2011

Factors that differentiate high-achieving and low-achieving language minority students enrolled in a middle-school Spanish two-way immersion program

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FACTORS THAT DIFFERENTIATE HIGH-ACHIEVING AND LOW-ACHIEVING LANGUAGE MINORITY STUDENTS ENROLLED IN A MIDDLE-SCHOOL SPANISH TWO-WAY IMMERSION PROGRAM

A Dissertation Presented
to
The Faculty of the School of Education
Learning and Instruction Department

In Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education

by
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San Francisco
May 2011

UNIVERSITY OF SAN FRANCISCO

Dissertation Abstract

Factors That Differentiate High-Achieving and
Low-Achieving Language Minority Students
Enrolled in a Middle-School Spanish
Two-Way Immersion Program

A growing number of students in the United States come from homes where a language other than English is the primary language, presenting challenges to educators who struggle to meet these students' educational needs. This study, using an exploratory mixed methods design, examined how seventh grade language minority high-achieving students in a Spanish two-way immersion program differ from language minority low-achieving students on several factors, including academic engagement, English and Spanish oral language proficiency at school entry, current English and Spanish language proficiency, Spanish language arts achievement, general ability, and background factors such as SES, gender, and age. Three dimensions of academic engagement were examined: behavioral, cognitive, and relational. School records that gave information on grades in English language arts, school behavior referrals, and attendance as well as teacher questionnaires about class participation and classroom observations were used to determine the behavioral engagement of the students. Students completed a questionnaire on their perceived use of self-regulation strategies to determine cognitive engagement. In addition, teachers were asked to rate students' use of self-regulatory strategies. Relational engagement was investigated with individual interviews and focus

group discussions around questions relating to perceived teacher, parent, and peer support for academic achievement. The results indicate that the high-achieving students had higher levels of academic engagement, were more likely to be orally proficient in at least one language at school entry, had a higher SES level, and were more likely to be female. The results of this study indicate classroom instructional strategies such as working in groups and structured review of information are essential to increasing students' academic engagement and achievement. Mentoring programs that foster students' perceptions that teachers care about them as individuals would also help raise the academic engagement of the low-achieving students. Results also indicate that instructional programs in kindergarten and first grade in a two-way immersion program should include a strong oral language component that will ensure all students have the language skills needed to be successful in school.

This dissertation, written under the direction of the candidate's dissertation committee and approved by the members of the committee, has been presented to and accepted by the Faculty of the School of Education in partial fulfillment of the requirements for the degree of Doctor od Education. The content and research methodologies presented in this work represent the work of the candidate alone.

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ACKNOWLEDGEMENTS

This dissertation could not have been written without the help and support of a great many people. First of all, I would like to thank my dissertation committee, especially Dr. Yvonne Bui, my committee chair. When my original research proposal could not be completed, Dr. Bui guided me through the process of finding a new topic. Each time I brought her a new draft of a section, her suggestions for revisions and refinements led me expand my thinking about my topic and delve deeper into the research. Without her guidance this dissertation could not have been completed. Dr. Kevin Oh and Dr. Stephen Cary were also extremely helpful, sharing their experience and insights in a way that helped bring greater focus and clarity to my study.

I would also like to thank my friends, fellow doctoral students, and faculty in the Learning and Instruction Department at the University of San Francisco for their encouragement and support. Roz Simpson, Debrayh Gayle, and Wendy Hacke especially listened to my ideas, offered encouragement, and helped me keep everything in perspective. I also want to thank Wendy for helping to transcribe the teacher interviews. I appreciate the support of Dr. Lanna Andrews who kept me motivated and encouraged my growth as a scholar and educator in higher education.

This study could not have been completed without the cooperation of the teachers, students, and families of River Glen School. Teachers and students who participated in the study were generous with their time and commentary. I want to thank Linda Luporini-Hakmi for sharing her wisdom and experience in two-way immersion education.

Most importantly I want to thank my partner, Dr. Katherine Goehle, who said she did not think she would ever have to live through another dissertation. Katherine was my pillar of strength, feeding me dinners, listening to me as I talked through my ideas and frustrations, and editing my first drafts. She helped me keep everything in perspective by reminding me what is really important, dragging me out of my dissertation "cave" to spend time enjoying friends and family.

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CHAPTER I

STATEMENT OF THE PROBLEM

A growing number of students in the United States come from homes where a language other than English is the primary language, presenting challenges to educators who struggle to meet these students' educational needs. From 1995 to 2008, the enrollment of students who are English learners (ELs) has grown by more than 57% compared to a growth of 4% in the general K – 12 student population (National Clearing House for English Language Acquisition (NCELA), 2008). Prior to entering a public school in the United States, ELs may have not attended school on a regular basis in their home country and may not be literate in their first language (Garcia & Weise, 2002). Some ELs may know only a few words of English and are struggling to adjust to the dominant American culture, while others who may be able to speak conversational-level English have a home culture that is different than the culture of most public schools. In addition to these unique needs, many ELs also have the same problems that are seen in some English-only students, such as high mobility, parents who have a low level of educational achievement themselves, and families that lack the resources to afford decent housing, adequate nutrition, and health care (Portes & Rumbaut, 2001). Educators must determine how to provide appropriate educational services that best meet the specific learning needs of EL students.

The achievement gap between White and students of color, specifically African American and Hispanic students, as well as the achievement gap between ELs and non-ELs, is of concern to K–12 educators in school districts across the United States. The achievement gap is seen as early as kindergarten and persists through secondary levels

(Manning & Kovach, 2003). The achievement gap between Hispanic students and White students has remained the same since 1992 for both fourth and eighth graders, 25 and 24 points respectively (Aud et al., 2010c). Accountability testing in schools has increased as a result of standards-based reforms and has made the achievement gap much more visible over the past decade (Williams, 2003). For example, the No Child Left Behind Act of 2001 (NCLB) (PL 107-110) established annual achievement goals for ELs and Hispanic students as well as other subgroups and enforces accountability requirements. This law requires that schools raise the academic performance of students on annual state tests, such as the California Standards Test (CST), and that the states develop statewide progress objectives to ensure that all groups of students reach proficiency levels or better by the year 2013 –2014 (Meyen & Bui, 2007).

Hispanic students and ELs are not performing in math and language arts at levels comparable to White students who only speak English at home. An examination of the National Assessment of Educational Progress (NAEP) reading subtest results shows that while 42% of White fourth-grade students and 41% of White eighth-grade students scored proficient or above in 2009, 17% of the Hispanic students scored proficient or above at both grade levels (Aud et al., 2010c). ELs trailed non-ELs by 39 points on the 500 point NAEP reading subtest scale with 4% scoring proficient or advanced (Baralova, Fix, & Murray, 2007).

In their attempt to reduce the achievement gap between White students and students of color, many educators and researchers overlook the fact that many students of color are able to achieve at high levels, receiving above average standardized state test scores and succeeding in their school courses (Bridgeman & Wendler, 2004). In a review

of literature related to school success, Gándara (2004) examined four different areas that contribute to academic success for Hispanic students: intrapersonal, extrapersonal, socio-cultural, and educational systems. Intrapersonal factors include a temperamental predisposition to be open to help and guidance from others, opportunities to develop a sense of competence and self-esteem, caring and supportive adults in a student's life, and basic ability that may be masked by linguistic or cultural factors. Extrapersonal factors include parenting styles with high-achieving students having strict parents with strong goals. Socio-cultural factors include peer groups that are supportive of academic achievement and share information about classes and course work and social structures such as bilingual and dual education programs that give validation to Hispanic students' language and culture. In the study, academically successful Hispanic students were often ones who socialized with low as well as high-achieving peers. The final factor discussed by Gándara was the education system and elements within the system that foster academic achievement. The results indicated that individual intervention programs targeted at specific needs of students increased the number of students who go on to college and decreased dropout rates. School-centered programs that aimed to raise the achievement of all students through high expectations and challenging curriculum were also shown to raise academic achievement; however, what is missing in Gándara's review is a discussion of how these various factors interact to increase achievement and which factors are most critical. Without knowledge of the critical factors, schools cannot develop appropriate programs to foster academic success.

Several researchers have linked oral language proficiency to literacy development, especially in relation to how problems in language development can lead to

reading difficulties (Catts, Rey, Zhang, & Tomlin, 1999; McCardle, Scarborough, & Catts, 2001; Nation & Snowling, 2004). One explanation for the achievement gap between Hispanic students and White students is that many Hispanic students began school as ELs (Aguila, 2010), but most of the academic instruction they received in school was in English. Rumberger (2007), analyzing data from the National Center for Educational Statistics (NCES) (2007), found that at the kindergarten level in the 1998-1999 school year, the achievement gap between Spanish-speaking ELs and native speakers of English is 1.22 (as expressed in terms of standard deviation units) in California and .91 in the rest of the United States. This data indicates that Spanish-speaking ELs begin school at a considerable disadvantage compared with native speakers of English. Between kindergarten and fifth grade, the gap in language skills is reduced only slightly for the Spanish-dominant students at the national level and the gap widens even further in California, indicating that initial language proficiency impacts students' language skills over several years. Programs that use students' primary language to form a foundation for and parallel learning in a second language such as English can increase academic achievement (Genesee, Lindholm-Leary, Saunders, & Christian, 2006). Thus, initial and current language proficiency is important to examine when investigating the differences between high- and low-achieving language minority students. In this study, English and Spanish initial oral proficiency levels at school entry as well as current English oral proficiency as measured by the California English Language Development Test (CELDT) are reported for the students in the high- and low-achieving groups and analyzed for any significant differences between the groups.

Another important factor, which is critical to middle school academic achievement, is academic engagement (Fredericks, Blumenfeld, & Paris, 2004; Heller, Calderson, & Medrich, 2003; Jennings, 2003; Perry, 2008). Heller, Calderson, and Medrich (2003) define academic engagement as a student's motivation to participate in academic activities without which students have difficulty learning the skills and knowledge necessary for academic achievement. Many of Gándara's (2004) factors that relate to the academic achievement of Hispanic students are factors that also contribute to students' academic engagement (Fredericks, Blumenfeld, & Paris, 2004) such as caring and supportive adults in a student's life, peer groups that are supportive of academic achievement and that share information about classes and course work, and social structures such as bilingual and dual education programs that give validation to Hispanic students' language and culture. Lower levels of academic engagement tend to correspond with lower levels of achievement while higher levels of academic engagement appears to relate positively to higher levels of academic achievement for all populations (De Bruyn, Dekovic, & Meijnen, 2003; Heller, Calderson, & Medrich, 2003). More research is needed to determine whether academic engagement is a critical factor in explaining the differences in academic achievement between high-performing and low-performing language minority students. In addition, research is needed on what contributes to academic engagement for language minority students so that programs and instruction can be implemented to foster academic engagement for these students.

School programs have been shown to have a significant impact on the academic engagement of students at all grade levels (Marks, 2000); therefore, in order to examine the factors that differentiate high- and low-performing students, participants should be

drawn from programs that have been shown to be effective with language minority students. In a synthesis of research on the education of ELs, Genesee, Lindholm-Leary, Saunders, and Christian (2006) concluded that there was strong evidence indicating that the educational success of ELs is positively related to sustained instruction through the student's first language. The synthesis revealed that evaluations conducted in the early years of a program (grades K–3) indicated that students in bilingual education scored below grade level on state-mandated standardized tests. In contrast, almost all evaluations conducted at later grades showed that the educational outcomes of ELs who received literacy instruction in their first language through at least fifth grade in late-exit bilingual programs (i.e., bilingual programs where student receive support in their first language through fifth grade) or two-way immersion (TWI) programs (i.e., programs that integrate ELs from a common native language background and native English-speaking students for academic instruction through both languages) were at least comparable to, and usually higher than, students educated in English-only programs or programs that provided only minimal support in the students' first language (Genesee et al., 2006). Thomas and Collier (2002) found that only late-exit bilingual programs and TWI programs enabled ELs to reach or surpass the 50th percentile on standardized tests on all subjects in both languages by fifth or sixth grade. ELs in other types of programs were unable to close the gap with non-language-minority peers by the end of high school. By studying the factors that differentiate higher and lower achieving language minority students within a program that research has found to be effective, many confounding school-related factors would be controlled.

Researchers also have examined factors such as socio-economic status (SES) in relation to general student academic success in two-way immersion (TWI) programs (Lindholm-Leary & Howard, 2008). Controlling for native language, gender, and participation in special education, higher socioeconomic status was associated with higher average outcomes in English literacy and achievement (Lindholm-Leary, 2001); however, no studies were found by this researcher that examined general ability, initial language proficiency in English and Spanish, current English oral language proficiency, and current Spanish literacy skills in relation to the academic achievement and academic engagement of high- and low-performing language minority students in a TWI program.

The present study investigated differences in the academic engagement of high- and low-achieving language minority students, as measured by the California Standards Test (CST), using student interviews, the completion of a questionnaire by the students' teachers, focus group discussions, classroom observations, and an examination of school records. In addition, the study investigated to what degree high- and low-achieving language minority students differ in initial oral language proficiency in English and Spanish, SES, current English oral language proficiency, current Spanish literacy skills, and general ability as measured by the Naglieri Nonverbal Ability Test – Second Edition. Information about these factors can be used to help determine strategies and programs that could be used to improve academic achievement for language minority students.

Theoretical Framework

The present study is based on three theoretical models. The first model comes from language acquisition theory and depicts language development in a student's first language (L1) as important for language acquisition in a second language (L2). This

model portrays oral language development in a student's second language as essential for academic achievement in the second language. Next, this study is based on a conceptual model developed by Bernhardt (2005) that proposes that a student's L1 and L2 interact during reading to increase academic success and that there are other factors such as academic engagement that also contribute to a student's success. The final conceptual model used is one that was developed by Suárez-Orozco, Suárez-Orozco, and Doucet (2004) that posits that academic engagement is a determining factor in explaining why some students are academically successful and others are not. Each theory and model will be discussed in relation to its foundation for the present study.

Cummins's Theories and Second Language Acquisition

Cummins (1979a) proposed two hypotheses to explain second language acquisition and the development of competence in a second language. One was the developmental interdependence hypothesis in which Cummins stated that the development of competence in a second language (L2) is partially a function of the type of competence already developed in the first language (L1) at the time when intensive exposure to L2 begins. His second hypothesis was the threshold hypothesis in which Cummins stated that there might be threshold levels of linguistic competence that bilingual children must attain both in order to avoid cognitive disadvantages and to allow the potentially beneficial aspects of bilingualism to influence their cognitive and academic functioning. Cummins used these dual hypotheses to explain education outcomes for bilingual students as a function of the interaction between background, child input, and educational treatment factors (see Figure 1). The child input component consists of two factors: conceptual-linguistic knowledge and motivation to learn L2 and

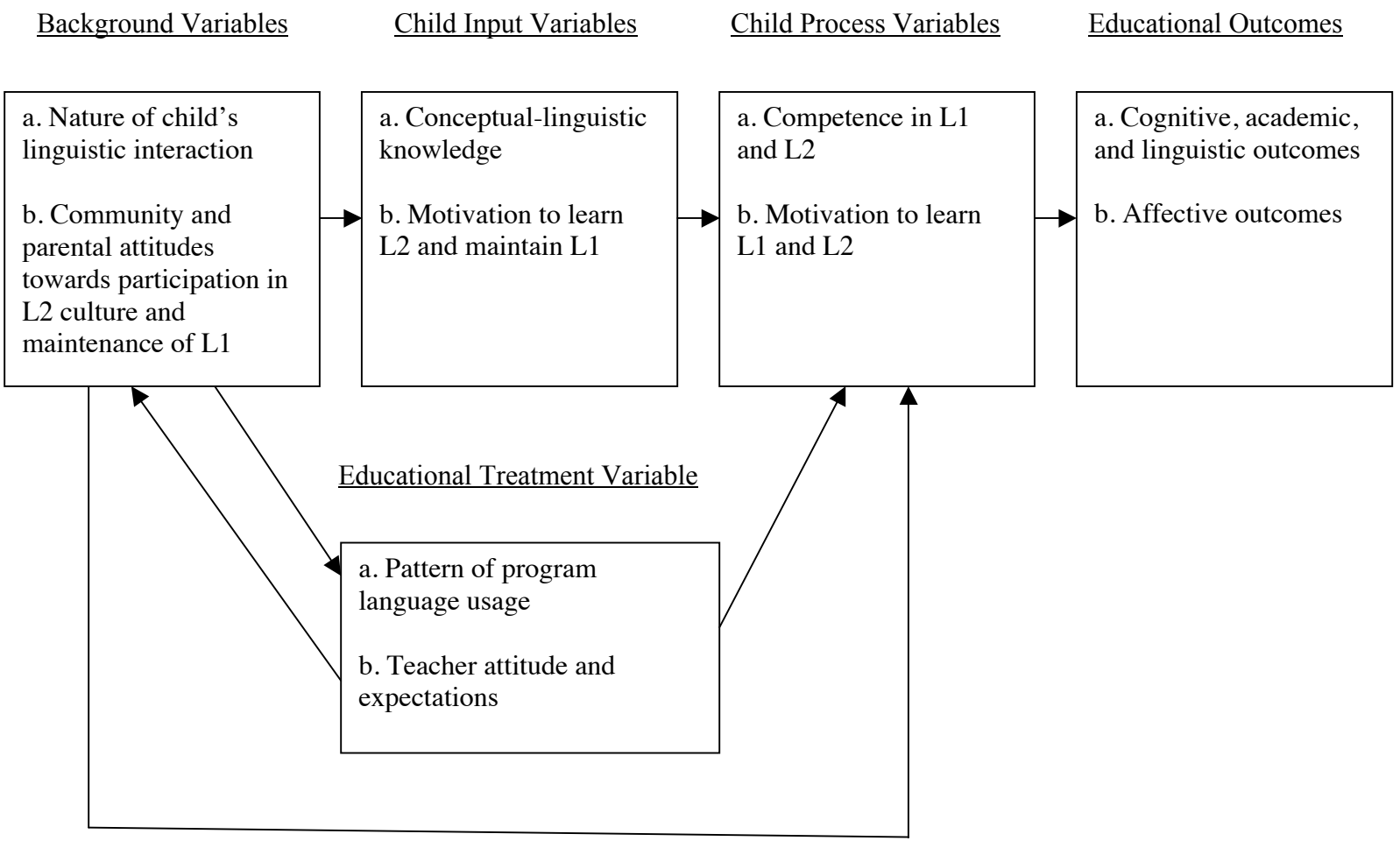

Figure 1. Interaction Model of Education with L1 and L2 (Cummins, 1979a)

maintain L1. The model that Cummins developed predicts that if ELs have the necessary competence in L1 and the motivation to maintain L1 and learn L2, they should be able to achieve at the level of their L2 peers; however, an important aspect of his model is that in order for ELs to be as successful as their L2 peers, they must have comparable school, community, and parental supports.

