reach middle school are receiving all of their instruction in the regular, all-English instructional program (TEA, 2002a). This report also provided evidence of a gap in performance between LEP and non-LEP students in meeting the exit-level testing requirement citing as one factor, the low performance of students who were still receiving LEP program services in grade 11. The most current information available on the performance of LEP students in Texas secondary schools is found on the statewide Academic Excellence Indicator System report, which indicates LEP student performance on the statewide Texas Assessment of Knowledge and Skills (TAKS) is among the lowest of eight reported disaggregated student groups (TEA, 2006c), as shown in Figure 1.



**Figure 1**

*2006 Texas Academic Excellence Indicator System, Percent Met Standard*

Percent of students tested that met the TAKS passing standard, summed over all grade levels tested and excluding Grade 8 Science.

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Whether due to the concern for LEP student performance in general or the dramatic increase in the number of LEP students in US schools, research in effective instructional methods for LEP students is in increasing demand (CREDE, 2003). Certainly, the performance of LEP students in secondary grade levels in Texas is one motivating factor (TEA, 2006c). Coupled with the testing results used in state and federal accountability systems, there is a growing desire for school districts to educate LEP students in an effective manner.

### Measuring ELL Student Achievement

On January 8, 2002, the No Child Left Behind Act of 2001 (NCLB) was signed by the President of the United States and established accountability provisions to begin in 2003. The Act required all public school districts, campuses, and states to be annually evaluated for adequate yearly progress (TEA, 2006b). Texas established the state accountability system in 1994 and has always been considered the “driving education policy for the entire nation” (McNeil, 2005). Despite that perception, one of the many assessment and accountability requirements introduced by NCLB included the reporting of disaggregated student performance results. One such student group which had not previously been required in the state accountability system was LEP students (Abedi, 2004; TEA, 2006a). In addition, NCLB testing requirements for LEP students led to the creation of the Texas English Language Proficiency Assessment System (TELPAS) and TAKS linguistically accommodated testing.

The importance of incorporating LEP student tests in school accountability systems was recognized as early as 1999 when it became evident that many states were

effectively ignoring LEP student (Ruiz de Velasco, 2005). Although NCLB required that all students, including LEP, be included in the AYP determinations, the use of assessment results for Texas LEP students dramatically changed. Originally, the US Department of Education recognized the Texas RPTE assessment results, yet only in part. By late 2006, the USDE determined that the RPTE would not be used in AYP and the only assessment recognized to measure LEP student performance would be the same assessment used by all students via the TAKS results (TEA Letter to the Administrator, November 13, 2006).

The change in the use of the RPTE by the USDE marked another shift in the policy focus on LEP student performance away from measuring English language attainment toward that of sheer content proficiency. Ruiz de Velasco (2005) presented the broader question of “whether it is appropriate to attach high-stakes consequences to [English Language Learner] ELL student test performance” (p. 49). In 2006, Texas recognized the focus on the academic progress of ELL students and for the first time provided a new ELL Progress Measure that reported student results of progress on the RPTE or meeting TAKS proficiency in reading (TEA, 2006d). The student performance of LEP students on the RPTE has not been included as a measure in the state accountability system (McNeil, 2005; TEA, 2006a) and the new ELL progress measure will not be part of the state accountability system for at least two more years (TEA, 2006a). The growing number of LEP students in Texas and the nation has caused concern with LEP success in state assessment programs (CREDE, 2003), and changes to the use of the assessment results for LEP students reflect that concern.

Providing appropriate, equitable and valid performance assessments for LEP students continues to be a critical topic of educational research (Solano-Flores & Trumbull, 2003). Research on the topic of assessment practices is limited, particularly to classroom assessment practices. Sanchez and Brisk (2004) provided helpful information on the complexity of LEP student assessments practices. They stated that classroom assessments are not part of the NCLB mandate, and there are no resources to ensure quality classroom assessments. They concluded that personal factors affect teacher decision making in the use of teacher-created assessments. Other research indicated that effective assessments are those that link student learning outcomes to teacher decision making and improvement in student performance (McMillan, 2004). Current trends in classroom assessment practices include formative assessment, or providing assessment during instruction rather than at the end of instruction, and promoting student engagement in the assessment process. Recursive assessments practices include the “continuous flow” of information to students and continuous adjustment of instruction based on their results (McMillan, 2004a, p. 16).

New instructional methods for LEP student instruction such as Sheltered Instruction include requiring teachers “to assess and provide feedback” to LEP students in order to help students evaluate their progress (Echevarria & Short, 2000). Local school districts have also recognized the critical role of classroom assessments. A recent school district Bilingual/English as a second language instructional program evaluation report recommended that English language learners should be taught how to assess their own academic progress so that they can recognize when additional support is needed.

## Classroom Assessments

Classroom assessment methods vary just as much as instructional methods for students (McMillan, 2004). Traditional assessment practices include summative assessments that evaluate at the close of instruction at either the end of a unit or after a set period. Teachers have traditionally used objective tests that measure specific skills using unbiased questions or scenarios. Researchers in effective strategies for student performance in statewide high-stakes tests suggest exposure of students to testing formats that help prepare them for large-scale standardized assessments, which may explain the continued use of traditional testing methods (Kopriva & Saez, 1997).

Current research on effective assessments for LEP students suggest radically different methods than those described above. Research on the effect of culturally sensitive test items showed that the effect of culture is great, in fact, that tests are considered “cultural products,” and assessment practices must build on cultural heritage and learning styles (Celedon-Pattichis, 2004; Kopriva, 2000; Solano-Flores & Trumbull, 2003). Other research supports the use of authentic assessment, which includes direct examination of a student’s ability to perform tasks (Echevarria & Short, 2000; McMillan, 2004a). Other assessment strategies include concurrent assessments in which LEP students are given the same test items in both English and their native language (Solano-Flores & Trumbull, 2003). In addition, the use of multiple assessments or “multiple pathways for students to demonstrate their meaning of the content” (Echevarria & Short, 2000) is suggested as an effective assessment and instructional method for LEP students.

In addition to exploring the various types of assessments, research has also been conducted on the factors that influence those selections. Research conducted by Sanchez and Brisk (2004) on the classrooms assessment practices with bilingual students found that bilingual teachers and bilingual program staff based their decisions on how to assess students on both school organizational factors and personal factors. Organizational factors included a fragmentary district wide assessment system and lack of professional development to help staff understand and use assessments. Personal factors that affected the choice of assessments were related to the teacher's or specialist's (a) level of English proficiency, (b) level of preparation and knowledge of measurement and assessment, and (c) level of acculturation to the American system. McMillan (2004a) also provided study results that determined two factors that influence teacher assessment practices: (a) the teacher beliefs and values about teaching and learning and (b) the external pressures, which "cause teachers to engage in certain practices that may not be in the best interests of student learning" (p. 18).