Cummins's hypotheses are important for this study because TWI programs are based on the premise that if ELs' L1 is developed, they will be more successful in their L2, which is usually English in the United States (Lindholm-Leary & Genesee, 2010). Considerable research supports this concept that developing proficiency and skills in one language is interrelated to the acquisition of proficiency and skills in a second language. Studies of academic achievement in bilingual students' two languages show that language minority students who have high levels of competence in their L1 demonstrate superior achievement in English literacy while language minority students who have lower levels of competence in their L1 show lower levels of achievement (Rolstad, Mahoney, & Glass, 2005; Slavin & Cheung, 2005). In addition, language minority students with higher levels of competence in both L1 and L2 attain significantly higher levels of academic competence than do language minority students with lower levels of competence (Lindholm-Leary & Borsato, 2006). In a study of more than 20 schools that have implemented TWI programs, Lindholm-Leary (2001) found that development of literacy skills in L1 and L2 increased the academic achievement of language minority students in English relative to language minority students who were in English-only programs. In order for students to be successful on standardized tests of achievement in English such as the CST, they must have developed competency in the English language

(Rhodes, Ochoa, & Ortiz, 2005), which is facilitated by developing competencies in their L1.

The present study was conducted at a school that has implemented a two-way immersion program, where language minority students receive instruction in both Spanish and English. All students in the program receive literacy instruction in Spanish through eighth grade. Literacy instruction in English begins in the second semester of second grade. Increasing amounts of time are spent on English literacy instruction between second grade (30 minutes) and fifth grade (90 minutes). In sixth through eighth grades, students have one period of English language arts and one period of Spanish language arts. In accordance with Cummins's model, the program assumes L1 proficiency and skills will increase L2 proficiency and skills. In the present study, the variables associated with this model are examined, which include initial oral language proficiency in English and Spanish at school entry, current English language proficiency, current Spanish oral language proficiency, and Spanish language arts skills. In addition, the effect of teacher expectations and attitudes and the students' attitudes about learning were explored during the student interviews and in the focus group discussions, which Cummins posits are also important factors associated for English academic achievement. Cummins (1979b) expands his model in another paper that discusses the term *cognitive/academic language proficiency* (CALP), which refers to the dimension of language proficiency, which is strongly related to overall cognitive and academic skills. CALP refers to the degree of language proficiency necessary for the successful navigation of academic situations where higher-order thinking skills are required (e.g. analysis, synthesis, evaluation) (Baker, 2006). He differentiates CALP from *basic*

interpersonal communicative skills (BICS), which almost all children acquire in L1 and can learn fairly easily in L2 regardless of academic aptitude or ability. Cummins states that CALP in L1 and L2 are interdependent and the development of proficiency in L2 is partially a function of the level of L1 proficiency. He hypothesizes that L1 and L2 CALP are manifestations of one underlying dimension and as such L1 and L2 proficiency should relate strongly to each other. Cummins qualifies his prediction that L1 proficiency should predict L2 proficiency by stating that factors such as motivation to learn L2 and the similarity of the L1 and L2 might make a difference in the relationship between L1 and L2 CALP. Since Cummins first proposed the concept of CALP, his ideas have been explored by other researchers, criticized, and modified by Cummins himself; however, CALP can still serve as a useful concept for linking L1 and L2 proficiency in relationship to academic language (Cummins, 2008). Five meta-analyses have been conducted that support Cummins's theory that L2 academic language proficiency is partially a result of academic language proficiency in L1 (Francis, Lesaux, & August, 2006; Greene, 1997; Rolstad, Mahoney, & Glass, 2005; Slavin & Cheung, 2005; Willig, 1985). These meta-analyses all found that programs that teach student to read in L1 increased English academic achievement by fifth grade. Specifically, academic L1 language development will increase students' ability to develop L2 proficiency for academic and decontextualized uses (Riches & Genesee, 2006). In the present study, English academic language proficiency is part of what is assessed by the CST, and the students' CST scores were used to group the students. The high- and low-achieving students' scores on a Spanish standardized achievement test were compared so

that the relationship of L1 academic language proficiency could be compared to L2 academic language proficiency.

Bernhardt's Model of the Relation of L1 and L2 Literacy

Cummins's model is sequential, assuming that L1 skills are developed first and then contribute to the mastery of skills and knowledge in L2. Cummins's theory also seeks to explain the relation of L1 oral language skills to L2 oral language proficiency. Bernhardt (2005) developed a model of second language reading that is a conceptualization of the second language reading process as a compensatory process. Knowledge sources in one language assist or replace the inadequate or nonexistent knowledge sources in a different language. The knowledge sources are not additive, but instead operate synchronically, interactively, and synergistically. In Figure 2, for example, the model illustrates how familiarity with orthographic patterns can facilitate the word recognition process without actual language knowledge. The more word knowledge is developed, the more resources are freed up to operate on more complex syntactic patterns. Another example would be how the knowledge of story structure, characterization, and vocabulary in one language could interact with the knowledge of cognates, vocabulary, and similarities between L1 and L2 in another language to allow the student to comprehend a story written in either language. Bernhardt's model conceptualizes how L1 and L2 reading instruction may interact in an educational setting where students are increasing their proficiency in both languages.

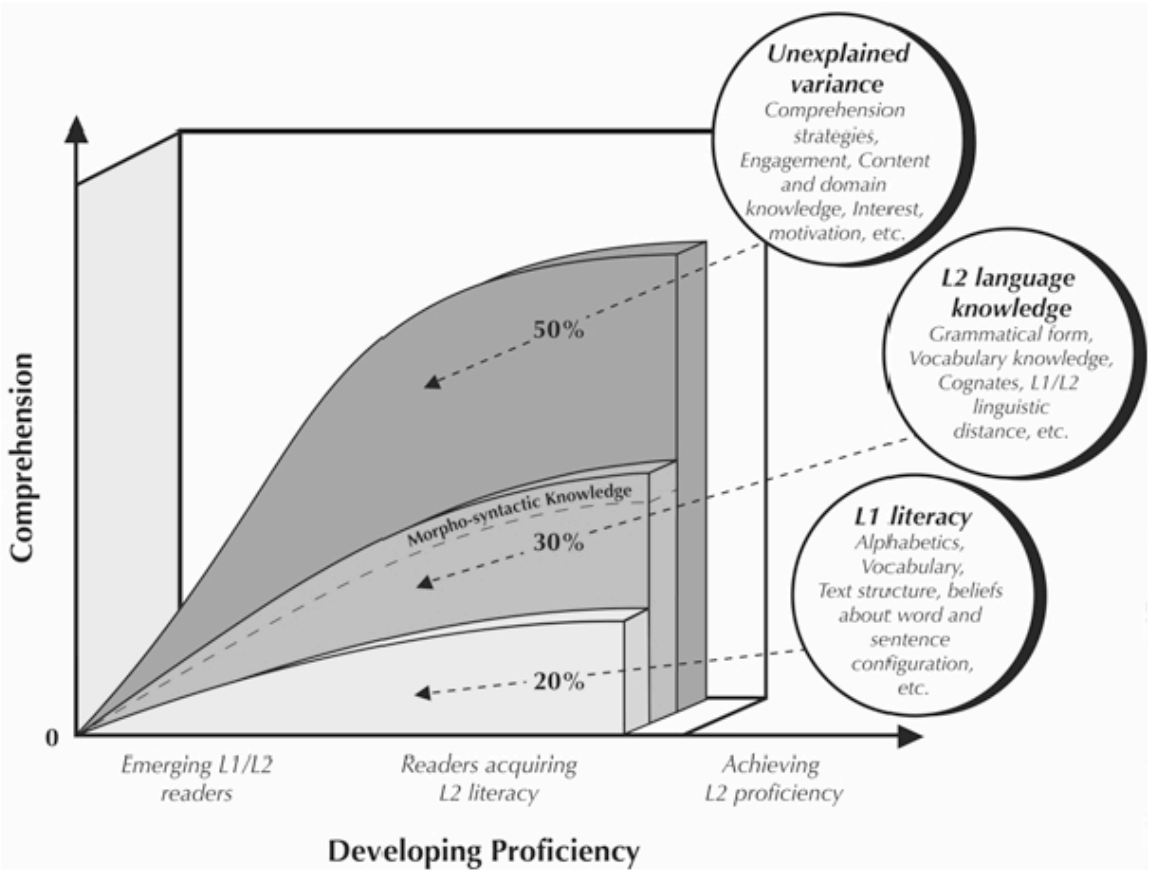

Figure 2. A compensatory model of second language reading (Bernhardt, 2005).

Several researchers (Asfaha, Beckman, Kurvers, & Kroon, 2009; Brantmeier, 2006a; Brantmeier, 2006b; McElvain, 2010) used Bernhardt's model in their research and found that L1 reading proficiency and L2 oral language proficiency interacted to increase L2 reading proficiency with each compensating for weak areas in the other, which supported the compensatory model of second language reading. Bernhardt and Kamil (1995) provided the basis for the model in their study that indicated that L1 reading proficiency and L2 linguistic proficiency interacted to predict L2 reading proficiency for ELs. In another study that supported Bernhardt's model of L1 and L2 literacy being interactive rather than sequential, Francis, Lesaux, and August (2006) reported

achievement gains in studies with language minority students who learned to read simultaneously in L1 and L2.

If Cummins's interaction model and his conception of L1 and L2 CALP as interdependent are correct and if Bernhardt's compensatory model is correct, then initial proficiency in L1 should predict later proficiency in L2 and achievement in L1 should be correlated with achievement in L2. Analyzing data from the National Education Longitudinal Study (NES: 88/2000), Guglielmi (2008) found that for ELs whose native language was Spanish, L1 proficiency in eighth grade did predict increased reading achievement in L2 in twelfth grade; however, Yeung, Marsh, and Suliman (2000) found that L1 proficiency was unrelated to English scores and to academic achievement. Young, et al. (2000), however, used a sample that included all students who used a language other than English, not just ELs. Investigation has not uncovered research that relates L1 achievement to L2 achievement in a TWI program.

Kieffer (2008) in an examination of longitudinal data from a study conducted by the NCES found that degree of English oral language proficiency at kindergarten predicted later academic achievement in English for language minority students; however, the students in his study were in a variety of programs and not specifically programs that also taught L1 literacy skills. Cummins's model would predict that L2 oral language skills would predict L2 reading achievement. In the present study, differences between high- and low-achieving language minority students in L1 and L2 oral language proficiency were examined as well as current L1 and L2 oral proficiency and L1 academic achievement as measured by a standardized test.

Motivation, Interest, and Academic Engagement

Besides L1 reading proficiency and L2 linguistic proficiency, both Cummins (1979a) and Bernhardt (2005) hypothesize that factors such as motivation, interest, and parent involvement are important in predicting L2 reading proficiency. Suárez-Orozco, Suárez-Orozco, and Doucet (2004) developed a conceptual model of academic engagement that explains the academic achievement of Latino students more accurately than earlier models. Earlier researchers such as Eccles, Wigfield, and Schiefele (1998) theorized that academic achievement was related to achievement motivation. Eccles, Wigfield, and Schiefele asked three questions. First, they asked if the student feels capable of doing the task, considering in particular the issues of locus of control (Weiner, 1994) and self-efficacy (Bandura, 1994; Schunk, 1991). Next, they asked if the task is motivating and why, focusing on the issues of intrinsic motivation (Dewey, 1913), internalization (Ryan, 1992), and interest (Schiefele, 1991). Finally, they asked if the student understands what he or she must do to succeed at the task, examining the issues of volition (Corno, 1993; Schiefele, 1991), self-regulation (Borkowski & Thorpe, 1994; Zimmerman, 1989), and help-seeking behaviors (Nelson-LeGall & Jones, 1990). Suárez-Orozco, Suárez-Orozco, and Doucet stated that they felt that the approach of these researchers was based on the Western model of individualism and ignored the realities that Latino students face. Many students from Latino cultures value filial loyalty, reciprocity, conformity to social conventions, and maintaining family and other social linkages over individual achievement (Valdés, 1996). Many of their families also struggle with poverty, inadequate housing, neighborhoods where some individuals are

engaged in violent and illegal activities, and undocumented status (Suárez-Orozco, Suárez-Orozco, & Doucet, 2004).

Suárez-Orozco, Suárez-Orozco, and Doucet (2004) posit that academic engagement is a more useful concept to investigate when trying to determine why some students have high academic achievement and others do not. They separate academic engagement into three dimensions: cognitive, behavioral, and relational. Cognitive engagement includes intellectual curiosity about new ideas and pleasure in mastering new material. Behavioral engagement refers to the degree to which students engage in the behaviors necessary to do well in school. Relational engagement is the degree to which students report meaningful and supportive relationships in school with adults and peers. Their conceptual model takes into consideration the role of such factors as parental education, immigration status, family constellation, neighborhood characteristics, and networks of social relationships. Many of the factors that affect academic engagement are malleable and may be changed through appropriate interventions (see Figure 3).

Other researchers have endorsed the multidimensional model of academic engagement, using similar terms for the three dimensions (Fredericks, Blumenfeld, & Paris, 2004; Yonezawa, Jones, & Joselowsky, 2009). A few researchers have begun to use the multidimensional model to examine the relationship of academic engagement to achievement. Sciarra and Seirup (2008) used the multidimensional model of academic engagement to examine the relationship of academic engagement to academic achievement across five major racial and ethnic groups. They found that the behavioral, cognitive, and relational dimensions of academic engagement were significant predictors of academic achievement for the Hispanic and White samples. Wang and Holcombe

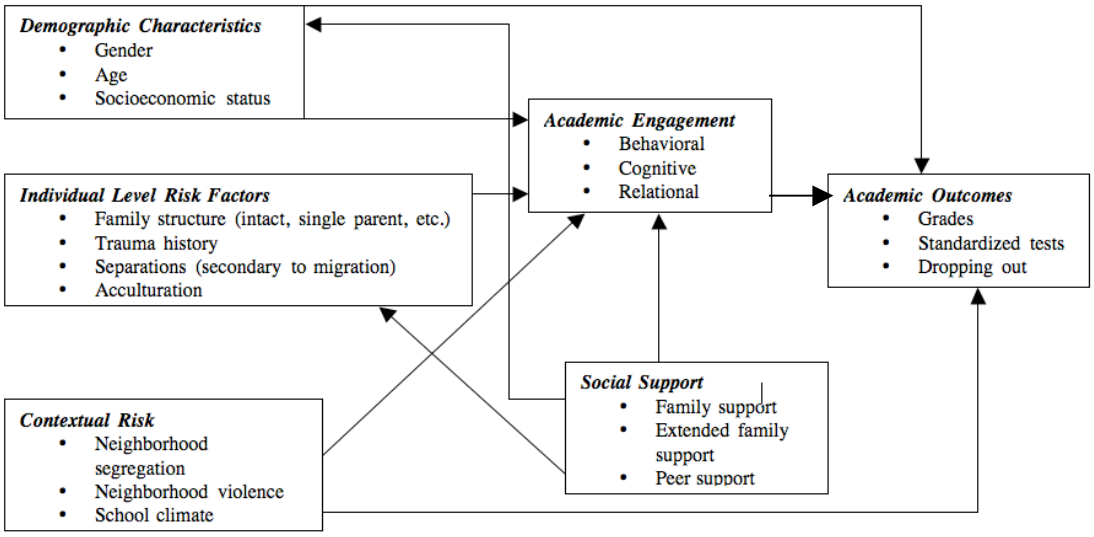

Figure 3. Conceptual model of academic engagement (Suárez-Orozco, Suarez-Orozco, & Doucet, 2004).

(2010) also used the multidimensional model of academic engagement to investigate the relationship of academic engagement to academic achievement. They found that the multidimensional model of academic engagement predicted academic achievement in secondary school students. Research is lacking on the differences between high- and low-achieving language minority students in academic engagement, and in regard to language minority students attending a TWI program.

Based on Suárez-Orozco, Suárez-Orozco, and Doucet's (2004) conceptual model of academic engagement, the present study included gathering information from the behavioral, cognitive, and relational dimensions. As part of the investigation of the behavioral dimension, school records were examined for information about grades, problems in behavior, and attendance. Teachers were asked to complete a questionnaire about students' class participation. For the cognitive dimension, students were asked to complete a questionnaire about their self-regulatory beliefs and practices and teachers

were surveyed about the students' use of self-regulatory strategies. To gain information in the relational dimension, individual student interviews and focus group discussions were conducted that included questions about perceived family, peer, and teacher support for academic achievement. Classroom observations were also used to observe both students' class participation and teacher support. Teachers were interviewed about their self-reported support for individual students.

Background and Need

The growing number of Hispanic and language minority students in schools is increasing the need to investigate how to increase academic achievement for these students. The number of Hispanic students in public school classrooms in the United States doubled between 1988 and 2008, increasing from 11% to 22% (Aud et al., 2010a). Hispanic enrollment grew from 4.5 million to 10.4 million. In California the number of Hispanic students increased from 31% to 49% of the total students enrollment during these 20 years. In 2008, 84.8% of the English learners were Spanish-speakers (California Department of Education, 2008a). With the increasing enrollment of Hispanic students in schools in the United States, it is imperative that the factors that lead to the academic success of Hispanic students be understood so that the achievement of all Hispanic students can be improved.

During this same time period the achievement gap in reading between Hispanic and White students has remained almost the same. In both 1992 and 2009, the achievement gap was 25 points on the National Assessment of Educational Progress (NAEP) reading assessment for fourth graders who performed at or above proficient level. For eighth grade students the gap was 24 points in both 1992 and 2009 on the

NAEP reading assessment (Aud et al., 2010c); however, in 2009, 17 percent of the Hispanic students in fourth and eighth grades performed at proficient or above. The factors that differentiate these high-performing Hispanic students from their lower performing peers need to be investigated and described.

As with the Hispanic student population, the English learner (EL) student population in the United States is increasing at a faster rate than the general education population. The National Clearing House for English Language Acquisition (2008) reported that the EL student population in the United States increased 57.17% from 1995 –1996 to 2005 – 2006, whereas the general student population increased only 3.66% during this same period. Moreover, it should be noted that the U. S. Bureau of the Census (2001) reported that one in five children in the United States had at least one parent that was foreign born. By 2030, up to an estimated 40% of the school population may speak English as a second language (Klingner, Artiles, & Barletta, 2006). In California, there are 1,553,091 English language learners in public schools (California Department of Education, 2008a), which is approximately 34% of the ELs in public schools (K – 12) nationwide (Aguila, 2010). The high numbers of students who are ELs are particularly significant because of educational policies such as *No Child Left Behind* (NCLB), the 2001 reauthorization of the Elementary and Secondary Education Act, that emphasize high standards and accountability for schools and students, including ELs. Under NCLB, if a school or district has enough ELs to be a significant subgroup, then ELs are required to show adequate growth in academic achievement from one year to the next or the school or district may be required to make changes to curriculum, instruction, and school leadership. In order to avoid the consequences of weak growth in academic

achievement among ELs, educators must become familiar with the factors that increase the academic achievement of ELs.

At present, many ELs are not making adequate academic progress in U.S. public schools (National Center for Educational Statistics (NCES), 2008). Gándara (2004) reported that the California Department of Education in 2001 estimated that 50% of Hispanic students entered kindergarten with Spanish as their primary language. These ELs commonly faced classrooms that either did not take into account their language needs or were structured to provide an impoverished curriculum that often did not prepare them to succeed academically (August & Hakuta, 1997; Olsen, Jaramillo, McCall-Pérez, White, & Minicucci, 1999). Services that fail to meet the ELs' educational needs can lead to lower achievement for EL students compared with native English-speakers. The national data from 2007 indicate that 70% of the fourth grade EL students scored below basic on the National Assessment of Educational Progress (NAEP) while 31% of the non-EL students scored below basic. The gap was even greater for eighth grade students, where 71% of the EL students scored below basic while 25% of the non-EL students scored below basic (National Center for Educational Statistics (NCES), 2008). In the 41 states that report on both the participation and success of ELs in English reading comprehension, 18.7% of ELs scored above the state norm (Kindler, 2002) while 50% of the total student population was above the norm for the state. In California the difference in the number of English-only students who were deemed proficient or advanced on the California Standards Test (CST) in comparison to ELs increased by four points for fourth graders and by 15 points for eighth graders between 2003 and 2009 (Aguila, 2010). Although ELs are making some improvement in their achievement as

shown on standardized tests, the achievement gap between ELs and English-only students is still a concern. Identifying the factors and programs that lead to increased EL achievement and academic success is vitally important.

Low levels of achievement for ELs and Hispanic students can lead to high dropout rates and poor job prospects in the future. According to Stillwell (2010), the Average Freshman Graduation Rate for White students was 81.0% while it was 63.5 % for Hispanic students. The national single-year dropout rate for White students was 2.8% while the dropout rate for Hispanic students was 6.0%. Students who have transferred to another school, died, moved to another country, or who are out of school due to illness are not considered dropouts. In California the single-year dropout rate for 2007-2008 for White students was 2.6% and for Hispanic students 4.7%. The California four-year dropout rate for White students for 2007-2008 was 11.7% but 23.8% for Hispanic students. The four-year dropout in 2007-2008 school year rate for the San Jose Unified School district, where the school used in this study is located, was 5.4% for White students and 14.0% for Hispanic students (California Department of Education, 2010a; California Department of Education, 2010b). Students who drop out of school experience lower income, greater unemployment, are significantly overrepresented in the adult corrections population, and are more likely to require social services during their lifetimes compared to high school graduates (Rumberger & Larson, 1994; Secada et al., 1998). The present study investigated how high- and low-achieving Hispanic language minority students differ on the three dimensions of academic engagement so that those factors that relate to academic achievement can be supported. Programs and interventions

that support these factors would lead to a decrease in the number of Hispanic language minority students who would be at risk for dropping out of school.

Socioeconomic Status

Socioeconomic status (SES) has been shown to have an effect on academic achievement. White (1982) found that while the correlation between SES and academic achievement is modest at the individual level, averaging about .22, the effect when measured at the neighborhood or school level is much higher, ranging as high as .80; therefore, examining the SES level of students within the context of the wider community is important. Johnson, McGue, and Iacono (1998) investigated environmental effects in 617 adoptive and biological families, adjusting for sample restriction of SES range. Controlling for gender, parenting, parental expectations for educational attainment, IQ, engagement in school, and genetic and shared environmental influences on sibling pairs, the researchers found that SES still made a small but significant non-shared environmental contribution to academic achievement. Sirin (2005) replicated White's (1982) meta-analysis examining the correlation between SES and academic achievement. The results showed a slight decrease in the average correlation when studies conducted between 1990 and 2000 were compared to the studies in White's meta-analysis that were conducted prior to 1980. Sirin also reported the effect size (ES) for various subgroups. The ES for middle school students was .31, and for students in urban schools it was .23. The mean ES for White student samples (.27) was significantly larger than the mean ES for minority student samples (.17). In other words Sirin found that SES did not seem to be as strongly related to academic achievement for culturally and linguistically diverse (CLD) students as it was for White students.

SES is an important background factor when examining the differences between high- and low-achieving language minority students. In the present study, information on SES, defined by whether a student is eligible for free and reduced lunch, was gathered and reported with other background factors such as gender and average age for each group. In Suárez-Orozco, Suarez-Orozco, and Doucet's (2004) model (see Figure 3), these factors also would be related to students' academic engagement.

Ability

Many researchers have found that higher ability is associated with higher academic achievement (Frey & Detterman, 2004; Jensen, 1998; Rohde & Thompson, 2007; Shea, Lubinski, & Benbow, 2001). Correlations between WISC-III and WISC-IV IQs and composite Wechsler Individual Achievement Test scores range from .72 to .87, suggesting that IQ explains 52% to 76% of variance in achievement (Mayes, Calhoun, Bixler, & Zimmerman, 2009). Correlations between the Naglieri Non-verbal Ability Test – Second Edition (NNAT2) and the Stanford 10, a test of academic performance, ranged from .51 to .70, accounting for 26% to 49% of the variance in achievement. Validity studies for the NNAT2 have found negligible differences in results between culturally and linguistically diverse populations and White or European American students (Naglieri, 2008). In the present study, the scores on the NNAT2 of high- and low-achieving language minority students were compared to determine if ability is a factor that differentiates the groups.

Oral language proficiency

One individual factor that can affect academic achievement is students' oral proficiency in their first language in addition to their proficiency in the language of

instruction, which in most schools in the United States is English. Oral language development, which includes phonology, vocabulary, grammar, and discourse-level skills, is an important factor in predicting literacy skills and academic achievement (Genesee, Geva, Dressler, & Kamil, 2006). Many studies have linked poor oral language skills to later difficulties with reading (Catts, Fey, Zhang, &Tomblin, &, 1999, 2002; Menyuk et al, 1991; Naucler & Magnusson, 2002). According to Gough and Tunmer's (1986) Simple Model, the two factors necessary for reading comprehension are decoding skills and listening comprehension. Listening comprehension is related to the ability to understand the meanings of the words and the logical and structural relationships among them or, in other words, the oral language development of the individual. Although reading comprehension has been shown to be more complicated than this model suggests (Catts & Hogan, 2003; Cutting & Scarborough, 2006), research has shown that vocabulary development (Fry, Johnson, & Muehl, 1970; Wiig & Semel, 1975), morphology and syntax skills (Doehring, Trites, Patel, & Fiedorowitcz, 1981; Fletcher, 1981; Stanovich & Siegel, 1994; Vogel, 1974), and text-level processing (Feagans & Short, 1984; Roth & Spekman, 1986; Smiley, Oakley, Worthen, Campione, & Brown, 1977; Stothard & Hulme, 1992; Yuill & Oakhill, 1991) all affect reading comprehension. Charity, Scarborough, and Griffin (2004) found that with African American students' greater familiarity with Standard English was associated with better reading achievement on tests written in Standard English. The researcher of the present study was only able to find one study that examined the relationship of the English oral language proficiency of bilingual Hispanic students who were English-dominant when they entered school in kindergarten and reading achievement. Kieffer (2008) examined language minority

students who entered kindergarten as initially proficient to students who entered kindergarten as English learners. He found that language minority students who entered as fluent English-speakers had a similar trajectory of reading achievement as students that entered school as English-only. In most research initially proficient students are grouped with students who are English-only.

In the present study, the differences between high- and low-achieving language minority students in English and Spanish oral language proficiency at school entry were documented. Cummins's model would predict that those students who enter school with higher levels of oral proficiency in English and Spanish would do better than students who had lower levels in both. His model would also predict that students who enter with high levels of either English or Spanish would do better than students who were low in both. The present study investigated whether high-achieving language minority students entered school with higher levels of English or Spanish oral language proficiency or both. This information can be used to designed intervention programs to help low-achieving students who may have entered with lower levels of oral language proficiency in both languages.

School Factors and TWI Program

TWI programs in the United States integrate ELs from a common native language background with English-proficient students for academic instruction that utilizes both the native language of the ELs and English. Lindholm-Leary and Genesee (2010) state that the goal of TWI programs is academic achievement, bilingualism, biliteracy, and cross-cultural competence for all students. Academic achievement and biliteracy is usually assessed through state and district-level tests. In TWI programs at the elementary

level a significant portion (50% to 90%) of the student's instructional day in the native language (target language) of the ELs. Other critical features of TWI programs are that the instructional day involves periods of instruction when only one language is used (i.e., there is no translation or language mixing), approximately equal numbers of native speakers of the target language and non-native speakers of the target language are included in the program, and students are integrated for most or all instruction (Lindholm-Leary & Genesee, 2010). TWI programs are diverse culturally, linguistically, and socio-economically (Lindholm-Leary, & Howard, 2008).

The popularity of TWI programs has grown over the past 20 years. From only 37 programs in 1987, there are now 359 programs in 28 states plus Washington, D.C. New programs are being added every year (Center for Applied Linguistics, 2010a). Research on TWI programs has also grown in the past ten years. Much of the research has focused on the academic achievement of students in TWI programs. In three longitudinal, large-scale, comparative studies (Lindholm-Leary, 2001; Thomas & Collier, 1997, 2002), researchers examined the effectiveness of two-way immersion program as well as other bilingual education programs in raising student achievement. Thomas and Collier (1997) examined 700,000 student records in five school districts to track long-term academic outcomes for ELs. The students were in various types of programs: English as a second language (ESL) pullout (traditional), ESL content (including content curriculum as well as English language arts), transitional bilingual education, developmental bilingual education, and two-way immersion education. Thomas and Collier (1997) chose well-implemented programs for their study, finding significant program effect by late high school. Receiving formal schooling in their first language in elementary school was

shown to be the largest single predictor of long-term success for ELs. TWI programs were found to be the program type with the best long-term success. In a later study, Thomas and Collier (2002) reported that only ELs in developmental bilingual and TWI programs reached or surpassed the 50th percentile on standardized tests on all subjects in both languages. The fewest dropouts were also found in these programs.

Lindholm-Leary (2001) found in a large-scale study that included 9,000 TWI students that native Spanish-speaking students scored significantly higher than native Spanish-speaking students in the state and also on par with native English-speaking students in English-only classrooms. The native English-speaking students also outperformed their English-only peers in English-only classrooms. Similar results were reported by Christian, Genesee, Lindholm-Leary, and Howard (2004) with TWI students in two different states.

Researchers have examined which factors lead to the greatest achievement within a TWI program. Howard (2003) and Lindholm-Leary (2001) found that higher socioeconomic status correlated with higher average outcomes in English literacy and achievement for students in a TWI program. In addition, when other variables such as socioeconomic status and native language background were controlled for, girls outperformed boys.

Students who have been in TWI programs score on average as well or higher than their peers in English-only classrooms with ELs outperforming their peers who have been in English-only programs (Lindholm-Leary & Howard, 2008); however, not all students in TWI programs score at proficient or above on the state standardized tests. The school that was used in this study has had a TWI program throughout the school since 1988. In

this school 33% of the EL students in seventh grade scored below basic or far below basic on the California Standards Test (CST). Investigation has not been successful in uncovering research that addresses why some students succeed in the TWI program while others do not, nor what are the factors that determine success when socio-economic status and gender are controlled for. Research is needed to determine what factors are the most critical ones that lead to success in a TWI program and whether academic engagement is one of the critical factors.

Academic engagement is a concept that has received increasing attention because of its relation to academic achievement (Fredericks, Blumenfeld, & Paris, 2004; Heller, 2003; Jennings, 2003; Perry, 2008). Academic disengagement has been observed as being severe in culturally and linguistically diverse student populations (Voelkl, 1997). The concept of academic engagement and its link to academic achievement may provide a new perspective from which to examine the achievement gap that continues to exist between Hispanic and White students and language minority and English-only students. Academic engagement has been shown to be responsive to variations in the educational environment (Finn & Rock, 1997; Fredricks, Blumenfeld, & Paris, 2004). Teacher behaviors, instructional methods, and school climate can all positively impact academic engagement (Marks, 2000). A search of the literature has not yielded any studies of academic engagement in language minority students within a TWI program nor whether there is a difference in academic engagement between high- and low-achieving language minority students. Academic engagement has been divided into three dimensions: behavioral, cognitive, and relational (Suárez-Orozco, Suárez-Orozco, & Doucet, 2004). The present study examined whether high-performing and low-performing students differ

in their behavioral, cognitive, and relational engagement and in what ways the two groups differ. Behavioral engagement is linked with overall student conduct – following rules in the classroom, lack of disruptive behavior, complying with teacher directions, completing assignments, and participating in class (Suárez-Orozco, Suárez-Orozco, & Doucet, 2004). Teacher interviews, classroom observations, grade reports, and school behavior records were used to gain information about students' behavioral engagement. Cognitive engagement has been related to students' overall investment in learning (Fredricks, Blumenfeld, & Paris, 2004) and was measured through students' reporting self-regulation strategies on a questionnaire and teacher reports of self-regulating behavior on a questionnaire. Relational engagement relates to the students' perceptions of supportive relationships with adults and peers in school. Focus group discussions and individual interviews were used to gain information about students' perceptions of adult and peer support for learning and academic achievement. Teacher interviews, teacher responses on a questionnaire, and classroom observations were also used to gather information on teacher support. The conceptual model developed by Suárez-Orozco, Suárez-Orozco, and Doucet (2004) would predict that higher achieving language minority students would have higher academic engagement in all three dimensions than lower achieving language minority students.

Purpose of the Study

The purpose of this study was to examine how seventh-grade language minority high-achieving students differ from language minority low-performing students on several factors, including academic engagement, English and Spanish oral language proficiency at school entry, current English language proficiency, Spanish academic

achievement, and background factors such as SES, gender, parent education, and age. The scores on the California Standards Test (CST) from sixth grade were examined for all students whose parents indicated that Spanish was used in the home on the school home language survey given to parents when students initially register for school entry. These students are labeled language minority students in the present study. Language minority students who scored in the top third of language minority students on the sixth grade CST formed one group. The other group consisted of language minority students who scored in the bottom third. All the students were enrolled in a TWI program at the time of the study and had attended a TWI program or late-exit bilingual education program for the majority of their previous school career. Students receiving special education services in the area of language arts through the resource specialist program were excluded.

According to the conceptual model developed by Suárez-Orozco, Suárez-Orozco, and Doucet (2004), academic engagement is expected to differ between high- and low-achieving language minority seventh grade students in a TWI program. The researcher examined the behavioral, cognitive, and relational dimensions of academic engagement. School records that give information grade point average, school behavior referrals, and attendance as well as teacher questionnaires about class participation and classroom observations were used to determine the behavioral engagement of the students. Students completed a questionnaire on their perceived use of self-regulation strategies to determine cognitive engagement. In addition, teachers were asked to rate students' use of self-regulatory strategies. Students' cognitive engagement in classroom activities was monitored during classroom observations. Relational engagement was investigated with

individual interviews and focus group discussions around questions relating to perceived teacher, parent, and peer support for academic achievement. High- and low-achieving language minority students were in different groups for the focus group discussions. Teachers were also asked to specify ways that they have provided support for students' academic achievement. A checklist was used during classroom observations to document examples of teacher support for selected students.

The second part of the study examined language and background factors that might affect academic achievement. Cummins's model supports L1 proficiency impacting L2 proficiency and Bernhardt's model supports L1 proficiency interacting with L2 proficiency; therefore, the researcher conducted Welch tests between the means of high- and low-achieving language minority students on the California English Language Development Test (CELDT) at school entry and the Language Assessment Scales (LAS) at school entry. The results of these Welch tests were used to determine if L1 and L2 oral language proficiency at school entry is significantly different between high- and low-achieving language minority students. Current CELDT and LAS scores were analyzed to determine if there appear to be differences between the high- and low-achieving language minority students. All of the students had tested as fluent in both English and Spanish by seventh grade, so no statistical tests were performed with regard to current English and Spanish language proficiency levels.

Cummins and Bernhardt's models also indicate that higher scores on the Spanish language arts standards test would correspond to higher achievement on the CST in English. A Welch test was used to determine if high- and low-achieving language minority students differed in their performance on Spanish language arts proficiency as

measured by a Spanish language arts standards test administered in March 2011. A Welch test was used for all the statistical tests because there were only 21 students in the total sample of high- and low-achieving language minority students and homogeneity of variance cannot be assumed for a parametric test. In addition, background factors such as gender, age, parent education, ability, and SES level were examined to determine if there were differences between low- and high-performing language minority students. The results of both parts of the study can be used to make suggestions on how to modify the design of the TWI program and to develop interventions to improve the achievement for all language minority students.

Research Questions

In the study, the following research questions were addressed:

1. What are the differences in behavioral engagement between high- and low-achieving seventh-grade language minority students when school behavioral referrals, grade point average, school attendance, classroom observations of student participation, and teacher perceptions of students' class participation are examined?
2. What are the differences in cognitive engagement between high- and low-achieving seventh grade language minority students when student- and teacher-reported use of self-regulatory strategies and classroom observations of cognitive engagement are analyzed?
3. What are the differences in relational engagement between high- and low-achieving seventh grade language minority students when student reports of perceived teacher, parent, and peer support for academic achievement;

classroom observations of support; and teacher reports of support are analyzed?