#### Why Mathematics?

In addition to research on the types of assessments, research on the content area language demand reveals the effect of language demand on LEP student performance in content area tests. Abedi (2004) found that the highest level of language demand occurs in student tests in reading and that the effect on the performance of LEP and non-LEP students was great. The effect was smaller in mathematics and the smallest in math calculation; however, the effect became larger for mathematics as the grade levels

increased where there is greater language demand. Adedi concluded, “The performance of LEP students may be underestimated by assessment results” (p. 9).

Policies that may influence LEP student performance in mathematics have also been investigated. In her research on the placement of LEP students in mathematics classes, Celedon-Pattichis (2004) studied policies and practices in schools and concluded that excellent performance of LEP students is possible if adequate classroom placements are made and ensured. The school must focus “on the student’s mathematical potential rather than [the] student’s English language proficiency” (p. 189).

In a position statement from the world’s largest mathematics education organization, the National Council of Teachers of Mathematics (NCTM) stated that every student should have equitable and optimal opportunities to learn and that key decision makers should understand issues related to equity in mathematics education (NCTM, 2005). NCTM supports the use of alternative and authentic assessment practices, curricula that are culturally relevant, and methods of instruction that are culturally sensitive. Effective mathematics instruction that affect LEP student performance outcomes is more important today due to the growing population of LEP students, and the effective classroom assessment practices that play a critical role in providing that instruction (CREDE, 2003).

#### Similar Studies on Classroom Assessment

Few studies specifically evaluate classroom assessment practices for either ESL or mathematics instruction. One study by Cheng, Rogers, and Hu (2004) compared ESL

and English as Foreign Language (EFL) college instructors from Canada, Hong Kong, and China to determine differences in classroom assessment practices. They found that differences in teacher classroom assessments practices were based on the purpose of the assessment, the method of assessment, and the beliefs and attitudes of the instructor, including the finding that instructors who experienced little external pressure for student performance on standardized assessments selected authentic assessments in non-objective formats. In another study, Kulm (1993) explored mathematics teachers' use of alternative assessments to measure higher-order thinking. He found that students instructed in mathematics were well served by authentic assessments, multiple assessments and alternative assessments and that teacher professional development in the area of alternative assessments improved the classroom instruction in higher order thinking. Kulm also noted, "Many educators believe that very little change will occur in mathematics curriculum and teaching without concurrent change in testing, especially state and national standardized tests that are used to assess and compare student, school, and district performances" (p. 1). An evaluation of the Vermont assessment program and specifically the evolution of the state portfolio program, Koretz (1994) found that use of portfolios as an alternative assessment led to changes in instruction. He found that portfolio assessments were supported by principals and parents, despite the belief of 40% of the teachers in his study "that student learning is 'neither better nor worse'" as a result (p. 28). Finally, Lara-Alecio, Parker, Irby, Mason and Avila (1997) explored the use of manipulative-based mathematics assessments for Hispanic LEP students. Although they caution that the number of study participants was too small to draw valid conclusion, they

found that “a student’s language skills were largely irrelevant to task performance” (p. 23).

### Theoretical Framework

The theoretical framework for this study is based on the major topics of research provided in this chapter. Four areas of research that provide a basis for discussing the findings of this study are: (a) language acquisition theory of threshold hypothesis, (b) LEP instructional program effectiveness, (c) use of authentic assessment for mathematics instruction, and (d) studies on classroom assessment practices. The threshold hypothesis presented by Cummins promotes continued development of a student’s first language in order to achieve proficiency in a second language (NALDIC, 2007). Findings presented by Collier and Thomas (2005) provide clear evidence that two-way bilingual immersion instructional methods are the most effective form of instruction for LEP students. According to Kulm (1993), mathematics teachers’ use of alternative assessments improves classroom instruction in higher order thinking. Personal factors, external pressures and/or external statewide assessments also influence teacher assessment practices (Abrams, 2004; Cheng, Rogers, & Hu, 2004; Rex & Nelson, 2004; Sanchez & Brisk, 2004).

## **CHAPTER III**

### **STUDY DESIGN AND PROCEDURES**

This case study focused on the teacher assessment practices on three secondary high school campuses. Each campus was selected to represent distinct instructional programs for ELL students, either standard or alternative educational instruction, offering ESL regular instruction or sheltered instruction for the ELL students. The three campuses represent the combinations of (a) standard educational instruction offering ESL regular instruction, (b) alternative education instruction offering ESL regular instruction, and (c) standard educational instruction offering ESL sheltered instruction. Background information for each campus included general information on the instructional programs offered for students, descriptive statistics of campus enrollment and student characteristics, and the most recent LEP student performance results.

#### **Role of the Researcher**

My role was that of a participant researcher (Yin, 2003). I reviewed the policy issues, presented the study topic to participants, and began the dialogue to obtain the information from teachers as they discussed their own assessment practices. I conducted the interviews and observed the classrooms of the selected teachers. The interviews were conducted in an informal conversation and discussion format, which allowed the participants sufficient time to present their point of view and create rich dialogue. A

naturalistic, semi-structured interview protocol, where each subsequent interview question was based on the participants' answers, was followed. I kept the overall focus on the study question, while allowing the teachers to control the flow of the conversation (Yin, 2003). Because of the informal nature of the interview, I included questions on life history to gain insight on the teachers' common experiences and background.

### Description of Participants

Five teachers were selected for this study, four female and one male. All were of Hispanic descent and their number of years of teaching experience ranged from three to twenty-two years, with ages ranging from early twenties to early sixties. Two teachers were born in Mexico and migrated to the US and one teacher was of Cuban descent. All were bilingual in English and Spanish and had learned both languages from an early age.

All were certified in mathematics, but only one was certified to teach ESL students. Four teachers received training for the TELPAS Texas Observation Protocol assessment rating process, which is required for LEP students. Three of the five teachers were responsible for providing ESL sheltered instruction, and the other two teachers taught regular mathematics classes with ESL students included.