4. What are the descriptive statistics of reported SES level, gender, current language proficiency, parent education, and age of high- and low-achieving seventh grade language minority students?
5. Is there a statistically significant difference between high- and low-achieving seventh grade language minority students when the mean scores on the Spanish language arts standards test given in March 2011?
6. Is there a statistically significant difference between high- and low-achieving seventh grade language minority students when the mean scores from the Naglieri Nonverbal Ability Test – Second Edition are compared?
7. Is there a statistically significant difference between high- and low-achieving seventh grade language minority students when the mean scores on the CELDT test given at school entry are compared?
8. Is there a statistically significant difference between high- and low-achieving seventh grade language minority students when the mean scores on the Language Assessment Scales given at school entry are compared?

Significance of Study

The significance of this study resides in its examination of factors that affect language arts achievement for language minority students in a TWI program. Because of the increased state and federal emphasis on accountability, schools need to insure that the knowledge and skills of all students are improving. Classroom teachers and school administrators can use the results of this study to develop strategies and interventions that

will improve academic achievement in the area of language arts. Specifically, the present study examined the role of academic engagement as a factor influencing academic achievement in low- and high-achieving language minority students. The interviews, focus group discussions, teacher questionnaire, classroom observations, and review of school records examined factors that link to academic engagement. The results of the present study indicate that providing interventions and instructional strategies that allow language minority students to succeed in their classes can support academic engagement, which in turn supports academic achievement. Early intervention programs in the primary grades are essential for helping struggling students to develop the skills they need so they can be successful in school. In the later grades classroom instructional strategies, such as working in groups and structured review of information, are important in helping LA students feel they can be successful, which increases students' academic engagement. Mentoring programs that foster students' perceptions that teachers care about the students as individuals would also raise the academic engagement of low-achieving students.

In addition, the present study examined the role of English and Spanish oral language proficiency at school entry and current L1 language arts proficiency in differentiating high- and low-achieving students in a TWI program. In the present study the differences in initial oral language proficiency between high- and low-achieving students indicate that early oral language development is important for future academic achievement. Instructional programs in kindergarten and first grade in a TWI program should include a strong oral language component that will ensure all students have the language skills needed to be successful in school.

In the present study, high-achieving students showed significantly higher competency in Spanish language arts as well as English language arts supporting the continuation of TWI programs that stress high-level academic skills in both languages. This study demonstrated that developing strong Spanish language arts skills does not interfere with the development of strong English language arts skills, and the development of skills in one language may increase the skills in the other.

In summary, this study examined the relationship of academic engagement, early L1 and L2 oral language proficiency, L1 language arts achievement, and background factors to L2 language arts achievement as measured by the CST in order to determine which factors differentiate low- and high-achieving language minority students. The number of TWI programs is growing in the United States (Center for Applied Linguistics, 2010) because they have been found to be effective programs for language minority students; however, without knowledge of which factors are most important for academic success, schools cannot design the most effective programs to meet the needs of their student populations.

Definition of Terms

Academic engagement – a continuum of involvement in academic activities where full engagement results in a student meeting his or her academic potential and where lack of engagement can lead to academic failure (Suárez-Orozco, Suárez-Orozco, & Doucet, 2004).

Academic language – language used in formal contexts for academic subjects. The aspect of language connected with literacy and academic achievement, including technical and academic terms (Echevarria, Vogt, & Short, 2008).

Agenda – a daily planner that students use to keep track of assignments that is provided by the school.

Basic Interpersonal Communication Skills (BICS) – face-to-face conversational fluency, which involves having the ability to converse in peer-appropriate ways. BICS includes mastery of basic pronunciation, vocabulary, and grammar of a language and may be observed to develop in one to three years (Cummins, 1979b).

Cognitive Academic Language Proficiency (CALP) – a complex, conceptual language proficiency associated with schooling, and the abstract language abilities required for academic work. CALP is usually thought to take five to seven years to fully develop in a second language (Cummins, 1979b).

Culturally and linguistically diverse (CLD) – students are usually referred to as being culturally and linguistically diverse when they come from homes where a language or dialect other than Standard English is spoken or from a home where the majority of the family members have a culture that differs from the mainstream.

Culture – the customs, lifestyle, traditions, behavior, attitudes, and artifacts of a given people. Culture also encompasses the ways people organize and interpret the world, and the way events are perceived based on established social norms (Echevarria, Vogt, & Short, 2008).

English learners (ELs) - also known as *English language learners* and *limited English proficient (LEP)* – California defines an English learner as a K-12 student who, based on objective assessment, has not developed listening, speaking, reading, and writing proficiencies in English sufficient for participation in the regular school program (California Department of Education. 2008b).

Language minority student – a student from a home environment where a language other than English is spoken. A language minority student may speak English as well as another language or may speak no English prior to entering school. A language minority student may be dominant in English or in another language.

Language proficiency – an individual's competence in using a language for basic communication and academic purposes (Echevarria, Vogt, & Short, 2008).

Socio-economic status (SES) - describes an individual's or a family's ranking on a hierarchy according to access to or control over some combination of valued commodities such as wealth, power, and social status (Sirin, 2005). In this study, SES level was defined by a student's eligibility free or reduced lunch.

Target language – the language other than English that is used for instruction in a TWI program.

Two-way Immersion – also known as *dual immersion* and *dual language* – an educational program in the United States that integrates English learners from a common native language background and native English-speaking students for academic instruction through both languages with the goals of academic achievement, bilingualism, biliteracy, and cross-cultural competence for all students (Lindholm-Leary & Howard, 2008).

CHAPTER II

REVIEW OF LITERATURE

The achievement gap between English learners (ELs) and English-only students and between students of color and White students is seen in schools across the United States from kindergarten through high school (Manning & Kovach, 2003). Various intervention strategies have been put in place with limited success. In both fourth and eighth grades the achievement gap between Hispanic and White students as shown on the NAEP (Aud et al., 2010c) remained unchanged. The National Center for Educational Statistics (2008) reported that the achievement gap between ELs and non-ELs ranged from 39 to 46 points for fourth and eighth graders, respectively. In order for this achievement gap to be diminished, appropriate interventions and school programs need to be developed to meet the educational needs of ELs and students of color.

One program that has led to increased achievement for Hispanic students and ELs is two-way immersion (TWI) education; however, even within a TWI program not all Hispanic students and ELs are successful (Lindholm-Leary, 2001). This study was designed to investigate the factors that lead to or hinder the success of ELs and Hispanic students in TWI program.

In order to provide a context for the present study, this literature review examines studies in three areas of research critical to explaining the success or lack of success of Hispanic students and ELs in a TWI program: (1) the link between oral language proficiency in a students first language (L1) and developing L1 literacy, (2) the link between second-language (L2) oral proficiency and L2 literacy, and (3) academic engagement as a factor influencing academic achievement. The first area of research

examines students' oral proficiency in their L1 and how it contributes to developing literacy in L1. Students who have as their L1 the target language (e.g., Spanish) used in a TWI program should be as successful in developing literacy in L1 as English-only students developing literacy in an English-only program. Like the first area of research, the second area of research looks at oral language development in relation to literacy development but in the L2 (e.g., English). The final area of research examines the role of academic engagement in explaining academic achievement. The present study examined in what ways academic engagement differs between high- and low-achieving language minority seventh grade students in a TWI program.

L1 Oral Language Proficiency and L1 Literacy

In 1997, Congress asked the Director of the National Institute of Child Health and Human Development (NICHD), in consultation with the Secretary of Education, to convene a national panel to assess the status of research-based knowledge of reading in general as well as the effectiveness of various approaches to teaching children to read (National Institute of Child Health and Human Development (NICHD), 2000). Two of the categories that had research relating L1 oral language proficiency to L1 reading skills were phonemic awareness and vocabulary development.

In addition to the NICHD report, other researchers have linked oral language proficiency to L1 literacy development, especially in relation to how problems in language development can lead to reading difficulties (Catts, Fey, Zhang, & Tomlin, 1999; McCardle, Scarborough, & Catts, 2001; Nation & Snowling, 2004). According to Gough and Tunmer's (1986) simple model of reading, decoding and listening comprehension are the two most important factors affecting reading comprehension. In

the present study, the researcher examined how L1 oral language proficiency at school entry and current L1 literacy skills differed between high and low-achieving language minority students. In a TWI program, students develop literacy in both their L1 and their L2, and examining how high and low-achieving language minority students differ in their L1 oral language and L1 literacy skills may help explain the differences in academic achievement.

One investigation of L1 oral language proficiency and its relationship to L1 literacy was completed by Cutting and Scarborough (2006). As part of a larger study that examined factors that predicted reading comprehension on three different measures (the Gates-MacGinitie Reading Test – Revised (G-M; MacGinitie, MacGinitie, Maria, & Dreyer, 2000), the Gray Oral Reading Test – Third Edition (GORT-3; Wiederholt & Bryant, 1992), and the Wechsler Individual Achievement Test (WIAT; Wechsler, 1992), Cutting and Scarborough measured two different aspects of language proficiency – lexical skills and sentence processing. They used the Peabody Picture Vocabulary Test – Third Edition (Dunn & Dunn, 1997), the Boston Naming Test (Kaplan & Goodglass, 1978), and the Word Classes subtest of the Clinical Evaluation of Language Fundamentals, Third Edition (CELF-3; Semel, Wiig, & Secord, 1995) to measure lexical skills. Four measures of sentence processing were used – Concepts and Directions, Formulated Sentences, and Recalling Sentences, which are all subtests of the CELF-3, and a 16-item experimental syntactic comprehension measure. The participants of their study were 97 children (65 boys and 32 girls) in grades 1 through 10, whose ages ranged from 7 to 15. The participants were predominantly White (85%), from medium to high socioeconomic status (81%), and all were native speakers of English.

Cutting and Scarborough (2006) used hierarchical multiple regression analyses to investigate the relative contribution – unique and shared – of word recognition/decoding and oral language skills to reading comprehension. In one analysis, the word recognition composite was entered at the first step and the oral language composite was entered at the second step. In the other analysis, the order of entry was reversed. Both word recognition and oral language accounted for significant variance in comprehension beyond that accounted for by the other, with oral language accounting for 15% of the variance on the G-M and 9% on both the WIAT and the GORT-3. Cutting and Scarborough (2006) also examined the contributions of lexical and sentence-processing skills separately in a second pair of regression analyses. Both aspects of language made unique as well as shared contributions to reading comprehension. For the G-M and GORT-3, vocabulary made unique statistically significant contributions of .045 and .053 respectively, to the proportion of variance accounted for, but for the WIAT, vocabulary did not make a statistically significant contribution. For the WIAT, sentence processing made a statistically significant unique contribution to the proportion of the variance accounted for (.034) as sentence processing did on the G-M (.018); however, sentence processing did not make a statistically significant unique contribution on the GORT-3.

The results of Cutting and Scarborough's (2006) study indicate that L1 oral language proficiency makes a significant unique contribution to L1 literacy. This study also supports the link between oral proficiency and literacy in general. These results indicate that students who are achieving at high levels when literacy skills are measured had higher levels of oral language proficiency. The present study examined whether high- and low-achieving language minority students differed in their L1 oral language skills at

school entry and in their current L1 literacy skills. For language minority students to be academically successful, schools may need to provide specific instruction to develop students' oral language skills in both their L1 and L2.

One limitation of the Cutting and Scarborough (2006) study is the small sample size that included students from 7 to 15 years old. The reading level of these students varied considerably, resulting in small samples at each of the various reading comprehension levels. The sample also was primarily White and of higher socioeconomic status. The present study included students of whom 100% are considered culturally and linguistically diverse and 71.4% who are eligible for free or reduced lunch. Students were from 12 to 13 years old, which lead to more detailed information being gained for students of this age range.

Cutting and Scarborough (2006) like many other researchers (Gottardo, Stanovich, & Siegel, 1996; Lombardino, Riccio, Hynd, & Pinheriro, 1997; Vellutino, Scanlon, & Spearing, 1995) relied on concurrent evaluations of oral language and reading abilities, which makes it difficult to determine whether oral language proficiency is influencing reading ability or reading ability is influencing oral language proficiency. Longitudinal studies that examine early oral language proficiency and use it to explain reading ability at a later time avoid this confusion. In a study by Catts, Fey, Zhang, and Tomblin (1999), measures of oral language proficiency made when students were in kindergarten were used to explain reading ability in second grade. The 604 participants in this study were sampled from a group of children participating in an epidemiologic study of language impairments in children. The epidemiologic investigation utilized a stratified cluster sample of 7,218 kindergarten children, who were given a battery of

language and cognitive assessments. The participants in the original study were then solicited to participate in a follow-up longitudinal investigation. The final sample for the longitudinal investigation included 328 children with language or nonverbal impairments and 276 children without impairments, yielding a total of 604 participants. This sample did not differ significantly in terms of demographic characteristics or language and cognitive abilities from children who either were not chosen to participate or chose not to participate in the longitudinal investigation.

In the original epidemiologic investigation, five subtests of the Test of Language Development – 1:P (TOLD-2:P; Newcomer & Hammill, 1988) plus a narrative story task were administered to evaluate oral language proficiency. The five subtests of the TOLD-2:P were the Picture Vocabulary, Oral Vocabulary, Grammatical Understanding, Sentence Imitation, and Grammatical Completion subtests. The narrative task evaluated the participants' abilities to comprehend, organize, and retell a story read aloud by the examiner. The participants' raw scores were converted to *z* scores based on the means and standard deviations of a normative sample of 1,475 children who received the battery of tests in kindergarten as part of the epidemiologic study. The *z* scores from the Picture Identification and Oral Vocabulary subtests were combined to form a vocabulary composite score. *Z* scores from the Grammatical Understanding, Grammatical Completion, and Sentence Imitation subtests were used to form a grammar composite score. Scores from the Narrative Comprehension and Recall measures were used to form a narrative composite score. To obtain a receptive language composite score, *z* scores from the Picture Identification, Grammatical Understanding, and Narrative Comprehension subtests were combined, and to derive an expressive language composite

score, *z* scores from Oral Vocabulary, Grammatical Completion, Sentence Imitation, and Narrative Recall were used. Both word recognition and reading comprehension were assessed in second grade. The Word Identification and Word Attack subtests of the Woodcock Reading Mastery Tests – Revised (Woodcock, 1987) were administered and the *z* scores from these subtests were combined to form a composite score for word recognition. Reading comprehension was assessed through three tests, which included the Passage Comprehension subtest of the Woodcock Reading Mastery Tests – Revised, the comprehension component of the Gray Oral Reading Test – Revised – 3 (Wiederholt & Bryant, 1992), and the Reading Comprehension subtest of the Diagnostic Achievement Battery (Newcomer, 1990). A composite score for reading comprehension was calculated by combining the *z* scores generated by these three measures. To address the potential problem of bias as a result of the study sample consisting of a higher proportion of students with language and nonverbal impairments than that found in the general population, the researchers employed weighted scores in all analyses.

Results of the study indicated that poor readers have a much higher percentage of receptive (57.4%) and expressive (50.3%) language deficits than good readers (11.8% and 12.2%, respectively). Among the poor readers, 56.0% had deficits in grammar and 39.3% had deficits in vocabulary compared to 9.8% in grammar and 9.0% for vocabulary among the good readers. For the narrative composite, 44% of the poor readers had problems compared to 15.1% of the good readers. In general oral language measures were more highly correlated with reading comprehension than were phonological processing measures but showed similar correlations for word recognition.

Hierarchical multiple regression analyses were used to examine the relative contributions of kindergarten measures in predicting reading achievement in second grade. Receptive language and expressive language abilities were combined to form a composite measure for oral language. Oral language was found to be more closely related to reading comprehension than was phonological awareness or rapid naming and accounted for 13.8% of the variance once those variables were entered in the regression model. Phonological awareness and oral language accounted for a large and similar amount of variance in word recognition when each of these variables was entered into the regression analysis as the first step. Oral language explained a significant amount of variability in word recognition even after phonological awareness and rapid naming were considered in the model (5.1%) although it was lower than it had been for reading comprehension.

The results of the Catts, Fey, Zhang, and Tomblin (1999) study indicate that oral language proficiency measured in kindergarten can be used to predict later literacy achievement. The researchers found differences between good readers and poor readers when their kindergarten oral language scores were compared with good readers having higher oral language proficiency. The present study examined whether language minority students with higher academic achievement differ from language minority students with lower academic achievement in their kindergarten L1 oral language proficiency as measured by the Language Assessment Battery (LAS).

One limitation of the Catts, Fey, Zhang, and Tomblin (1999) study is that it evaluated reading achievement at second grade, which is when reading comprehension is still highly related to word recognition and decoding skills. In the present study, the

researcher used the CST language arts scores at sixth grade as a way of measuring the reading achievement of the students. By sixth or seventh grade most students have mastered basic word attack skills and can decode most words, leading to less overlap between reading comprehension and simple word recognition. Like the Catts, Fey, Zhang, and Tomblin study, oral language scores in kindergarten were used to determine one aspect of oral language proficiency in order to control whether oral language proficiency was influencing reading ability or if reading ability was influencing oral language.

Nation and Snowling (2004) conducted another study that examined the relationship of L1 oral language proficiency to later L1 literacy. In this study 72 children were given oral language and reading tests when they were approximately 8.5 years old (time 1) and then again when they were approximately 13 years old (time 2). All children spoke English as their first language, and they attended schools in working class areas of the city of York in the United Kingdom. Several skills were assessed as part of the evaluation of the participants' oral language proficiency. Expressive vocabulary was assessed using the Vocabulary subtest from the Wechsler Intelligence Scale for Children (WISC-III; Wechsler, 1992). The participants listened to three recorded short stories and answered eight questions about them to assess listening comprehension. Semantic skills were evaluated using the Word Association subtest of the Clinical Evaluation of Language Fundamentals – Revised (CELF; Semel, Wiig, & Secord, 1987) and a synonym judgment task. Several components of reading were also assessed. The Wechsler Objective Reading Dimensions Basic Reading Scale (WORD; Rust, Golombok, & Trickey, 1992) was used to obtain word recognition scores, the Graded

Nonword Reading Test (Snowling, Stothard, & McLean, 1996) was used to assess decoding skills using non-words, the Neale Analysis of Reading Ability – Revised (Neale, 1989) was used to test reading comprehension, and a list of 39 words with irregular spellings was used to assess exception word reading skill.

The researchers examined whether oral language skills accounted for additional unique variance when entered as the final step in a series of hierarchical regressions. Listening comprehension, vocabulary, and semantic skills were found to correlate fairly well with *r* varying between 0.53 and 0.65 (all *ps*< 0.001) at time 1 (Nation & Snowling, 2004). Three separate regressions were performed, entering either listening comprehension, vocabulary, or semantic skills as the final step, and all three predicted significant portions of unique variance when reading comprehension was used as the criterion variable. Another set of analyses examined the longitudinal predictors of reading comprehension at time 2 from language skills at time 1, controlling for the autoregressive effect of time 1 reading comprehension. Reading comprehension at time 1 accounted for 32% of the variance while semantic skills, vocabulary, and listening comprehension all accounted for significant portions of unique variance (between 4% and 14%) entered on the final step of the regression analysis. These results indicate that individual differences in oral language skills at time 1 accounted for unique variance in later reading comprehension skills. Snow and Nation also examined the variance accounted for by semantic skills, listening comprehension, and vocabulary in predicting time 2 word recognition skills and found that all these factors accounted for portions of unique variance when entered as the final step.

The results of the Snow and Nation (2004) study indicate like the Catts, Fey, Zhang, and Tomblin (1999) study that early oral language proficiency predicts later literacy achievement. Snow and Nation found that even when there was a four to five year interval between the initial testing of oral language proficiency and later literacy achievement, oral language proficiency still predicted reading comprehension and word recognition. The present study used oral language proficiency in kindergarten to examine the differences between high- and low-achieving language minority students, which for most of the student was a six-year interval between the initial oral proficiency testing and the later academic achievement test. The Snow and Nation (2004) study indicates that early oral language proficiency could have an effect on literacy achievement after an interval of several years.

Limitations of the Nation and Snowling (2004) study include that the participants were fairly homogeneous and were enrolled in school system outside of the United States, limiting the ability to generalize the findings to students in the United States. In the proposed study, students were culturally and linguistically diverse and enrolled in a public school in California. Another limitation of the study is that seven factors were used in the regression analysis with semantic skills, vocabulary, and listening comprehension being added at the end. The sample size of 72 used with seven predictor variables may have lead to an overestimation of the multiple correlation (Pedhazur, 1997). In the present study, the relationship of early L1 oral language scores and reading skills, including reading comprehension and word recognition, was examined.

Summary. Oral language proficiency has been found to be strongly predictive of reading skills both concurrently and longitudinally (Catts, Fey, Zhang, & Tomblin, 1999;

Cutting & Scarborough, 2006; Nation & Snowling, 2004; Ouellette & Beers, 2009). Vocabulary development especially seems to be related to reading comprehension in older students (Nation & Snowling, 2004; Ouellette & Beers, 2009). The studies reviewed, however, did not examine the relation of L1 oral language proficiency to L1 literacy using a culturally and linguistically diverse sample, which would be more similar to many student populations in California than a more homogeneous one. The present study used some of the methodology of the studies reviewed by examining early L1 oral language proficiency as well as later L1 literacy; however, the participants were culturally and linguistically diverse. In addition, the proposed study examined how high- and low-achieving language minority students differed in L1 oral and literacy skills.

Another difference between the studies reviewed in this section and the present study is the school instructional program. All the students participating in the present study were enrolled in a two-way immersion program where the majority of the day (90% for K – 2) is in Spanish through fifth grade. L1 oral language development is an important part of a two-way immersion (TWI) program (Center for Applied Linguistics, 2010b). Participation in the TWI program might result in higher achievement than kindergarten L1 oral language scores would predict. Lindholm-Leary (2005) found that native Spanish-speaking students who began kindergarten with low oral vocabulary skills in Spanish made substantial gains in their Spanish oral language skills by third grade as a result of their participation in a TWI program that promoted Spanish oral language development and that these third grade oral vocabulary scores were highly correlated with reading achievement on norm-referenced achievement tests in both English and Spanish. The researcher states that the results suggest that strengthening L1 oral

vocabulary development in the early primary grades supports later achievement in L1 reading. In the present study, both L1 oral language scores at school entry and later L1 oral language skills were used to determine if there is a difference between high- and low-achieving language minority students.

L2 Oral Language Proficiency and L2 Literacy

When investigating the factors that lead to academic achievement among language minority students, English language proficiency needs to be considered. The rising number of ELs in public schools in the United States has led to a call for more research on the best educational strategies for educating these students. In 1999, the U.S. Department of Education, Office of English Language Acquisition and the National Institute of Child Health and Human Development (NICHD) funded the National Literacy Panel on Language-Minority Children and Youth. Researchers in reading, language, bilingualism, research methods, and education were invited to be on the panel. Their charge was to examine and report on the research literature on the development of literacy for language minority students - children whose first language is not the societal or majority language (August & Shanahan, 2006).

One area that was examined by the National Literacy Panel on Language-Minority Children and Youth was L2 oral language proficiency and L2 literacy. This area is of particular concern because 59.6% of ELs are in programs where most of the instruction is only in English, and even in programs where students' native language is used for part of the instructional day, English oral language development is included as an essential part of the program (August, 2006). The National Literacy Panel on Language-Minority Children and Youth reviewed literature to determine the relationship

of English oral proficiency and English word-level skills (e.g., decoding, knowledge of sight words) and English oral proficiency and English text-level skills (e.g., reading comprehension, vocabulary).

Various researchers took responsibility for reporting the findings of the National Literacy Panel on Language-Minority Children and Youth. Geva (2006) was responsible for examining the research on second-language oral proficiency and second-language literacy. She found that the majority of the research on English oral proficiency in ELs and its relationship to English word-level skills was conducted with students in the early grades. Geva concluded from a review of the research that phonological processing skills and measures of working memory in English correlated highly with and were predictive of English word and pseudoword reading skills, but that English oral proficiency was not as predictive and did not explain a significant proportion of unique variance when the criterion variable was a measure of English word-level reading skills. Geva cautions that this conclusion can be made with more certainty for younger ELs than for older ELs and that in some studies the weak relationship between English oral language proficiency and word reading skills might be due, in part, to a restriction in range in the measure of oral language proficiency. When examining the research relating to English oral proficiency and English reading comprehension in ELs, Geva concluded that having a well-developed oral language proficiency in English was associated with well-developed reading comprehension skills in English. She notes that like the research on the relationship of English oral language and English word-level reading skills, most of the research on English oral proficiency and English reading comprehension skills was done with younger students. Geva cautions that differences in reading comprehension abilities

in ELs may also stem from differences in cognitive ability and memory. Home language use and socioeconomic status (SES) might also be factors that mediate the effect of English oral proficiency on English reading comprehension skills. In the present study, the SES level of the students, students' cognitive ability, and home language use were examined and will contribute to the research base of literature on English oral proficiency and its relationship to English reading skills in older students.

In this section of the literature review, two studies that were not included in Geva's (2006) synthesis of the effect of L2 oral language proficiency on L2 reading achievement will be discussed. In the first of these studies, Proctor, Carlo, August, and Snow (2005) investigated how well English oral language proficiency predicted L2 reading achievement, using a sample of 135 Spanish-speaking fourth grade ELs from Boston, Chicago, and El Paso. Of the 135 students, the majority (69%) were taught to read first in Spanish through the Success for All program (Spanish version) that transitions students to English reading in third grade. The remainder of the students (31%), except for three cases where initial literacy instruction data were missing, received initial literacy instruction in English through the Success for All program (English version). At the time of data collection the average student's age was 10 years 1 month. In the participant samples from El Paso and Chicago, the majority of the students were of Mexican origin. In the Boston sample, most of the students were from the Dominican Republic or Puerto Rico. All of the students came from schools where more than 70% of the students received free or reduced lunch and more than 76% of the students were Hispanic.

The researchers collected data on vocabulary knowledge, listening comprehension, and reading comprehension, using the Woodcock Language Proficiency Battery (WLPB; Woodcock, 1991) in English. They developed a structural equation fit using LISREL from which all standardized regression output, multiple squared correlations, and other fit indices were derived. The researchers found that those students who received their initial literacy instruction in English out performed the students who had received their initial literacy instruction in Spanish on all oral language and reading comprehension measures. The most notable difference between the two groups can be seen in listening comprehension in English, $t\ (129) = 4.72$, $p < .05$, but statistically significant differences between the groups were also present for vocabulary knowledge, $t\ (129) = 8.28$, $p < .05$, and reading comprehension, $t\ (129) = 6.00$, $p < .05$. In reporting these results, the researchers noted that the differences in sample size and the fact that some of the students who had received their initial literacy instruction in Spanish were recent arrivals to the United States might have contributed to the higher scores by the students who had received their initial literacy instruction in English. The researchers found strong, positive, and significant correlations between listening comprehension and reading comprehension ($r = .76$, $p < .001$) and between vocabulary and reading comprehension ($r = .73$, $p < .001$). In the structural equation model, the researchers found that vocabulary directly affected reading comprehension but also affected reading comprehension through its strong relationship with listening comprehension. The model was found to have a very reasonable goodness of fit $\chi^2\ (2, N = 135) = 2.59$, $p = .27$.

The researchers applied this model to the subset of Spanish-instructed students only ($n = 91$); the results were comparable to the total sample. The effects for vocabulary

on listening comprehension were .81 ($p < .001$) for the Spanish-instructed sample and .85 ($p < .001$) for the total sample. The effect of vocabulary on reading comprehension was .22 ($p < .05$) for the Spanish-instructed sample and .30 ($p < .01$) for the total sample. The effect of listening comprehension on reading comprehension was .51 ($p < .001$) and .44 ($p < .001$) for the total sample. The goodness of fit was appropriate for this model as well, χ^2 (2, N = 91) = 3.70, $p = .16$. The model was not tested on the subset of English-instructed students because the sample size was too small.

The results of this study confirm that L2 oral language proficiency, which was measured by vocabulary and listening comprehension in this study, can be used to significantly predict L2 reading comprehension for students who receive their initial literacy instruction in L1. In the present study, L2 language proficiency at school entry and latest L2 oral language proficiency as measured by the California English Language Development Test (CELDT) were examined to determine if there are differences on these measures between high- and low-achieving language minority students.

Limitations of the Proctor et al. (2005) study are that the Spanish-instructed sample combined recently arrived students with students who had lived in the United States for a number of years. Factors other than L2 oral language proficiency may have been influenced the results, such as lack of school experience and lack of experience with the testing format. In the present study, all of the language minority students have lived in the United States since entering kindergarten. Another limitation of the Proctor et al. study is that the students were given the reading comprehension test when they were in fourth grade. In fourth grade reading comprehension is still sensitive to decoding ability, especially for Spanish-instructed students who received their literacy instruction in

Spanish through second grade. In the present study, the language arts achievement test was one that was administered in sixth grade. By sixth grade, most students can decode accurately so that reading comprehension is more dependent on vocabulary development, knowledge of syntax and grammar, and use of meta-cognitive strategies than on simple decoding.

In a second study that examined the relationship of L2 oral language proficiency to L2 reading comprehension, Nakamoto, Lindsey, and Manis (2008) investigated the relationship of oral language proficiency with reading achievement with a sample of 282 Spanish-speaking ELs across three years of elementary school. The study was part of a seven-year longitudinal study. The initial sample included 303 Hispanic kindergarten students who participated in an early transition bilingual education program (students began transitioning into English literacy skills in first, second, or third grade and were expected to be in a completely English program by fifth grade). All of the children in the program were ELs. The sample lived in a Texas town bordering on Mexico. After the initial gathering of data in kindergarten, data were gathered from students during a four-week period when they were in third grade and during a four-week period when they were in sixth grade. The students' ages ranged from 8.2 to 9.8 when they were tested at the end of third grade. Age did not correlate with 11 of the 12 variables that were used, so it was not used as a covariate. Boys comprised 47.5% of the sample and girls comprised 52.5%. Ninety percent of the students in the sample were eligible to receive free or reduced lunch. The attrition rate was modest. There were 250 participants in third grade and 245 participants in sixth grade. A confirmatory factor analysis (CFA) that was done in third grade was based on 250 participants. The structural equation

model (SEM) analyses incorporated all 282 participants that had data for either third or sixth grade. The regression analyses were based on the 211 participants that had complete data for both third and sixth grades. The students who were retained or that dropped out of the study did not differ significantly on any of the measures given in kindergarten at the start of the study.

The researchers used a variety of instruments to measure reading comprehension and oral language proficiency. Subtests from the Woodcock-Johnson Psycho-Educational Battery – Revised (Wookcock & Johnson, 1989) were used to measure both oral language proficiency and reading comprehension. Oral language proficiency was measured by the Picture Vocabulary subtest, the Listening Comprehension subtest, and the Memory for Sentences subtest. Reading comprehension was measured by the Letter-Word Identification subtest and the Passage Comprehension subtest. These same subtests were given in Spanish using the Spanish version of the tests (Woodcock & Muñoz-Sandoval, 1995). In addition, Form B of the Gray Silent Reading Test (Wiederholt & Bialock, 2000) was used to assess reading comprehension in English. Because no Spanish version of the Gray Silent Reading Test existed, two professional translators collaborated on a translation of Form A of the test into Spanish for meaning, content, and register. Participants were also asked to read 50 high frequency words during a speeded reading task that was given in both English and Spanish.

In the CFA performed on the data from third grade, Nakamoto, Lindsey, and Manis (2008) found that four factors – Spanish decoding, Spanish oral language, English decoding, and English oral language – provided the best fit for the data. Next the researchers determined the most parsimonious latent variable model with the English and

Spanish decoding and oral language factors in third grade predicting English and Spanish reading comprehension in sixth grade as measured by the passage comprehension subtest and the Gray Silent Reading Test. A model that specified paths from the two English factors to English reading comprehension and from the two Spanish factors to Spanish reading comprehension provided an excellent fit to the data, χ^2 (40, N = 282) = 69.66, $p <$ .01 (χ^2 / *df* = 1.74, RMSEA = .05, CFA = .99). The predictors accounted for 71% of the variance of the English reading comprehension factor and 74% of the variance of the Spanish reading comprehension factor. The researchers concluded that most of the variability in sixth-reading comprehension could be subsumed under decoding and oral language skills in the same language. As part of the CFA, the researchers investigated the implied correlations between the variables. The scores of the English passage comprehension subtest were correlated with an r = .57 ($p < .001$) with the Spanish passage comprehension subtest. The correlation of the scores on the Gray Silent Reading Test with the Spanish translation of this test yielded an r = .51 ($p < .001$). Both of these results indicate that there was a moderate positive correlation between English and Spanish reading comprehension. Students who did well in reading comprehension in one language were likely to do well on tests of reading comprehension in the second language.

In the final step of the analyses, the researchers used hierarchical regression analyses to determine what proportion of this variance might be attributed to cross-linguistic variance. The researchers found that English decoding and English oral language contributed 47% ($p < .001$) and 41% ($p < .001$) of the variance, respectively, when each factor was entered as the only predictor of English reading comprehension.

The researchers then determined the unique proportion of variance in English reading comprehension accounted for by each factor after accounting for the effects of the same skill in the opposing language. After accounting for Spanish decoding, English decoding accounted for an additional 30% ($p < .001$) of the variance and English oral language accounted for 36% ($p < .001$) after accounting for Spanish oral language. Spanish oral proficiency did not contribute to the variance when predicting English reading comprehension and Spanish decoding accounted for only a small amount of the variance (1%, $p < .05$).

The results indicate that English decoding skills and English oral language proficiency predict English reading comprehension. In the present study English oral language proficiency as measured by CELDT scores was examined to determine if there are differences between high- and low-achieving language minority students. In addition, the results of the Nakamoto, Lindsey, and Manis (2008) study indicate that students who scored high on the English reading comprehension tests also would also score high on the Spanish reading comprehension tests. In the present study, scores on a Spanish language arts achievement test and the results of the CST language arts test in English were examined to determine if there is a difference between high- and low-achieving language minority students. Like the Nakamoto, Lindsey, and Manis (2008) study, the present study used reading achievement scores from when students were in sixth grade.

Limitations of the Nakamoto, Lindsey, and Manis (2008) study include that their study used a moderately sized sample from only one school. The students transitioned at various times into English reading, and the researchers did not examine how much English was used in the classrooms in various grades. Therefore, the contribution of

classroom instruction to reading development, including its precise contribution to the predictor variables could not be assessed. In the present study, all of the students began transitioning into English reading at the beginning of third grade, and the amount of English was standardized for each grade level, based on the TWI program model. In this way, the contribution of classroom instruction in English was controlled.

Summary. English oral language skills have been found to be predictive of English reading comprehension skills both concurrently and longitudinally (Geva, 2006; Nakamoto, Lindsey, and Manis, 2008; Proctor, Carlo, August, & Snow, 2005). In the studies reviewed in this section, the onset of English literacy instruction and the amount of English oral language development received in the classroom varied so that the contribution of these factors could not be controlled. In the present study, all the classrooms followed the TWI program model with fidelity; therefore, the onset of English literacy instruction and the amount of English used in the classrooms was controlled and similar for all the students. The studies reviewed indicate that participation in a program where students first begin learning literacy skills in Spanish does not affect the later influence of English oral language proficiency on English reading comprehension. In the present study, all of the students had begun their initial literacy instruction in Spanish as part of the TWI program.

Academic Engagement

Beyond identifying possible factors related to language that differentiate high- and low-achieving language minority students, factors related to motivation and academic engagement need to be investigated. Educators and researchers have recognized for many years the importance of academic engagement as a critical influence

on academic achievement for all students (Appleton, Christenson, & Furlong, 2008). Mosher and MacGowen (1985, as cited by Appleton, Christenson, & Furlong, 2008) in a review of literature on student engagement found only two studies that actually used the term engagement, but since then the use of academic engagement as a construct for explaining achievement has increased. Researchers have found that lower levels of academic engagement tend to correspond to lower levels of achievement while higher levels of academic engagement appears to relate positively to higher levels of academic achievement for all populations (De Bruyn, Dekovic, & Meijnen, (2003); Heller, Calderson, & Medrich, 2003). Fredericks, Blumenfeld, and Paris (2004) discussed the possibility of academic engagement being a meta-construct that could bring together separate lines of research (e.g., interest, motivation, belonging, school climate) and provide an avenue for examining how these different subsumed constructs interact. They proposed that academic engagement be separated into three different dimensions: behavioral, cognitive, and emotional. In their review of literature, Fredericks, Blumenfeld, and Paris (2004) observe that academic engagement research is critical for developing programs to meet the needs of culturally and linguistically diverse students and that there is a need for additional research in that area. Suárez-Orozco, Suarez-Orozco, and Doucet (2004) proposed a similar multidimensional meta-construct of academic engagement, discussing it specifically as a way of examining the relationship of various behavioral, cognitive, and relational factors to academic achievement. Although Orozco, Suarez-Orozco, and Doucet (2004) use the term relational for one of the dimensions of academic engagement instead of the term emotional used by Fredericks,

Blumenfeld, and Paris (2004), the type of behaviors examined within both terms are similar (e.g., peer and adult support, feelings of belonging).