**Table 1**  
*Case Study Participants*

	School*	Name*	Gender	Teaching Cert.	Additional Cert.	TOP** Training	Teaching Assignment
Standard Instruction/ ESL Regular	Erwin	Mary	Female	Math	None	Yes	Sheltered
		Cathy	Female	Math	None	Yes	Sheltered
Alternative Instruction/ ESL Regular	Alton	Amy	Female	Math	ESL	Yes	Regular
Standard Instruction/ ESL Sheltered	Sheldon	Francis	Female	Math	None	Yes	Sheltered
		Van	Male	Math	None	No	Academy/ pull-out

\* Pseudonym

\*\* Texas Observation Protocol rater training

### Selection of Participants

The participants in this case study were selected based on their role in serving LEP students from each of the three case study school campuses. Two mathematics teachers were selected from a standard educational instructional campuses based on recommendations from the assistant principal. Only one ESL mathematics teacher was selected from the alternative education campus because of the small number of ELL students on that campus. The mathematics teachers selected from the second standard instructional campuses were based on recommendations from professional development staff.

## Sources of Data

Five secondary mathematics teachers serving ELL students were interviewed for this study. The interviews were conducted to understand the assessment methods used by each teacher for both regular students and ELL students. The teacher interviews were held at a location suggested by the teacher, typically the teacher's classroom. Joint interviews were held for teachers from one campus, a decision that provided synergy and added to the discussion format of the interview. Each participant was assured confidentiality and signed a consent form. The length of the interviews was one hour, and each interview was recorded. Follow-up interviews were limited to clarification of their previous responses. See Appendix A for the interview protocol and participation consent form. Lesson plans or other yearly classroom assessment schedules were requested of each teacher to determine the frequency of student assessment. Descriptive statistics were provided from data available on the state education website. Summaries of campus characteristics and performance information are provided for each of the case study sites.

## Data Analysis Procedures

Data analysis began immediately after data was collected from the first participant using a constant comparative approach (Strauss, 1967). Audio tapes of each interview were transcribed in order to summarize the data into themes. Since all of the interviews were conducted in a discussion format, the interview guide served to ensure that all of the areas critical to the study were discussed. Each response was compared to the previous response after each interview. The data from each teacher interview were transcribed and

summarized to identifying recurring themes or categories. The interview guide also provided a framework for the summary for the data analysis. The data were summarized into the following categories: (a) demographic information, (b) philosophical views, (c) classroom assessment practices, (d) English proficiency identification, (e) assessment accommodations, (f) academic proficiency identification, (g) campus support services, and (h) grading modifications. After all interviews, the full set of categories were reviewed to ensure that all comments by the participants were included. Finally, a copy of the transcribed notes was provided to each of the participant to validate the information collected.

### Study Trustworthiness

Qualitative study techniques were followed by the researcher to provide credible case study results. Purposive sampling was applied based on the problem of the study, where participants were selected from different campus sites to offer typical and divergent data therefore maximizing the range of information obtained (Erlandson, Harris, Skipper & Allen, 1993). The researcher applied direct data collection through a naturalistic approach to the interview-discussion. The interview guide provided a framework to record the teachers' selection of assessments in order to capture how they had changed their choices and why. In addition, the interview-discussions were focused on the perspectives of the teachers, specifically, the assessments and instruction for ELL students based on their point of view. The interview included an in-depth situational analysis, or teachers' selection of assessments, with rich dialogue generated through open-ended questions (Yin, 2003). Narrative descriptions were recorded based on the

assumption that nothing that was shared by the participants was trivial or unimportant which led to rich data collection. Member checking (Erlandson, et al., 1993) was applied at the end of each interview as the data were summarized and each respondent was allowed to immediately correct errors or challenge interpretations. A constant comparative method of data analysis (Glaser & Strauss, 1967) was employed to identify common emerging themes from the data collected. Finally, triangulation (Erlandson, et al., 1993) was applied to the study by the use of multiple sources of data through (a) the selections of three interview sites, (b) review of campus, school district and state ELL policy, and (c) descriptive statistical data.

### Descriptive Statistics of Selected High School Campuses

#### Selected Urban School District

The school district selected for this study was a large urban school district in an ethnically diverse state. According to statistics, over 81,003 students attended the district in 2005-2006 school year. The school district provided services for students from Early Childhood Education to secondary grade levels. The students in secondary grades 7 to 12 made up 39 percent of the total district enrollment. ELL students numbered 19,353, or 24 percent of the district enrollment. According to the latest Bilingual/ESL program evaluation report, the district ELL performance results lagged behind the state average in all grade levels, with the greatest gap in grade 6 reading and mathematics. Of all ELL students served in the district, English as a Second Language programs serve 32 percent, typically found in the secondary grade levels in this state. Of the remaining students, 63 percent were served through bilingual education, while the parents of 4 percent did not

approve any services. Approximately 1,250 (or 6 percent) of all ELLs were eligible to exit the LEP program based on passing the state's required assessment. Only 21 percent of those eligible to exit the LEP program were in grades 9 through 12.

#### Erwin High School Campus: Standard Instruction Offering ESL Regular Instruction

Erwin High School, a pseudonym, was selected for this case study because it represented a high school offering standard educational instruction for all students and ESL content area instruction for ELL students. The high school campus had 1,555 students enrolled in the 2005-2006 school year. This campus served grades 9 through 12, although it was among the three smallest high schools in the district (excluding alternative high schools). However, the campus served a large LEP student population of over 300 students or 22 percent of the campus population. Based on instructional program financial information for this campus, there were four teachers identified on this campus as serving students in the ESL program (see Table 2).

**Table 2**  
*Selected High School Campuses: General School Characteristics*

	Total Fall Enrollment	Limited English Proficient (LEP) Students		
		No. of Students	Percent	No. of Teacher FTEs*
Erwin High School (Standard/Regular)	1555	343	22%	3.8
Alton High School (Alternative/Regular)	303	5	2%	0.0
Sheldon High School (Standard/Sheltered)	2351	224	10%	1.7

\* FTE: Full Time Equivalents

Erwin High School was established in the mid-fifties and has educated three generations of students. The campus had a long history of community partnerships with local universities and community dropout prevention programs. Currently the school programs focused on (a) school-to-career academies, (b) ninth-grade transitions to high school life, and (c) math test scores and math curriculum alignments.

Overall student performance results for this campus were 30 percentage points lower than the statewide results and 25 percentage points lower than the district results, as shown in Table 3. Mathematics results were the lowest among the subject areas, and only 14 percent of LEP students met the proficiency standard in mathematics.

**Table 3**  
*Selected High School Campuses: Percent of Students Meeting Proficiency Standard*

	All Assessment Results			
	State	District	Campus	LEP Students
Erwin High School (Standard/Regular)	67%	62%	37%	9%
Alton High School (Alton High School)	67%	62%	55%	*
Sheldon High School (Standard/Sheltered)	67%	62%	43%	8%

	Mathematics Assessment Results			
	State	District	Campus	LEP Students
Erwin High School (Standard/Regular)	75%	70%	42%	14%
Alton High School (Alton High School)	75%	70%	71%	*
Sheldon High School (Standard/Sheltered)	75%	70%	51%	17%

\* Data are not available when very few students in a group are assessed in order to comply with the Family Educational Rights and Privacy Act (FERPA).