The present study used a multidimensional model of academic engagement, gathering information about the behavioral, cognitive, and relational dimensions of academic engagement. Behavioral engagement refers to the behaviors that are necessary for students to do well in school such as participating in class and completing assignments (Suárez-Orozco, Suárez-Orozco, & Doucet, 2004). Behavioral engagement has been demonstrated to be positively associated with academic achievement. Students who attend school regularly, participate in class, complete class work, and homework, and avoid disruptive behaviors generally get better grades and perform better on standardized tests (Bandura, Barbaranelli, Caprar, & Pastorelli, 1996: Caraway, Tucker, Reinke, & Hall, 2003). In the present study, information about behavior engagement was garnered from school attendance records, teacher reports of participation, grade reports based on part on completed class work, and reports of rule infractions that are in each student's record.

Researchers have defined cognitive engagement as intellectual curiosity about new ideas and pleasure in mastering new material (Suárez-Orozco, Suárez-Orozco, & Doucet, 2004), as self-regulating behaviors and a strategic approach to learning (Fredericks, Blumenfeld, & Paris, 2004), and as goal directed learning (Dowson & McInerney, 2001). In the present study, cognitive engagement was defined as self-reported self-regulation. Information about cognitive engagement was gained by students completing a questionnaire about their use of self-regulation strategies. Two questions on a teacher questionnaire also related to cognitive engagement.

A third dimension of academic engagement is relational engagement, which is the degree to which students' report meaningful and supportive relationships in school with adults as well as peers (Suárez-Orozco, Suárez-Orozco, & Doucet, 2004). Research has shown that positive experience with adults at school can set the stage for academic engagement among Latino youth (Hamre & Pianta, 2001; Roderick, 2003; Stanton-Salazar, Chavez, & Tai, 2001). Teacher support is negatively associated with absences, detentions, and suspensions (Catterall, 1998). In the present study, information about relational engagement was elicited through the focus group discussions and individual interviews.

In this section of the literature review, specific studies that relate the multidimensional construct of academic engagement to academic achievement will be discussed. In addition, specific research related to students in middle school as well as language minority students will be reviewed. Research related to the role of adult support in fostering academic engagement will also be presented.

Multidimensional construct of academic engagement

Sciarra and Seirup (2008) used a multidimensional construct of academic engagement to examine the relationship of academic engagement to academic achievement across five major racial and ethnic groups. The sample included 115 Native Americans, 486 Asians, 1,551 Blacks, 1,682 Hispanics, and 7,554 Whites who participated in the Educational Longitudinal Study (ELS) in 2002 through 2004. The ELS was conducted by the U.S. Department of Education and the National Center for Educational Statistics (2004). The ELS started in 2002 with a nationally representative probability sample of 15,362 tenth graders, and the researchers collected a second set of

data in 2004 from the same base-year participants who were in their senior year. The second set of data consisted of 13,420 seniors. Base-year data were also collected from 13,488 parents, 7,135 teachers, 743 principals, and 718 librarians. Sciarra and Seirup (2008) used data from 2002 of the ELS when items related to academic engagement were administered for the independent variables (the three dimensions of academic engagement). The dependent variable (math achievement scores) was collected in 2004 as part of the second set of data. Data on the SES level, type of school (public or private) and location (urban, suburban, or rural) of the students were also collected. Data were weighted to adjust for unequal probabilities in the selection of students and for the fact that not all students who were selected participated. In addition, weighting was used to adjust for non-response bias.

The three independent variables used by Sciarra and Seirup (2008) were the three dimensions of academic engagement: behavioral, cognitive, and emotional. Each of the three variables was a composite derived from a mean of Likert-scaled items that were selected from the database. The behavioral scale consisted of 14 items divided into eight responses from students, three from the math teacher, and three from the English teacher. The items dealt with frequency of lateness, cutting, absences, disruptive versus attentive behaviors, disciplinary actions, and time dedicated to extracurricular activities. The cognitive scale consisted of student responses to eight student items and two teacher items (one from the math teacher and one from the English teacher) concerning the student's commitment to learning, importance of good grades, perseverance in the face of difficulty, homework completion, and amount of hours per week spent on homework. The emotional scale consisted of student responses to 24 items relating to student-teacher

relationships, school safety, peer relationships, and harmony among different racial groups. The dependent variable was measured through the use of standardized tests in mathematics with item response theory scores converted to T-scores.

Sciarra and Seirup (2008) used multiple regression analysis for each of the five racial and ethnic groups to model the relationship between academic engagement and math achievement. The forced entry method was used to enter the predictors into the model. Pearson product moment correlation coefficient was used to assess the degree of relationship among the variables and possible multicollinearity. Effect sizes were calculated to determine the strength of the relationship when there were significant results.

For all five racial and ethnic groups, the overall combination of engagement variables was significantly related to math achievement scores. For the Hispanic sample (3, 1,678) = 40. 56, $p \leq .001$) the multiple regression coefficient was .26, indicating that the variance in the math scores accounted for by the linear combination of the engagement variables was approximately 7%, which Sciarra and Seirup (2008) stated was of medium practical significance. All three dimensions of academic engagement were significant predictors for the Hispanic and White samples, which was not the case for the other racial and ethnic groups. Emotional engagement was not significant for the Black, Native American, and Asian samples and was less important for predicting math achievement for the White sample than for the Hispanic sample. Sciarra and Seirup (2008) stated that this difference for the Hispanic sample might have been the result of Hispanics having a tendency to define themselves through their relationships (LaRoche & Schriberg, 2004; Triandis, 1994, as cited in Sciarra & Seirup, 2008). Behavioral,

cognitive, and emotional engagement were of approximately equal importance for predicting math achievement for the Hispanic sample.

The results indicate that the behavioral, cognitive, and emotional dimensions of academic engagement are all important predictors for Hispanic students' academic achievement. In addition, these results indicate that some Hispanic students may achieve at a higher level when schools provide them with a greater sense of emotional attachment while that factor may not be as important for other racial and ethnic groups. Like Sciarra and Seirup (2008), the present study examined the three dimensions of academic engagement, using the term relational rather than emotional so as to be in agreement with the Suárez-Orozco, Suárez-Orozco, and Doucet (2004) model. A limitation of the Sciarra and Seirup (2004) study was that it used an existing database, using content validity procedures to select the items that made up the composites for the three dimensions of academic engagement. The present study developed specific questions to use during the interviews and focus groups discussions as well as a review of school records and a teacher questionnaire to elicit information about these three dimensions. Another limitation of the Sciarra and Seirup (2004) study was that there was no mention of the language proficiency of the students or whether the students entered school speaking a language other than English. Examining language proficiency for Hispanic students would be an important variable in relating academic engagement to academic achievement, and the present study gathered data on English and Spanish oral language proficiency at school entrance as well as current language proficiency. Another difference between the Sciarra and Seirup (2004) study and the present study is that the Sciarra and Seirup study examined data from a sample of high school students while the

present study investigated the link between academic engagement and achievement with middle school students.

Wang and Holcombe (2010) also used the multidimensional model of academic engagement in a study that analyzed data from the Maryland Adolescent Development Center Study (MADIC), which is an on-going longitudinal study of adolescents, their families, and their teachers. The 1,046 participants were adolescents from 23 schools in a large, ethnically diverse county on the East Coast of the United States. Approximately 56% of the students were African American, 32% were European American, and 12% were biracial or other ethnic minorities. Wang and Holcombe (2010) examined data from when the adolescents were in the seventh and eighth grades because significant disengagement from school occurs from seventh to eighth grade (Murdock, 1999, as cited in Wang & Holcombe, 2010). The complete study gathered data from students at six different times ranging from seventh grade through three years after they graduated from high school.

Wang and Holcombe (2010) used structural equation modeling to investigate the links between academic achievement and students' perceptions of the school environment and school engagement. Academic achievement was measured by grade point average (GPA). Perceived school environment was measured by responses on a school climate measure in seventh grade that included questions on the schools' promotion of performance goals, promotion of mastery goals, support of autonomy, promotion of discussion, and teacher social support. School engagement was measured in eighth grade using a 14-item school engagement index. Students marked their responses on a survey that used a 5-point Likert scale. The behavioral dimension of school engagement was

measured by school participation. The school participation subscale included three items that measured the extent that students were distracted in classes and had trouble getting schoolwork completed. The cognitive dimension of school engagement was measured by the students' self-reported use of self-regulation strategies. The use of self-regulation subscale included 4 items related to the students' perceived use of learning strategies and included questions such as one about how often the students tried to relate what they were learning to other things that they knew about. The emotional or relational dimension of academic engagement was measured by school identification, which the students' sense of school belonging and valuing of school. The school identification subscale had seven items that asked the students to rate their feelings about school, the degree to which they felt part of their school, and the degree to which they felt it was important to go to school.

Preliminary analyses included conducting a confirmatory factor analysis on the 14 items of school engagement to examine the hypothesized three-factor (or three-dimension) structure of academic engagement. Comparisons between a three-factor model, a two-factor model (combining items from school participation and school identification), and a global factor model (all 14 items) were made to determine the extent that a three-factor model fit the sample of 1,046 students. The three-factor model ($\Delta\chi^2$ (24, N = 1046) = 116.96, $p < .001$) provided a significantly better solution than the one-factor model, $\Delta\chi^2$ (3, N = 1046) = 643.44, $p < .001$, and the two-factor model, $\Delta\chi^2$ (2, N = 1046) = 578.04, $p < .001$). Wang and Holcombe (2010) concluded that the results suggested that academic engagement was a multidimensional construct and that

the three-factor structure representing school participation, use of self-regulating strategies, and school identification explained the covariance among the 14 items.

After controlling for students' gender, race/ethnicity, SES, and prior academic performance in seventh grade, Wang and Holcombe (2010) concluded that academic engagement in eighth grade as measured by school participation, use of self-regulation strategies, and school identification accounted for a significant portion of the variance in GPA (R^2 = .35, .42, and.64, respectively). In testing the direct paths between academic engagement in eighth grade and academic achievement in eighth grade, Wang and Holcombe (2010) found that greater school participation, use of self-regulation strategies, and school identification was positively associated with GPA (β = .13, .17 and .32), respectively). Student engagement and academic achievement might be reciprocal so the researchers tested an alternative model whereby academic achievement mediated associations between student perceptions of school environment and school engagement. The fit was not as good as the originally proposed model. Wang and Holcombe (2010) also found that student perceptions of school environment directly and indirectly influence academic achievement through their impact on the three dimensions of academic engagement.

The study by Wang and Holcombe (2010) did not mention any specific inclusion of Hispanic or language minority students; however, their finding that the three-factor model of academic engagement produced the best fit for predicting academic achievement supports research with Hispanic and language minority students that uses the three-dimension model. In addition, their finding that school identification contributed most to predicting academic achievement confirms that the emotional or

relational dimension is an important one when studying the academic engagement, especially because Sciarra and Seirup (2008) found it to be more important for the Hispanic sample in her study than for other racial and ethnic groups.

Wang and Holcombe (2010) used a 14-item survey to measure academic engagement, but had no classroom observations or interviews to confirm the result of the survey. In the present study, individual student interviews, focus group discussions, teacher questionnaires, student questionnaires, and school records were used as part of a triangulation of data to determine students' academic engagement. Academic engagement was not used to predict academic achievement as was done in the Wang and Holcombe (2010) study; instead the researcher examined whether students who had higher achievement on a standardized language arts test such as the California Standards Test (CST) also exhibited higher academic engagement as measured by teacher responses on a questionnaire about student participation, the students' responses on the student questionnaire on the use of self-regulation strategies, and an examination of attendance records and behavioral referrals. In addition, the students' responses gathered during the individual student interviews and focus group discussions were analyzed for themes and patterns that differentiate the higher-performing language minority students from the lower performing language minority students. Information on GPA was gathered in the present study but not used for determining the academic achievement of the students. In the present study, students' GPA was used as an indication of behavioral engagement.

Middle school and academic engagement

Students' academic engagement becomes an important factor affecting academic achievement in middle school, especially for language minority students. Research

indicates that academic achievement often slows or declines for culturally and linguistically diverse students when they enter middle school relative to the academic achievement of White students (Heller, Calderon, & Medrich, 2003). A decline in academic engagement may be one factor that contributes to the slowing of academic achievement in middle school (De Bruyn, 2005). Academic engagement may decline because middle school teachers usually have many students for short periods of time, which changes the student-teacher relationship; in addition, elementary instruction tends to be task oriented while middle school instruction focuses on performance, which may be associated with lower academic engagement (Anderman, Maehr, & Midgley, 1999). The changes in student – teacher relationship may be an especially significant reason for a decline in the academic engagement of Hispanic and language minority students (Green, Rhodes, Hirsch, Suárez-Orozco, & Camic, 2008; Sciarra & Seirup, 2008). The importance of the relational dimension of academic engagement for Hispanic and language minority students is discussed in other sections of this literature review.

Language proficiency and academic engagement

The relational dimension of academic engagement includes feelings of school belonging. Morrison, Cosden, O'Farrell, and Campos (2003) investigated whether language proficiency impacted students' perceptions of school belonging. The researchers defined school belonging as the extent to which students feel personally accepted, respected, included, and supported by others in school. The participants in the study were 57 Hispanic students enrolled in an after-school program at three elementary schools in Southern California. Hispanics were the largest ethnic group represented in these schools (46%, 52%, and 95% across the schools) with White students the next

largest group (42%, 45%, and 3%, respectively). All three schools offered bilingual programs at the beginning of the study, but state and local mandates to promote English immersion were instituted during the last year. While 81 Hispanic students were initially part of the study, longitudinal data were available on 57 Hispanic students at the beginning and end of fourth and sixth grades. The final sample was 48% male and 52% female. The sample was 46% ELs and 44% English proficient (as measured on the Language Assessment Scales). The students completed surveys and teachers were interviewed when the students were in fourth and sixth grades.

Morrison et al. (2003) used a variety of instruments to investigate the factors related to school belonging. The *Self-Description Questionnaire (SDQ;* Marsh, Smith & Barnes, 1984)*)* was used to assess academic and peer self-concept. In this study the Peer Relations (nine items) and General Academics (nine items) factors of the SDQ were administered. The students are asked to respond on a 5-point Likert scale to items such as, "I make friends easily," and "I enjoy doing work in all school subjects." Information about student behavior was gained through teachers responding to items from the *Teacher-Child Rating Scale (TCRS;* Hightower, 1986) and the *Behavioral and Emotional Rating Scale* (BERS; Epstein & Sharma, 1998). Teachers were asked to check those students who resembled the characteristics described in the items. The five highest loading items from the TCRS were chosen to be used in the study and included items such as, "Those who are disruptive in class," and "Those who constantly seek attention." Similarly the five highest loading factors from the BERS were used and included items such as, "Those who complete school tasks on time," and "Those who complete homework regularly." The *Psychological Sense of School Membership* scale (PSSM;

Goodenow, 1993) was used to measure school belonging. Students responded to the 18 items on the PSSM using a 5-point Likert scale. The PSSM was developed to be used with early and mid-adolescent students and includes items about the student's perceived likeability, personal acceptance, inclusion, respect, and encouragement from others (e.g., "People at this school are friendly to me," "The teachers respect me,").

Morrison et al. (2003) used two one-way repeated measures analyses of variance (one for fourth grade and one for sixth grade) in order to examine the effects of English language proficiency on students' feelings of belonging. English oral language proficiency was designated as the independent variable and fall and spring measures of school belonging were the repeated measures. At the fourth grade level, the main effect for English proficiency was not significant (i.e., no differences were found between students who were ELS and those who were English proficient). There was a significant interaction between language proficiency and change in school belonging, $F(1, 55) = 5.72$, $p = .02$. A lower score on school belonging was evident for ELs at the end of the academic year. At sixth grade level, no difference was found for the main effect for language proficiency or for the interaction of language proficiency and the repeated measure of school belonging.

Morrison et al. (2003) used hierarchical linear modeling (HLM) to examine the contribution of English language proficiency, self-perceptions of academic and social competence, and teacher academic and behavioral ratings to school belonging. Student ratings of school belonging during the fall of the academic year were entered at Step 1 as a control, so that the criterion measure was change in students' reports of school belonging across the fourth or sixth grade school year. Student English language

proficiency status was entered at Step 2 in order to isolate the contribution of this variable. At Step 3, the self and teacher ratings were entered to assess their relative contributions to increases or decreases in school belonging. At fourth grade level, a significant amount of variance was accounted for by the fall rating of school belonging. In addition, there was a significant change in the total amount of variance explained when English language proficiency was added as a variable. Finally, there was a significant increase in variance accounted for upon entry of the self and teacher ratings. In sixth grade, there was a significant increase in variance upon entry of the fall ratings of school belonging, but a significant contribution of English language proficiency at this step was not found. A significant increase in the R^2 was found with the entry of the self and teacher ratings.

The results of the Morrison et al. (2003) study have several implications for language minority students. The results indicate that being an English learner had a negative effect on school belonging across the fourth grade academic year; those students who were ELs showed a decrease in school belonging while English proficient students did not. Schools need to be sensitive to language minority students who may be declining in their academic engagement because of difficulties caused by their lower English language proficiency. Overall, students had a higher sense of school belonging when they also felt good about their peer relationships and when teachers reported they were doing well in school. In sixth grade English oral language proficiency was no longer a factor in changes that take place with regard to school belonging. Teacher evaluation is also not as important. In sixth grade, it is peer self-concept that significantly predicts school belonging. These results indicate in sixth grade and

probably into middle school, school belonging for language minority students depends a great deal on students' peer relationships. If students are experiencing positive peer relations, they are likely to look forward to coming to school and engaging in academic tasks that are required to be part of that community; however, if they are experiencing negative peer relationships, their connections and academic engagement may decline. Schools may need to provide support for some language minority students if they are experiencing poor peer relationships.