Although over 300 LEP students were enrolled in the Erwin High School campus, only 245 LEP students had performance results. This included both currently served and monitored LEP students who had exited from the LEP program. An estimated 65 percent of the 245 LEP students had been enrolled in US schools for over five years. LEP students who had exited the LEP program on this campus outperformed all other non-LEP students in grades 9 and 10 as shown on Table 4. Among all grades with LEP

students tested, 12<sup>th</sup> grade LEP students outperformed other grades with 26 percent meeting proficiency on mathematics assessments.

**Table 4**  
*Selected High School Campuses: Student Mathematics Assessments Results*

	Students Tested		Student Performance		
	Grades 9-12	% All Students	Grade 9	Grade 10	Grade 11
Erwin High School (Standard/Regular)					
All Students	863	100%	38%	35%	56%
LEP Students:					
Current	190		13%	9%	26%
Monitored 1st Year	28		20%	45%	*
Monitored 2nd Year	27		63%	63%	*
Total	245	28%			
Non LEP Students	618	72%	48%	39%	63%
Alton High School (Alternative/Regular)					
All Students	108	100%	*	63%	73%
LEP Students	N/A		N/A	N/A	N/A
Sheldon High School (Standard/Sheltered)					
All Students	1541	100%	43%	45%	64%
LEP Students					
Current	138		16%	10%	29%
Monitored 1st Year	24		33%	11%	*
Monitored 2nd Year	16		*	27%	*
Total	178	12%			
Non LEP Students	1363	88%	47%	49%	67%

\* Data are not available when very few students in a group are assessed in order to comply with the Family Educational Rights and Privacy Act (FERPA).

N/A: Tested students and performance results are not available for Current and Monitored LEP Students.

### Alton High School Campus: Alternative Instruction Offering ESL Regular Instruction

The second campus selected for this case study was one that provided alternative instruction for secondary students while offering regular ESL programs. Alton High School, a pseudonym, was an open enrollment academic school of choice designed to meet the needs of students through a non-traditional, self-paced approach to learning. The total enrollment of this campus was 303 students in 2005-2006, and 57 percent were 12<sup>th</sup> grade students. Only five students were identified as LEP students during that school year.

Alton High School was designed to offer an approach that strengthened the belief that students are the solution for the issues that affect their lives. The solution-focused intervention model offered all school staff specific skills for fostering strengths in students. Whether students were at-risk of, or dropout youth, each was encouraged to graduate from high school and successfully transition to college and work.

Table 3 shows the overall student performance for Alton High School was only 12 percentage points behind the state average and seven points lower than the district average. Mathematics results for all students on this campus exceeded the district average. Performance results for this alternative campus exceeded that of the other two campuses in this case study; however, the LEP student assessment results for this campus were too few to report in 2005-2006.

### Sheldon High School Campus: Standard Instruction Offering ESL Sheltered Instruction

The third campus included in this study, Sheldon High School, a pseudonym, represented a high school that provided standard instruction and offered ESL sheltered instruction. This campus served grades 9 through 12 and was the second largest high school campus in the district with an enrollment of 2,351 students in the 2005-2006 school year. The LEP student population was approximately 100 students fewer than that of Erwin High School, yet comprised only 10 percent of the entire student body (see Table 2). Only two teachers were identified on this campus as serving students in the ESL program based on campus financial program information.

Sheldon High School was a new campus in the school district that opened in the fall of 2000 with 9th and 10th graders. The school graduated its first senior class in 2003. There were innovative school redesign efforts, partnerships with regional educational boards, and support from national foundations. Also in place were small learning communities, or academies, designed to foster mentoring of students by teachers and frequent collaboration between teachers from different disciplines.

Student performance results for this campus are shown in Table 2. Sheldon High School had higher performance results than Erwin High School; however, the overall performance results was 24 percentage points lower than statewide results and 22 points lower than the district average. Like Erwin High School, mathematics results were the lowest among the subject areas, yet with a slightly higher result of 17 percent of LEP students meeting the mathematics proficiency standard. An estimated 75 percent of the 178 students tested were enrolled in US schools for over five years. Similar to Erwin

High School, the 12<sup>th</sup> grade LEP student results were highest among all LEP student in other grades, yet only 29 percent met the mathematics proficiency standard (see Table 4).

All three campuses had been evaluated by both the state and federal accountability systems for the last three years. As mentioned earlier, the student performance results for ELL students was used in the evaluation of the federal AYP determinations. The campus state accountability results indicated that all campuses were rated “Academically Acceptable” for the last three years, as shown on Table 5.

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**Table 5**  
*Selected High School Campuses: State Accountability Results*

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	2004	2005	2006
Erwin High School (Standard/Regular)	Academically Acceptable	Academically Acceptable	Academically Acceptable
Alton High School (Alternative/Regular)	Not Rated	Academically Acceptable	Academically Acceptable
Sheldon High School (Standard/Sheltered)	Academically Acceptable	Academically Acceptable	Academically Acceptable

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In contrast, the AYP results for two of the three campuses indicated that the LEP student group performance adversely affected the federal accountability results, as shown in Table 6 (TEA, 2006e).

**Table 6**  
*Selected High School Campuses: Federal Accountability Results*

	2004	2005	2006
Erwin High School (Standard/Regular)	Did Not Meet*	Did Not Meet	Did Not Meet
Math LEP Student Group Met Standard?	Yes	No	No
Alton High School (Alternative/ Regular)	Meets	Meets	Meets
Math LEP Student Group Met Standard?	-	-	-
Sheldon High School (Standard/Sheltered)	Did Not Meet	Meets	Did Not Meet
Math LEP Student Group Met Standard?	-	-	No

\* Meets or Did Not Meet Adequate Yearly Progress

" - " indicates that the LEP student group did not meet the minimum size criteria for evaluation.

## CHAPTER IV

### FINDINGS

This case study provided valuable information on the issues that mathematics teachers of ELL students encounter each day. The first section describes the results from the selected high school campuses and then in the next section, the four common themes emerging from the case study data are presented.