One limitations of the Morrison et al. (2003) study was that it was not completely clear how students changed their status from EL to English proficient and how many students who were ELs in fourth grade were English proficient in sixth grade. In California students may be orally proficient in English and still be classified as EL because of low English reading and written language scores. If the EL students in sixth grade had higher oral language proficiency in English than they had had in fourth grade, then it might explain why English oral language proficiency was no longer a factor in predicting school belonging. The Morrison et al. (2003) study also did not investigate the relationship of school belonging to academic achievement. The researchers discussed the relationship of school belonging to academic achievement as a rationale for their study, but they did not provide data on the participants' academic achievement. The present study was designed to document the participants' current English language proficiency and the English oral language proficiency at school entry, so that mean differences between high and low achieving students on English oral language proficiency could be observed. The TWI program is designed to give ELs support in both English and their native language so that they can succeed in school. The present study was designed to

elicit student perceptions about the support that they feel when they experience problems because of lack of knowledge of English. Differences in the perception of support between high- and low-achieving language minority students are used to provide suggestions on how the TWI program might be changed. Results of the Morrison et al. (2003) indicate that peer relationships are an important predictor of academic engagement for students as they enter middle school. The present study elicited perceptions of support from peers and quality of peer relationships during the individual student interviews and during the focus group discussions.

Perceived adult support and academic engagement

Support from adults is important to examine when investigating academic engagement and factors that differentiate high- and low performing language minority students. Adult support at school usually takes the shape of support from teachers. Green, Rhodes, Hirsch, Suárez-Orozco, and Camic (2008) studied the relationship of supportive adult relationships, which was reported as perceived teacher support, and the academic engagement of Latin American immigrant youth. These researchers used data collected through the five-year Longitudinal Immigration Student Adaptation (LISA) study (Suárez-Orozco & Suárez-Orozco, 2001), focusing on the 139 students from Mexico and Central America living in the San Francisco Bay Area. The LISA study included 408 immigrant youth, but included students from other places besides Mexico and Central America. Green et al. (2008) used behavioral and relational engagement measures that were administered only during the third, fourth, and fifth years of the LISA study. Analyses in their study were limited to these three years.

Two behavioral and relationship scales were administered. The Support from Adults and Teachers at School Scale (Green et al., 2008) consisted of ten items that evaluated the students' perceptions of being supported by teachers and staff at school. The questions addressed both emotional and academic needs and included items such as, "There is at least one adult in school I can count on," and "Teachers do not treat me with respect" (reversed). The students responded to the items verbally, using a 4-point Likert scale that went from "very true" to "very false." Scores on all items were summed and then divided by the number of items answered, such that each student's full-scale score was any positive number ranging from 1 to 4. The Academic Engagement Scale (Green et al., 2008) consisted of three items asking about behaviors necessary for school success. These items were: "Some students always finish their work BUT other students often do not finish it," "Some students always turn in their homework on time BUT other students often do not turn in their homework on time," and "Some students pay close attention in class BUT other students do not pay close attention in class." The students were asked whether they were more like the first or second group of students and then asked whether the statement was "really true" or "sort of true" for them. Scores ranged from 1 to 4 on each item, with higher scores signifying higher academic engagement. Scores on all items were summed with the students being able to receive a score from 3 to 12.

Green et al. (2008) used hierarchical linear modeling (HML) to test three models, each of which tested a different facet of Latin American immigrant youths' engagement in school. The first model investigated trends in youths' engagement trajectories, describing change over time occurring at the group and individual levels, variables within the sample, and relationships between initial engagement and changes in engagement.

The second model predicted initial engagement and change in engagement over time with particular attention to gender and perceived support. Finally, the third model addressed relationships between year-to-year fluctuations in support and engagement in the group as a whole.

Independent sample t-tests were also used to determine if there were significant differences for academic engagement between groups based on gender, country of origin, age, and level of schooling. The only significant differences were for age and school level. The youngest group of students (ages 9 and 10 during the first year of the LISA study) reported significantly higher engagement compared to students who were 11 and 12 years old during the first year. Students who were in elementary school when the first and second surveys were administered reported significantly higher engagement than students in higher grades. When assessed as a control variable in the analyses, age and school level did not affect the overall pattern of findings.

Results using the first model revealed that engagement among immigrant youth from Mexico and Central America is not static over time, nor is change uniform across individuals. The students in the study reported a range of engagement trajectories with some showing higher academic engagement, others showing decline, and others holding steady. These results indicate that when studying Hispanic youth, it may be very important to gather information about individuals and not just groups. In the present study individual interviews were conducted and information was gathered about individuals from school records and teacher interviews.

In the second model, Green et al. (2008) investigated the influence of time-independent factors on school engagement trajectories. Gender and mean support (the

mean of support on the Support from Adults and Teachers at School Scale for all three years) emerged as important predictors of the participants' engagement trajectories, both alone and through interactions. Boys were more highly engaged at the time when the first survey was given but had a steeper decline in academic engagement over time relative to girls. Girls became more engaged than boys over time. In addition, the relationships between the average amount of school-based support perceived over the three years and engagement differed for boys and girls. For girls support was positively associated with initial engagement, whereas for boys, it was positively associated with changes in engagement. The researchers observed that the results might indicate that low support may exacerbate other risks experienced by boys, while highly supportive relationships with adults at school may become especially important over time. Some research shows that boys may benefit more from teacher connection and teacher caring than girls although they may be less likely to experience such highly supportive relationships (Furrer & Skinner, 2003; Way & Chu, 2003, as cited by Green et al., 2008).

In the final model, which looked at the relationship between support and engagement from year to year for the group as a whole, the researchers found that perceptions of support fluctuated from year to year and that the fluctuations were linked to the students' engagement in school that year. When perceptions of support rose, engagement rose and vice versa. The researchers concluded that there is a dynamic association between students' perceptions of support and academic engagement, which may be related to a student experiencing a good fit with his or her teachers one year, and then less than ideal fit the next year. This fluctuation in perceptions of support, which linked to fluctuations in engagement, indicates that for Hispanic immigrant youth

academic engagement can change if perceptions of teacher support change. Schools could implement programs to increase teacher support and students' perceptions of teacher support.

Green et al. (2008) did not provide data on the language proficiency of the students in either English or Spanish. The students in the study had immigrated to the United States within the last five years, so some of them could just be at the beginning levels of learning English while other could have a fair command of basic English oral language skills. Level of English language proficiency could influence both perceptions of teacher support and academic engagement. Another limitation of the study is that it relied only on students' self-reports. The present study examined school records and teacher responses on a questionnaire about student participation as well as eliciting information from the students.

The implications of the results of the Green et al. (2008) study for educators and researchers working with language minority students are that academic engagement can change from year to year and can be related to perceptions of teacher support. To improve academic engagement teachers need to help students realize that they are being supported at school. Green et al. (2008) point out that there are several studies that have shown that individuals' reports of how much support would be available to them if needed (i.e., perceived support) are more consistently related to positive outcomes than support actually received (Kessler & McLeod, 1985, as cited by Green et al., 2008). Schools need to help language minority youth become aware of teacher support and not just make support programs available to them. Green et al. (2008) do not examine the academic achievement of the participants, so no conclusions can be drawn about how

academic engagement and perceived teacher support interact with academic achievement for language minority students. In the present study, differences in perceived teacher support between high- and low-achieving language minority students was investigated.

In another study that examined adult support as a factor leading to academic achievement, Hassinger and Plourde (2005) examined the factors that contributed to the academic success of high-achieving Hispanic students. Using a qualitative ethnographic approach, the researchers interviewed, observed, and reviewed school records of four high-achieving, Hispanic high school students. The chosen students had been working below grade level expectations at some point in their academic careers but were now working above grade level expectations. The school records reviewed were the educational records of the four students and were used to verify academic success as well as the educational and academic history of each student. The interviews were done at several different times throughout the school years in various classrooms and several subject areas. The interviews were always audio-recorded for accuracy and extensive field notes were taken. After the interviews and observations, the data were coded and coding categories emerged. Information transcribed from the interviews and observations was then placed under specific headings. The data determined common themes and attributes within support systems and personal characteristic traits of the high-achieving Hispanic youth.

Hassinger and Plourde (2005) found that the following themes emerged: family factors, personal characteristics, teacher relationships, supportive relationships from peers, school factors, and future implications. Responses under family factors included statements such as “My parents want me to get better grades,” and “Even if we grew up

in Mexico, we were going to get a good education...somehow." Under personal characteristic traits responses included statements such as, "I know I have to work at things that I'm not good at," and "I believe in myself now." The teacher relationship category included responses such as, "I think teachers have high expectations because when I go downhill, they are harder on me and my grades. They know that I can do better," and "I just learn more from them when you trust them." The peer supportive relationship category included responses such as, "I don't know what I'd do without my friends and friendships I've developed," and "When I start to break down, I have friends who pick me back up." School factors included the response, "My overall attitude toward school is good now. I'm talking to the teachers more." The future implications category included the response; "I want to go to college and then to medical school."

In their discussion of the results, Hassinger and Plourde (2005) stated that all of the high-achieving Hispanic students in the study had strong caring relationships with more than one adult in their lives. That adult was willing to listen to the student, show an interest, and help him or her with whatever problems that surfaced. All participants reported that they had a caring adult who understood them and loved them. All of the students also felt that their family supported them and loved them unconditionally. The parents of all the students involved in the study had high expectations for their children. All of the students viewed school as a place that supported all students, and they thought school was both fun and meaningful. The participants reported that teachers had high expectations because they believed in the students. The participants stated that teachers were willing to create a positive relationship with students and talk with them. The students believed in themselves partly because the teachers believed in them. A personal

characteristic of all the participants was that they believed that they had the ability and training to do their job well.

Using the Suárez-Orozco, Suárez-Orozco, and Doucet (2004) model of academic engagement, most of results reported by Hassinger and Plourde (2005) would be included in the relational dimension, which supports the importance of this dimension for the academic achievement of Hispanic and language minority students. Hassinger and Plourde (2005) discussed the importance of peer relationships as a support for academic achievement, which was not discussed in other studies. In the present study, the perceived support from peers for academic achievement was investigated through the questions asked during the individual student interviews and focus group discussions.

A limitation of the Hassinger and Plourde (2005) study is that it does not give any information about the English or Spanish language proficiency of the students or about the school program in which they were involved. Without this information, the role of language proficiency or school program in their academic success cannot be assessed. In the present study, the researcher elicited information through interviews and focus group discussion about the role that supportive adult relationships, family factors, and teacher relationships play in the students' lives and whether there are differences between high- and low-achieving language minority students. Information about language proficiency and school program was also examined.

Summary. Suárez-Orozco, Suárez-Orozco, and Doucet's (2004) model of academic engagement proposes that academic engagement needs to be separated into three dimensions: cognitive, behavioral, and relational. The research reviewed in this section supports the use of this model with culturally and linguistically diverse students

(Sciarra & Seirup, 2004; Wang & Holcombe, 2010), but the language proficiency of the students was not always reported (Sciarra & Seirup, 2004) or was not adequately described (Green et al., 2008; Morrison et al., 2003). In the present study English and Spanish language proficiency was reported for the participants, so that the influence of language proficiency on the factors that differentiate high and low-performing language minority students could be examined.

Several of the studies reviewed in this section discussed the importance of the relational dimension of academic engagement for Hispanic students (Green et al., 2008; Hassinger & Plourde, 2005; Morrison et al., 2003; Sciarra & Seirup, 2004). In the present study information about the students' perceptions of adult support and peer relationships was elicited through individual student interviews and in the focus group discussions. Differences between high- and low-achieving students relational engagement was evaluated.

Chapter Summary

The number of language minority students in public school in the United States has increased dramatically in the last 20 years. Schools and educators need to be able to meet the academic needs of these students so that the students can be academically successful and so that the achievement gap between Hispanic and White students and ELs and English-only students can be reduced or eliminated. In order to meet the academic needs of language minority students, those factors that differentiate high- and low-achieving language minority students need to be investigated so that appropriate interventions can be implemented to improve the academic achievement of all students.

A considerable body of research exists that investigates why culturally and linguistically diverse (CLD) students struggle in schools; however, much less research exists that investigates why some CLD students succeed. Research reviewed in this chapter supported L1 oral language proficiency as one predictor of L1 literacy achievement, indicating that developing L1 oral language skills may lead to higher L1 literacy achievement Catts, Fey, Zhang, & Tomblin, 1999; Cutting & Scarborough, 2006; Nation & Snowling, 2004). In addition, the research reviewed indicated that L2 oral language proficiency predicted L2 literacy achievement even for students who initially received literacy instruction in Spanish (Geva, 2006; Nakamoto, Lindsey, and Manis, 2008; Proctor, Carlo, August, & Snow, 2005). L1 literacy achievement also correlated with L2 literacy achievement to a moderate degree (Proctor et al., 2005). In the present study, L1 oral language proficiency, L1 literacy achievement, L2 oral language proficiency, and L2 literacy achievement was investigated as well as socio-economic status, age, and gender to determine to what degree these factors differentiate high- and low-achieving language minority students. One difference between the present study and previous research is that these factors were examined within a Spanish TWI program where the grade when English literacy instruction was started and the amount of English and Spanish oral language used in the classroom is controlled.

One area of academic achievement research that has received increasing interest in the last 10 years is academic engagement. A multi-dimensional model of academic engagement has been developed so that behavioral, cognitive, and relational aspects of academic engagement can be compared and examined (Sciarra & Seirup, 2004; Wang & Holcombe, 2010). Research seems to indicate that the relational aspect of academic

engagement is of particular importance to Hispanic students (Green et al., 2008; Hassinger & Plourde, 2005; Morrison et al., 2003; Sciarra & Seirup, 2004). In the present study, the three dimensions of academic engagement was examined for seventh-grade language minority students in order to determine if differences exist between high- and low-achieving students.

This study is designed to build on existing research in order to determine in what ways high- and low-achieving language minority students differ. L1 and L2 oral language proficiency, L1 language arts achievement, and academic engagement were all examined. The present study investigated the behavioral, cognitive, and relational dimensions of academic engagement. This literature review provides the foundation and rationale for this study.

CHAPTER III

METHODS

The number of English learners (ELs) and Hispanic students in public schools in the United States is increasing, and many of these students are not achieving at levels comparable to their White peers. For schools to implement programs to address the educational needs of ELs and Hispanic students, those factors that contribute to academic success must be identified and addressed. The purpose of this study was to examine how seventh grade language minority high-achieving students differ from language minority low-achieving students on several factors, focusing on academic engagement but including as well English and Spanish oral language proficiency at school entry, current English and Spanish language proficiency, Spanish language arts achievement, general ability, and background factors such as SES, gender, and age. The present study answered the following research questions:

1. What are the differences in behavioral engagement between high- and low-achieving seventh grade language minority students when school behavioral referrals, grade point average, school attendance, classroom observations of student participation, and teacher perceptions of students' class participation are examined?
2. What are the differences in cognitive engagement between high- and low-achieving seventh grade language minority students when student- and teacher-reported use of self-regulatory strategies and classroom observations of cognitive engagement are analyzed?

3. What are the differences in relational engagement between high- and low-achieving seventh grade language minority students when student reports of perceived teacher, parent, and peer support for academic achievement; classroom observations of support; and teacher reports of support are analyzed?
4. What are the descriptive statistics of reported SES level, gender, current language proficiency, parent education, and age of high- and low-achieving seventh grade language minority students?
5. Is there a statistically significant difference between high- and low-achieving seventh grade language minority students when the mean scores on the Spanish language arts standards test given in March 2011?
6. Is there a statistically significant difference between high- and low-achieving seventh grade language minority students when the mean scores from the Naglieri Nonverbal Ability Test – Second Edition are compared?
7. Is there a statistically significant difference between high- and low-achieving seventh grade language minority students when the mean scores on the CELDT test given at school entry are compared?
8. Is there a statistically significant difference between high- and low-achieving seventh grade language minority students when the mean scores on the Language Assessment Scales given at school entry are compared?

Structure of the Study

The overall research design of this study was an exploratory mixed methods design, which utilized both quantitative and qualitative procedures. In the quantitative part of the study, descriptive data on socio-economic status, gender, age, parent

education, current English and Spanish language proficiency were gathered and analyzed to determine if they showed a difference between high- and low-achieving language minority students. A Welch test was used to determine how high- and low-achieving seventh grade language minority students who attend a two-way immersion (TWI) program differed on English oral language proficiency at school entry as measured by the California English Language Development Test (CELDT), on Spanish oral language proficiency at school entry as measured by the Language Assessment Scales (LAS), on the Naglieri Nonverbal Ability Test – Second Edition (NNAT2), and on a Spanish language arts standards test administered in March 2011.

The second part of the study focused on academic engagement and combined both qualitative and quantitative methods. Information about the number of behavior referrals, grade point average, and days absent was recorded for the high- and low-achieving language minority students to investigate the behavioral dimension of academic engagement. In addition, classroom observation and teacher reports of classroom participation were used to look for patterns in behavioral engagement. To determine if there are differences in the cognitive dimension of academic engagement, a student questionnaire was used to gather information on students' self-reported use of self-regulatory strategies. A teacher questionnaire also gathered additional information on students' use of self-regulatory strategies. Classroom observations were used to gather information on students' involvement in the classroom lessons and activities. In order to explore the relational dimension of academic engagement for high-and low-achieving language minority students, the students were gathered into four focus groups that met separately to discuss their perceptions of teacher, parent, and peer support for academic

achievement. These focus group discussions were followed up by individual student interviews that asked similar questions about teacher, parent, and peer support for academic achievement as well as classroom observations and teacher interviews that were used to document information about the support that teachers offer to students. The responses given during the focus group discussions and the interviews were coded for the perceived support received from teachers, parents, and peers. Transcriptions of the focus group discussions and interviews as well as the information from the student and teacher questionnaires and the classroom observations were analyzed for patterns and themes that emerge and for differences between the responses of high- and low-achieving language minority students. The focus group discussions and student interviews were conducted during a three-week period in March 2011. The teacher and student questionnaires, classroom observations, and teacher interviews also were completed during this same time period. The gathered data were analyzed to determine which factors differentiated the high- and low-performing language minority students, as well as patterns that emerged about which factors were the strongest when examining the differences between the groups. As can be seen in Figure 4, the information was grouped into categories: (1) behavioral engagement, (2) cognitive engagement, and (3) relational engagement background factors, (4) background factors, (5) English oral language proficiency, (6) Spanish oral language proficiency, and (7) Spanish language arts achievement.