#### Erwin High School: Standard Instruction/ESL Regular Instruction

The teachers interviewed from Erwin HS, Mary and Cathy (pseudonyms), were intensely focused on the upcoming state assessments. Both teachers were instructors of sheltered ESL classes and had also taught regular classes in which ESL students were included. Both Mary and Cathy were dedicated to ESL students, referring to them as “my favorites” and “extremely hard workers.” These teachers were comfortable with providing some instruction in the student’s native language but focused on the attainment of English academic language skills for mathematics. Mary and Cathy described the sheltered instructional team as effective, with specific coordination among the mathematics sheltered instructional teachers. In addition, these ESL teachers provided a separate Saturday classroom for additional instruction to thirty ESL students. Student participation in the weekend classes was voluntary. Both Mary and Cathy clearly supported of the academic progress of ESL students and strongly opposed to the use of

alternative assessments or accommodations to obtain that goal. Grading modifications were not used in order to focus on the goal of academic proficiency. Mary and Cathy felt that any modification to tests or grades “would be hurting the students.” Both felt that the external pressure to have students perform well on state assessments had increased over the last year, and they believed that the sheltered instruction classes offered for ESL students had been limited as a result.

#### Alton High School: Alternative Instruction/ESL Regular Instruction

Amy, a pseudonym, taught at Alton High School, the alternative instruction campus. She spoke frankly about effective instruction to ELL students in English without any use of a second language, noting “to do it right, you need to be consistent, and if you have a team that teaches ELL students, you have to agree on the approach as a team.” Amy described the students on this campus as dedicated to completing the high school requirements. The academic setting of Alton High School provided an avenue for students to complete their high school requirements for graduation. This included both course requirements and successful completion of the state assessment in grade 11 (TAC, 2006). Alton High School offered instruction at a self-paced rate. Amy described the opportunities for one-on-one instruction in this academic setting that allowed her to gauge each student’s performance closely. Amy’s classroom assessments mirrored the state assessments; however, she allowed her ELL students to use either English or Spanish versions of a test. Although Amy applied some grading modifications, her use of alternative assessments or accommodations was limited. For Amy, the primary goal of instruction was for the student to pass the Grade 11 state assessment in English.

### Sheldon High School: Standard Instruction/ESL Sheltered Instruction

Sheldon High School teachers Francis and Van, pseudonyms, were interviewed for this study. Both teachers had used alternative assessments, such as performance assessments, presentations, and demonstrations, in the prior school year. Francis and Van believed that to be effective with ELL students, teachers must provide a “safe environment” where they “feel comfortable” and have “some common ground” with their instructors. Previously, they had taught as a team for a class of ESL students who were “pulled-out” of several classes for separate instruction. Their familiarity with alternative methods of instruction was fresh on their minds, but they admitted that during the current school year they had used more traditional assessment methods. Both described that although the pullout program was still in place during the current school year at Sheldon HS, ELL students were not the target students served by the program. Francis and Van conveyed that during the current year, most ELL students at Sheldon High School were taught in sheltered instructional classes. They felt that the campus leaders’ emphasis on state assessment performance led them to provide classroom assessments for ESL students that incorporated more of the state assessment format during the current year. Both Francis and Van noted that there was little coordination with other ESL mathematics teachers and little additional campus support for ESL students.

## Common Themes

Four common themes that emerged from the interviews were: (a) intensified state assessment focus, (b) recent changes in ESL instruction, (c) ineffective state Linguistically Accommodated Testing, and (d) ELL student problematic identification.

### Theme: Intensified State Assessment Focus

Teachers from each campus setting described the goal of their classroom assessments as preparing students for the state assessments. Mary and Cathy from Erwin High School discussed their preference for exposing students to the state assessment format and the English language more often than Amy, Francis and Van. Erwin High School teachers Mary and Cathy provided quizzes once a week with coordinated testing by all Algebra teachers twice every six weeks. Although both provided open-ended questions requiring students to show their work, Mary and Cathy tested their students more often than the other teachers did. Amy from Alton High School also described her focus on the state assessment and used curriculum written so that state assessment preparation was embedded in the instruction. Students at Alton High School were assessed at the completion of every full chapter, typically every two or three weeks. In addition, Amy's students were allowed to suspend their progress on the regular curriculum and focus on state assessment preparation. Francis and Van from Sheldon High School described testing their students once every two weeks. Within a six-week grading period, two of the tests they administered were traditional paper-and-pencil tests, and one of those tests was a presentation or demonstration of knowledge. Both Francis and Van described their tests as incorporating more of the state assessment objectives and

mirroring the state assessment format during the current school year than in the previous year.

### Decisions Against the Use of Authentic Assessments

Some teachers described their personal experiences with changing their assessment choices from those used in the prior year. Francis from Sheldon High School described her experience with the use of alternative assessments:

Last year we did a neat program with lots of presentations for all the kids; and, of course, they are challenging; but the ELL [students] did it, they did their scenario in English, and then would have to explain how they got their answer.

Despite her positive experience during the last year, Francis described her current assessments as “our tests incorporate more of the [state assessment objectives].” Van agreed with her but expressed concern over his decision by stating, “The presentations take longer to conduct. Now our tests incorporate more of the [state assessment], and it’s unfortunate.” Mary described using assessments that “require students to show their work” but did not consider those assessment alternatives to the paper-and-pencil tests. Both Cathy and Amy did not describe using any other type of assessment method.

### Individual Student Pressure for Assessment Results

The teachers were aware that students were unable to perform well on state assessments because of their lack of proficiency in English. Van from Sheldon High School said, “I know I have had students where I know they know the subject; if you had the question written out in numbers they could do the problem. If there are words, they can’t do it.” Cathy from Erwin High School described the challenge in helping students

attain proficiency and her decision to let the grade reflect the failing performance. She stated,

I have a student whose last grade was 4th grade; they are already 15 years old but don't have the schooling. But, you are still moving that bar up. We don't see any benefit in moving them forward because if they passed on to another teacher, they are going to be tested at the exact same level regardless of whether they speak the language or not; so we really would be hard on them if we didn't do that [fail them].

Amy from Alton High School shared a different perspective on grading and explained that her campus was structured to assist failing students:

I know that you can't expect this student to answer with the same grammatical expertise or properly done as another AP student in the same classroom. All of the students are mixed. All tests are modified, so the other students are not aware of the grading or assessment modifications.

Amy, however, spoke of the performance of ELL students at Alton High School and stated:

One student is almost 21 years old and must complete the credits and the state exit exam by that age. Another student is accelerating his pace to complete high school in three years [in order to qualify for a scholarship]. Two weeks ago they both took the exit exam, one as a repeater and the other as an accelerated student.

The pressure on students to succeed on state assessments is not limited to one type of student. Amy described the diverse students she taught and their unique circumstances, which made it a challenge for them to pass the exit test and graduate from high school.

Theme: Recent changes in ESL instruction

Lack of Instructional Continuity

Teachers from Erwin and Sheldon High School experienced some change in the structure of classes offered for ESL students over the last year and felt that the prior year's instructional and assessment practices were more effective. Mary and Cathy from Erwin High School witnessed a reduction in the number of sheltered instruction classes offered for ELL students, describing that this year most ELL students received instruction in regular mathematics classes as part of a regular ESL program. Both teachers were unhappy with the change, and Mary stated,

In years past we used to have three Algebra I ESL classes, two Geometry and two Social Studies. This year they were going to do away with the ESL classes, and we had to fight for them. Now there is only one Algebra I, one Geometry and one Social Studies [class]. They are taking away these classes [and are now in regular classes].

Francis and Van from Sheldon High School also described differences in the approach to language instruction since the previous year. Both stated that Spanish language was used in their ESL classrooms more often in the previous year. During the current year they focused on students' understanding of English mathematical terms and concepts, and most of the instruction was conducted entirely in English. Other teachers expressed similar transitions in the use of Spanish in the classroom and agreed with Francis' comment below:

Last year I did speak in Spanish to the class, but this year I am doing it all in English and make them learn the words in English. As the [graduation] gets closer, I tell them they have to learn the English. I use a lot of cognates and go over the words and help them make connections.

### Inconsistent Teacher and Student Support

The teachers described a lack of support for both faculty and students. Mary shared that “we used to have an ESL specialist, but I don’t think she is called a specialist anymore. All other [ESL] teachers teach Reading, Writing, Social Studies, and Science.” Francis and Van also described a lack of support among ELL teachers at Sheldon High School and shared that “there is not much communication between the math ELL teachers” and “we should communicate with the ESL teachers, but we don’t.” Mary and Cathy from Erwin High School also described a reduction in the support offered to ESL students as opposed to the previous school year. They said, however, that ESL teachers continued to provide assistance beyond their time in the classroom and they added, “students come to us and we make ourselves available to them.”

Theme: Ineffective Assessments

### State Linguistically Accommodated Testing (LAT)

Four of the five teachers generally agreed that the state Linguistically Accommodated tests (LAT) for LEP students are ineffective. Teachers from Erwin and Sheldon High School described the training material for assisting both teachers and students in the administration of the LAT tests as “useless.” Most of the teachers interviewed had served as test administrators for the LAT assessment in the prior year. Test administrators may translate test instructions during LAT administrations and provide additional clarification of test instructions; however, they may only provide *direct* translations of each test question. School districts give all mathematics teachers a

Math Glossary that includes the English to Spanish and Spanish to English translations of mathematical terms. Glossaries help students to prepare for LAT assessments. Mary, Cathy, Francis and Van reiterated the idea that typical ESL students understand neither the English mathematical term nor the academic concept of the term. In other words, they have never been exposed to the Spanish term for the mathematical concept. In addition, administrators of the LAT may only directly translate the test questions, leaving students unclear about phrasing found on the assessment. Mary provided an example of a student reading a LAT assessment question that included the word “silo.” The student was unfamiliar with the English word and the Spanish translation, and test administrators could not assist the student without describing the word “silo” as a cylindrical object.

#### Spanish Language Versions of Assessment Instruments

The teachers held surprisingly mixed viewpoints regarding the use of the Spanish or home language assessments. Mary from Erwin High School shared that she did not use Spanish language tests. She stated, “They have the same test [as the others]. I never test them in Spanish.” Francis from Sheldon High School agreed and added, “I assess them the same way as I do the regular students, but I allow them to write out their information in Spanish but ask them to please also write in English.” Amy from Alton High School shared her assessment choices as “ESL students either write all in English, or get the English and Spanish versions of the tests. The same test (either English or Spanish) is provided.”

Theme: Problematic Student Identification

### Identification of ELL Students

All teachers in this study considered the identification of ELL students as a problem. Teachers on each campus agreed that students should be identified as ELL students at the beginning of the school year; however, each year they encounter instances where students were “discovered to have trouble with the language,” and were “misplaced,” or were “not identified at all” as ELL students. All teachers described some difficulty in getting campus leaders to identify certain students as ELL students. They stated, “I don’t think the teacher referral is used enough” and “the person I refer them to will not agree with me.” Only one teacher described some misplacement of ELL students who knew the English language and likely did not need ESL instruction.

### Identification of Special Education Students

The most disturbing aspect of student misidentification was the description of a set of ELL students referred to campus leaders for possible identification as special education students. Mary described recommending “a bunch of students since they were failing [repeatedly], not because of the language, but because of some other problem like a learning disability.” According to the state Guide to the Admission, Review, and Dismissal Process for special education students, the first three steps for identifying special education students are to (a) make a referral, (b) contact the parents, and (c) obtain written parental consent to evaluate (TEA, 2002b). After realizing that none of the students had proceeded with the special education evaluation process, Mary learned that

the students were not processed because of the lack of parental consent. Mary and Cathy agreed the situation was frustrating. Cathy claimed:

There is a learning disability when the last grade they were in was the 4th Grade, and then they are trying to come back five years or ten years later to a higher education. It might not be their brain, but how can you move them [in five months] from a 4th Grade level to a 9th Grade level in English?

Mary and Cathy expressed great concern for the lack of understanding by school leaders of the cultural differences and personal issues experienced by recent immigrant LEP students on their campus.

## CHAPTER V

### CONCLUSION

Emerging from the case study data were four themes: (a) an intensified focus on state assessments, (b) changes in ESL instruction at the campuses, (c) ineffective state assessments for ELLs and (d) problematic identification of ELLs. The findings show that teachers in this study felt pressure to help their ELLs to succeed on the state assessments and thus, adjusted or abandoned what they knew to be best practice. In addition, the teachers were selecting classroom assessments that helped their students to perform well on state assessments but which may not accurately measure ELL academic progress or lead to effective instruction. The following section will discuss the findings in light of the theoretical framework presented in the literature review.

Four underlying theories support this framework. First, Cummins' threshold hypothesis (NALDIC, 2007) assumed students must achieve a certain level of proficiency in the first language for second language attainment. Second, Collier and Thomas (2005) provided clear evidence to support the use of dual language bilingual education instruction over separate or sheltered instruction. Third, Kulm (1993) presented a theory based on his findings of the effective use of authentic assessments for mathematics instruction. Finally, several other studies concluded that teacher assessment choices were

driven by several personal and external factors. A summary of the external pressure placed on each of the selected campus sites by state and federal accountability systems is provided, followed by recommendations for classroom practices and future research.

### Theoretical Framework of the Study

#### Threshold Hypothesis

The teachers in this study shared their views of the use of Spanish in the classroom. Although the primary home language of most ELL students on each campus site was Spanish, the teachers said that they used Spanish in the classroom much less than in the previous school year. The teachers differed in their opinion as to whether it was helpful to students for their teacher to use Spanish to instruct students in mathematics. Most used Spanish while teaching but focused on the students' English proficiency. This finding contradicts Cummins' threshold hypothesis that supported the continued development of students' proficiency in their first language in order to learn a second one.

#### Effective Instruction

Next, the teachers described their teaching responsibilities and shared information that may have influenced their assessment choices. Of the five interviewees, three taught ESL sheltered instruction classes and two taught mainstream mathematics classes with ESL students included. School districts are not required to offer bilingual instruction for secondary level students (TAC, 2006). In addition, teachers shared that the district had reduced the number of sheltered instruction classes available for ELL students and had

placed them in mainstream classes. The findings in the study seem to contradict the conclusions by Collier and Thomas (2005) who showed that dual language bilingual instruction was more effective than sheltered instruction for ELL students.

#### Authentic Assessments

Of the teachers interviewed, only two provided information on their use of alternative or authentic assessments, and both mentioned that they had reduced the number of alternative assessment methods over the previous year. All teachers were aware of authentic assessments, but they chose to use traditional paper-and-pencil assessments. This finding contradicts Kulm's (1993) theory that mathematics teachers' should use alternative assessments because they are effective for teaching higher-order thinking.

#### Assessment Choices and External Pressures

The teachers also described their decision to focus on student performance on state assessments. The assessment choices reflected an increase in the use of traditional objective assessment formats that mirror the statewide assessment. This finding supports several studies that indicated that teacher assessment choices were driven by personal and external factors (Abrams, 2004; Cheng, Rogers, & Hu, 2004; Rex & Nelson, 2004; Sanchez & Brisk, 2004). A review of the state and federal accountability results for each of the three campuses explain the growing pressure experienced by the study participants.

### External Pressure on Case Study Sites

Tables 5 and 6 show the state and federal accountability results for all three campus sites. It is important to note the difference between the state accountability rating and the federal accountability results. The state accountability rating of “Academically Acceptable” for each of the three campuses over the last three years indicated that there had been no change on the campus in terms of student performance. This state rating system did not measure the performance results of LEP students separately in any of the indicators (TEA, 2006a). Based on the state accountability ratings over the last three years, there would likely have not been any cause for concern for the performance of ELL students.

The federal accountability rating for each of the three campuses illustrated a dramatically different result. Erwin High School campus failed to make Adequate Yearly Progress in 2004, 2005, and 2006 (TEA, 2006b). In both 2005 and 2006, the campus failed to meet AYP due in part to the performance of students identified in the LEP student group. The 2006, AYP performance results for the LEP student group indicated 22% of the students meeting the proficiency standard. In addition, the campus had previously been identified as “In Need of School Improvement” under the federal Title I provisions and the additional failure to meet AYP in 2006 moved that campus into the next level of school improvement intervention (TEA, 2006b; TEA, 2006e).

Alton High School’s federal accountability results were similar to the state accountability results. The number of ELL students on this campus small and was essentially not evaluated for either the state or AYP determinations. The campus

provided instruction as a means for dropout prevention, with success on the state required TAKS Exit exam as a goal for each student. If students do not meet proficiency on the state Exit exam, they do not receive a high school diploma (TAC, 2006). Given the high stakes involved for each student, teachers were naturally focused on providing instruction and assessments that help students attain success on the TAKS Exit exams.

The federal accountability results for Sheldon High School revealed a change in the LEP student group performance in 2006. The campus met AYP in 2004 and 2005 in all student groups, and the LEP student group was not large enough for evaluation (TEA, 2006e). However, the only student group that failed to meet the AYP standard for mathematics in 2006 was the LEP student group. Since this was the first failure of Sheldon High School to meet AYP in three years, the campus was not identified for any further school improvement interventions (TEA, 2006b; TEA, 2006e).

### Recommendations

Additional comments provided by the interviewees suggest ways that ELL assessments choices of mathematics teachers may improve. Naturally, one solution to removing the external pressures on mathematics teachers is to alleviate the high stakes involved for students and campuses on state assessments. Although some interviewees alluded to that notion, most thought that the attention to the performance of LEP students was long overdue. The complete exclusion of LEP students from state assessments was never presented as a solution, but the teachers were clear that students needed more time to learn the English language in order to be successful on state assessments. The state and federal accountability systems should consider including LEP student performance in

campus evaluation yet should allow some number of years for the students to reach academic language proficiency and therefore, proficiency on state assessments.

Another recommendation for effective ELL instruction and assessment is the promotion of ELL instruction in the student's first language. Cummins' threshold hypothesis (NALDIC, 2007) encourages the use of the native language in instruction. If the pressure of external assessments was removed, then the teachers could redirect their instruction to promote the development of students' proficiency in their first language, along with mathematical content before transitioning to proficiency in a second language. Finally, promoting dual language bilingual education in all grade levels, particularly secondary grades, would allow teachers to provide the most effective instruction to ELL students. Collier and Thomas' (2005) study of effective ELL instruction provided clear evidence of the best practice for teachers of ELL students. Without the pressure of statewide assessments and with adequate resources for secondary dual language instruction, teachers could instruct ELL students in their own language as they gain proficiency in mathematical content and progress in the knowledge of the English language.

### Future Research

The purpose of this study was to determine the assessment practices of secondary mathematics teachers for use with ELL students. As shown by the history of educational policy for instructing ELL students, education research on the effective assessment of ELL students is still lacking and is now in demand due to the implementation of NCLB in 2003. More research is needed on the topic. Specifically, more in-depth research is

needed to identify the most effective mathematics classroom assessments for ELL students. Studies to support the appropriate large-scale assessment of ELL students would be useful, along with more research on the appropriate length of time to provide instruction prior to inclusion of ELL students in statewide assessments.

Furthermore, more studies are needed to effectively measure the academic progress of ELL students in either their primary or secondary language. Although the participants of this case study were concerned with the lack of academic or language proficiency of ELL students, there appears to be little or no effort toward accurately measuring the extent of their academic knowledge. Research is needed to identify accurate measures of academic progress of ELL students without the influence of external factors, such as high-stakes state assessments, that can then be used by classroom teachers.

### Conclusion

Cummins' threshold hypothesis supports the development of a student's level of proficiency in the first language in order to learn a second language (NALDIC, 2007). The findings of this study showed that the teachers interviewed were increasingly using only English in their classrooms instruction while they focused on the student's proficiency in the English language. Collier and Thomas (2005) found that dual language bilingual education instruction is most effective with LEP students. This study found that secondary teachers are not required to teach bilingual education and that students were placed in classes on the selected campus sites in either sheltered instruction or mainstreamed, regular classes with ESL students. Kulm (1993) presented his theory on

the effective use of authentic assessments for mathematics instruction. Teachers interviewed for this study either never used or reduced their use of alternative or authentic assessments. Teacher assessment choices are driven by personal and external factors (Abrams, 2004; Cheng, Rogers, & Hu, 2004; Rex & Nelson, 2004; Sanchez & Brisk, 2004). The state administered tests results for the study campus sites selected were high profile and used for state or federal accountability ratings or for students to attain a high school diploma. The existence of state level assessments drive the behavior of the participants of this study, as secondary mathematics teacher assessment practices for ELL students mirror the state assessments across all three campuses.

The history of effective instruction for ELL students in Texas has been affected by a changing political climate and public opinion of the requirement to provide a free and public education for recent immigrant students (Walsh, 2005). Currently, classroom assessment practices for ELL students by teachers in this study seemed to indicate that the pendulum may have swung too far. Although there are unprecedented high profile results indicating the need for better ELL instruction, the requirement of having all LEP students succeed on state assessments distorts effective assessment and effective instruction (Abrams, 2004). Educators must use the most effective assessment methods when measuring the progress of ELL students in order to make well-informed decisions regarding classrooms instruction for these students.

**APPENDIX A**

**PARTICIPATION CONSENT FORM**

## Participant Consent Form

March 2007

### “Secondary Mathematics Teacher Assessment Practices for Use with English Language Learners”

Secondary Mathematics Teacher,

My name is Ester Regalado, and I am a graduate student pursuing my master’s degree at Texas State University - San Marcos. This project focuses on the classroom assessments of students with limited English proficiency. You have been selected to participate in this study because you are a secondary mathematics teacher of English language learners. The project will consist of two teacher interviews and an examination of the assessments that you use with English language learners. The purpose of this form is to request your participation in this study.

I have obtained permission to conduct this study from the school district and the principal. The results of this study will be shared with my supervising professor, your school district research staff and campus principal. Please read the information below and sign if you are willing to participate in this study. If you have any questions, please contact me at (512) 787-5272 or my supervising professor, Dr. Nathan Bond, at (512) 245-3098.

#### Consent Form

Your signature below indicates that you have read the information and that you have agreed to participate in the study. It also indicates that you agree to with the following conditions.

1. The interviews will be conducted at the school during the lunch hour, after school, or at a time convenient to you. The length of the interviews will be 25 – 30 minutes.
2. All information obtained from the study will be confidential.
3. By conducting the study, the results will help mathematics and ESL educators understand strategies used for the assessment of students.
4. There are no risks anticipated by participating in this study.
5. The results of the study will be analyzed and shared with the researcher’s supervising professor.
6. You are entitled to a copy of this consent form.
7. In return for participation in this project, a copy of the final research study will be provided to you.
8. Your participation is optional. Your decision to participate or not participate will not affect future relations with Texas State University at San Marcos, with your school district, nor with your campus principal. If you decide to participate in the study, you reserve the right to discontinue participation at any time.

\_\_\_\_\_  
Signature of Teacher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Researcher

\_\_\_\_\_  
Date

## **APPENDIX B**

### **TEACHER INTERVIEW GUIDE**

## TEACHER INTERVIEW GUIDE

### Questions that are asked to all interviewees:

Warm-up Question: Tell me a little about yourself.

- *Demographic*
  - a) age
  - b) gender
  - c) ethnicity
  - d) years of experience
  - e) are you multilingual?
- Teacher preparation / Did their pre-service education courses provide training in this area?
- Advanced training / Have they participated in professional development training in working with ELL students?
- Years of teaching experience
- Years at this school / What kind of support have they received from their campus administration in meeting the needs of these students?
- Teaching responsibilities this year
- What is your basic philosophy/approach towards working with ELL students?

### **TEACHER INTERVIEW GUIDE (continued)**

- Ask of all interviewees:
  1. What are some of the ways that you assess your students' content knowledge?
  2. What are the reasons for using these types of assessments?
  3. How often do you assess your students?
  4. What are some ways that you determine if students are not proficient in English?
  5. After you have identified an ELL, do you try to determine how proficient the student is in English? Based on the participant's answer:
    - Yes: How do you determine the student's language proficiency level?
    - No: What are your reasons for not determining a student's proficiency level?
  6. Do you modify your assessments for ELL students? Based on participant's answer:
    - Modify: In what ways do you modify your assessments for ELL students?  
Do you use linguistic modifications, or change the language for ease of understanding?  
Do you modify the assessment in other ways, such as more white space, or special accommodations?
    - Don't modify: What are your reasons for not modifying your assessments?
  7. What do you do for native English speaking students who are not doing well on the assessments?
  8. What do you do for ELL students who are not doing well on assessments?
  9. What support systems or services are available on your campus to help you teach ELL students?
  10. Do you collaborate with the ESL teacher? If so, how? If not, why not?
  11. What support systems or services are available on your campus to help your ELL students?
  12. How do you determine a student's six weeks average? What is your grading system?
  13. Do you grade your ELL students differently? Based on participant's answer:
    - Yes: In what ways do you grade your ELL students differently?
    - No: What are your reasons for not modifying your grading system?
  14. May I review your lesson plans for classes with ESL students?

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## VITA

Ester Calderón Regalado was born in Del Rio, Texas on September 21, 1959, the daughter of Guillermo Mario Calderon and Lucy Torres Calderon. After completing her work at San Felipe Del Rio High School, Del Rio, Texas, in 1977, she entered the University of Texas at Austin. She received the degree of Bachelor of Arts in Government, with a minor in Computer Science and Mathematics from UT Austin in December 1981. She completed graduate coursework in Public Administration at the University of Texas at San Antonio in 1986. During the following years, she was employed at various public sector positions in both city and state government agencies including the Texas Education Agency. In July 1998, she received her teaching certification in Secondary Mathematics and taught in the Austin and San Marcos Independent School Districts. In January 2004, she entered the Graduate College of Texas State University-San Marcos. She is currently employed as a manager in the Performance Reporting Division of the Texas Education Agency in Austin, Texas.

Permanent Address: 5900 Fergus Road

Kyle, Texas 78640

This thesis was typed by Ester C. Regalado.