The first three research questions address the academic engagement of the students. Research question 1 explores the behavioral dimension of academic engagement. School records were used to gather data on behavior referrals, grade point average, and school attendance. Teacher responses on a questionnaire about the students'

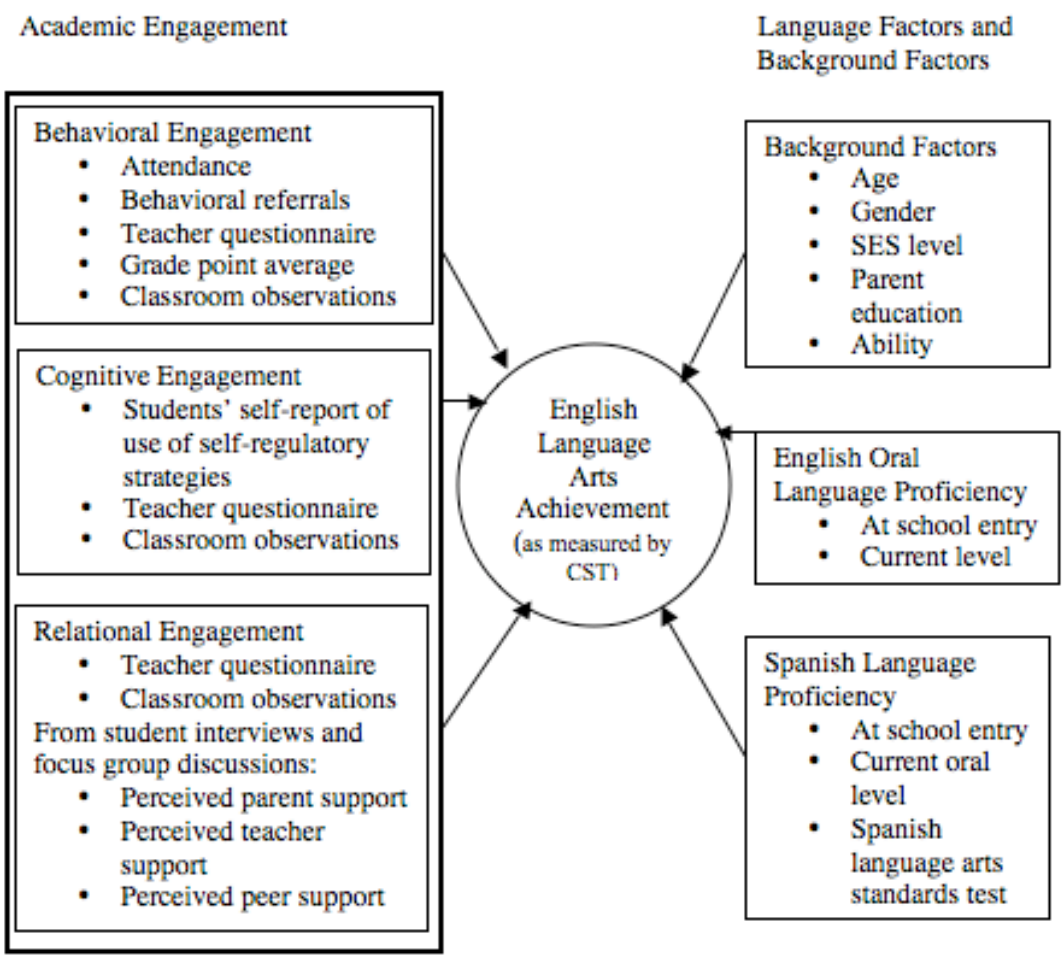

Figure 4. Visual model of variables being investigated as contributing to the academic achievement of high- and low achieving seventh-grade language minority students in English language arts.

class participation also were analyzed to determine degree of behavioral engagement. Students' participation in class activities was also noted during classroom observations. The data were analyzed to determine if the high- and low-achieving students differ on behavioral engagement. Research question 2 explores the cognitive dimension of academic engagement. The students completed a questionnaire about their use of self-regulatory strategies, which was analyzed to determine if there was a difference between the high- and low-achieving students. The teacher questionnaire also had questions related to students' use of self-regulatory strategies. Students' engagement in the topic of

the lesson was also tallied during classroom observations. Research question 3 explores the relational dimension of academic engagement. Student responses to questions about perceived teacher, parent, and peer support for academic achievement were coded and analyzed to determine if there is a difference between the high- and low-achieving students. Classroom observations were used to document examples of teacher support. During interviews with the teachers, teachers were queried about support given to students in general and to the selected students.

Research questions 4 and 6 were used to determine if there are background factors, which differentiate the groups, such as SES level, gender, age, parent education, language proficiency status, and ability. The students took the NNAT2 to demonstrate basic ability with a Welch test being used to determine if there is a significant difference between the high- and low-achieving students.

Research question 5 was answered by using the Welch test to determine if there is a significant difference in the scores of the high- and low-achieving students on a Spanish standards language arts test. Examining the student records to find CELDT and LAS scores at school entry and then using Welch test to determine if there is a significant difference between the high- and low-achieving students for the scores on these two measures answered research questions 7 and 8.

Sample

The participants in this study were selected from seventh grade language minority students who attend a Spanish two-way immersion (TWI) program in a metropolitan area in Northern California plus six middle school teachers who are part of the same TWI program. The TWI program at the school began in 1988 and at present all the classrooms

in the school participate in the TWI program. The school is K – 8 with a total enrollment is 536. Sixty students are enrolled in seventh grade. Hispanic enrollment for the school is 68%, and 48% of the students are eligible for free and reduced lunch. Twenty-three percent of the students in the school are English learners. The school is presently in the first year of program improvement status, which is a designation given to schools by the California Department of Education because one or more subgroups within the school did not make adequate yearly progress on the CST. The two subgroups that did not make adequate yearly progress at the school were Hispanic students and students who received free and reduced lunch.

The present study examined the factors that differentiate high- and low-achieving language minority students. Out of 60 students in the TWI program at seventh grade level, 37 were language minority students who came from homes where some Spanish was spoken as reported on the home language survey completed when the students were enrolled in school. Four of these students receive special education services in language arts through the resource specialist program. These four students were removed from the study because they would not be present during the classroom observations and three of them did not take the California Standards Test (CST) in sixth grade. The remaining 33 language minority students received scores ranging from 253 to 461 on the CST given in sixth grade. One way of dividing a continuous variable, such as scores on the CST, into a dichotomous variable, such as high- and low-achieving language minority students, is through the use of a median split. In a median split, the researcher finds the median of the scores, and any value below the median is put in the category “Low” and those above the median are labeled “High” (Knüppel & Hermsen, 2010). A problem with median

splits, however, is that the values just above the median and the values just below the median are not very different. Because of this problem, it sometimes is hard to find differences between the two groups. One solution to the problem is to split the sample into three groups, not two, and then drop the middle group (Grace-Martin, 2010). In the present study, the language minority students were divided into three groups and the middle group was dropped, leaving 11 students in the lower group and 11 students in the higher group.

The participants of the present study were 10 students who scored in the bottom third and the 11 students who scored in the top third. The parents of one student who scored in the bottom third declined to let their child participate. That child's behavior, CST, and language scores did not differ significantly from the average of the low-achieving group. The average age of the students in the sample was 12.7 years as of March 1, 2011, and 71.4 % of the students in the sample were eligible for free and reduced lunch. Three of the students' (14.3%) parents had graduated from college, and 57.1% of the students were classified as English learners when they entered kindergarten. As of March 2011, all of the students who had entered school as English learners had been reclassified as fluent English proficient. All of the students came from homes where some Spanish was spoken, and 71.4% were fluent Spanish-speakers when they entered kindergarten. Six students or 28.6% were fluent in both Spanish and English when tested in kindergarten. Four of the students (19%) were eligible for services from the migrant education program, and four of the students (19%) were part of the gifted and talented education program (GATE). Two of the students received special education services through the resource specialist program for math.

Teacher participants were the six teachers who work with the seventh grade students in the TWI program. They included two teachers who teach social studies, one English language arts teacher, one science teacher, one math teacher, and one Spanish language arts teacher. Demographic information on the teachers was collected, including years of experience, ethnic background, Spanish language proficiency, and specific credentials that are held. The English language arts teacher and the math teacher are Teach for America interns. The other teachers are all fully credentialed for their subjects. The science teacher and one of the social studies teachers have taught for five and six years respectively, all of which were in the TWI program. The Spanish teacher has taught 26 years, 18 of which were in the TWI program. The other social studies teacher has taught 19 years, 14 of which were in the TWI program. All of the teachers except for the Teach for America interns are fluent in Spanish. Five of the six teachers self-identify as white or European American and one as Latino (Mexican).

All of the teacher participants were asked to complete questionnaires indicating students' class participation and use of self-regulation strategies. The English language arts teacher and the Spanish language arts teacher were interviewed individually. Classroom observations to document class participation, cognitive engagement, and teacher support were conducted in the English language arts class and the Spanish language arts class.

Protection of Human Subjects

The use of human subjects as research participants was approved by the University of San Francisco Institutional Review Board for the Protection of Human Subjects, the school district, and the school where the study took place. The decision was

based on the study aim, background and design, participants, a description of the subject population, and research procedures as well as the guarantee of subject anonymity. All procedures for the protection of human subjects were followed. The informed consent of the teachers and principal was secured prior to the start of the study. Parents' informed consent for the student participants also secured. All informed consent forms completed by parents were available in Spanish and English.

Measurement Instruments

Information on the factors that differentiate high- and low-achieving language minority students was gained through the use of several different measurement instruments. These instruments included the California Standards Test (CST), the Spanish language arts standards test, the California English Language Development Test (CELDT), the Language Assessment Scales (LAS), the Naglieri Nonverbal Ability Test – Second Edition (NNAT2), a student questionnaire, a teacher questionnaire, focus group discussion questions, and student interview questions. Descriptions of these instruments as well as reliability and validity information about them are discussed in detail below.

California Standards Test (CST). The CST (California Department of Education, 2010c) is a standardized test given to public school students in second through eleventh grades in California. The CST is designed to measure the content standards for a particular grade or course that were developed by the California Department of Education. The CST items are designed to conform to principles of item writing defined by Educational Testing Service (Educational Testing Service, 2002). The English Language Arts section of the CST was used in this study and consists of 75 four-option multiple-choice questions that are administered following a standardized protocol. Raw

scores on each CST are transformed to three-digit scale scores using an equating process that is based on item response theory. CST results are reported through the use of these scale scores; the scores range from 150 to 600 for each test. In addition to total scale scores, CST performance on various reporting clusters is reported. The reporting cluster score is obtained by summing the examinee's score on the items in each reporting cluster. The information is reported in terms of a percent correct score. The Language Arts section of the CST is given over two days. Test booklets are shipped to ETS for scoring. ETS then completes the scoring and statistical analyses and sends the information to the California Department of Education through a secure server. The scores are then made available to the parents, the schools, and the school district. The scores used in this study were from April 2010, when the participants were in sixth grade. For the 2009 administration of the sixth-grade Language Arts section of the CST, the statewide raw score mean was 45.08 with a standard deviation of 14.31. The reliability coefficient was .93. Reliability information for the CST (2010) will be available in the spring, 2011 (California Department of Education, 2010d) but were not available when this study was completed. The standardized scores as reported by the California Department of Education were used in this study.

Spanish language arts standards test. The Spanish language arts standards test is a district test developed during the 2009 – 2010 school year by Spanish teachers and resource teachers to be used in the TWI programs in the district. All seventh grade students in TWI programs in the district took the test in March 2011. The test was designed to follow the same format as the high school Spanish exit exam for Spanish 1 – 2 and consists of four parts: listening, reading, grammar, and written language. Students

can score a total of 100 possible points. Scores above 70 are considered passing. Except for the writing section, the test uses a multiple-choice format with an answer sheet that is scanned into the computer, which tabulates the results. A team of Spanish teachers and district resource teachers score the writing section. The results of the writing section is entered into the computer and added to the total score. The test was piloted in the spring of 2010 and then revised prior to the administration in March 2011. The Kuder-Richardson Formula 20 reliability value for the test is .82, which indicates good reliability.

California English Language Development Test (CELDT). The CELDT was developed by CTB/McGraw-Hill (2009) in conjunction with the California Department of Education (CDE) Statewide Assessment Division in response to legislation requiring school districts to assess annually the English language proficiency of all students with a primary language other than English upon initial enrollment. The CELDT is an assessment of students' proficiency in the English language rather than of their academic achievement in reading and language arts or any other academic subject. The CELDT that the students took at school entry in kindergarten only consisted of listening and speaking skills. Tests that were administered in higher-grade levels also included reading and written language sections. The Listening portion of CELDT assesses students' receptive skills vital for effectively processing information presented orally in English. The students need to show that they can follow oral directions, understand important details of a narrative, and follow the thread of a narrative. The Speaking portion of the CELDT assesses students' productive skills necessary for communicating in both social and academic settings. In the Speaking portion, students need to show oral vocabulary knowledge, ability to use interrogative and declarative sentences, ability to give reasons in complete thoughts, and tell

a story about four pictures. The Reading portion of the CELDT assesses students' receptive skills required to process information presented in written materials in English. This portion includes word analysis, vocabulary, and reading comprehension. The Writing portion of the CELDT assesses students' productive skills in written language critical for communication of ideas and assignments in English. This portion assesses student's ability to write short sentences and a short composition, using good sentence formation, appropriate transition, good organization, and appropriate use of grammar structures and punctuation. The Listening, Speaking, and Reading portions of the CELDT are administered individually while the Writing portion may be administered in a group. The Listening portion consists of multiple-choice items and items where the student needs to indicate his or her response in some other way. The Speaking portion requires oral responses by the student and the Reading portion consists completely of multiple-choice items. In the Writing portion the student is required to write his or her responses. All of the participants in the study were required to be given the CELDT within the first year after enrolling in school because their parents indicated on the Home Language Survey that a language other than English was used in the home. Results from the CELDT are shown in scaled scores and performance levels, with Levels 1 – 3 indicating that a student is an English learner and levels 4 – 5 indicating that the student is English proficient. The scale score for determining the overall performance level for individual and group results in grades two through twelve is calculated by weighting the domain scale scores as follows: 25 percent for listening, 25 percent for speaking, 25 percent for reading, and 25 percent for writing. When the students initially took the CELDT at school entry, the overall score was a weighted score that gave equal weight to listening and speaking. A range of scaled scores corresponds to each proficiency levels with the ranges varying by grade level. Students who received a 4

or a 5 when they were administered the CELDT at school entry were labeled Initially Proficient and are not considered English learners. They were not given the CELDT again. Students who were not initially proficient continued to be administered the CELDT each year until they were reclassified, a process that involves receiving an overall CELDT score of 4 or 5 plus scoring at 317 or higher on the CST and passing a writing test in English. The reliability coefficients for the CELDT fall between 0.73 and 0.92 across all grades and domains, and these are typical coefficients for assessments of these lengths (CTB/McGraw-Hill LLC, 2009). In the present study, students' CELDT scores at school entry were examined as well as their latest CELDT score, the year of which varied by when they were reclassified. Students in the TWI program who have not been reclassified are targeted for specific English language development at the fifth and sixth grade levels in order to help them develop their English language skills.

Language Assessment Scales (LAS). The Language Assessment Scales – Oral (CTB/McGraw-Hill LLC, 1990,) in Spanish are used to evaluate the native oral language proficiency of Spanish-speaking students enrolled in public schools in the United States. A trained staff member who is fluent in Spanish administers the tests individually. All of the student responses are oral. The students receive a score of 1 through 5 with scores 4 and 5 indicating that the student is a fluent Spanish speaker. The oral language component of the LAS has three parts: 1) Vocabulary, which contains Name That Picture in which students produce labels for concrete nouns commonly found in the public school environment, and Action Words which assesses the ability to produce the -ing form of commonly used verbs; 2) Listening comprehension which contains one dialogue and 10 yes-no questions; and, 3) Story retelling in which the student listens to a story which is

supported with four cartoon-type drawings and then retells the story in his own words. The pronunciation component of the LAS has two parts: 1) Minimal sound pairs, which tests auditory discrimination of minimal-pair items, and 2) Phonemes, in which the student is tested on his ability to pronounce specific phonemes embedded in words, phrases, and short sentences. The test is scored at the school site and not sent to the California Office of Education or the district for scoring. Scores on all the parts of the test except for the story retelling section are determined by a simple correct/not correct computation. The score on the story retelling sections is computed through the use of a rubric. The overall oral language proficiency is determined by consulting the score conversion table in the scoring and interpretation manual. Coefficient alpha reliability estimates for various sections of the LAS -Oral in Spanish range from the high .70s to the .90s. A total of 1,264 students from Mexico, California, and Texas who were native Spanish speakers participated in the norming study (CTB/McGraw-Hill LLC, 1990). In the present study, students' LAS scores at school entry were reported as well as their latest LAS score, the year of which varied by when they reached a score of 4 or 5 and were considered fluent Spanish speakers. A scaled score is not reported for the LAS.

Naglieri Nonverbal Ability Test – Second Edition (NNAT2). The NNAT2 (Naglieri, 1997) uses progressive matrices to evaluate students' nonverbal reasoning and problem-solving ability and is conceptualized as a measure of overall ability. The NNAT2 is designed to be culturally and linguistically neutral. Age-based norms were developed from a nationally representative sample of more than 57,000 students (Pearson Education, Inc. 2010). The NNAT2 is available in seven levels, each with 38 items, specifically normed for the appropriate grade levels. In the present study, level E was

used. The NNAT2 may be administered in a group or individually, using a pencil and the test booklet, and usually takes about 45 minutes to administer - 15 minutes for directions and filling out identification information and precisely 30 minutes for actually completing the 38 items on the test. The items in level E involve several different categories of items: (1) reasoning by analogy, where the examinee must recognize a logical relationship between several geometric shapes; (2) serial reasoning, where the examinee must identify a sequential pattern occurring across rows and down columns; and (3) spatial visualization, where the examinee must recognize how two or more designs would look if combined or transformed in some systematic manner. The NNAT2 can be hand-scored by the examiner. The NNAT2 yields a Nonverbal Ability Index expressed in standard scores (M = 100, SD = 15), age- and grade-based percentile ranks, stanines, and normal curve equivalents (NCEs). Based on the Kuder-Richardson Formula 20 reliability coefficients, the NNAT2 shows evidence of high total test internal score consistency, with reliability coefficients ranging from .83 to .93 by grade. The NNAT2 has a moderately strong correlation (.54) with the reading subtest of the SAT-9 (McCallum, Bracken, & Wasserman, 2001). In the present study, the NNAT2 was used to determine if basic ability is a factor that differentiates high- and low-achieving language minority students.

Student questionnaire. The student questionnaire was used to gather student self-reported use of self-regulation strategies. The questions used are the same four questions that are used by Wang and Holcombe (2010) and that have been found by other researchers (Roeser, Eccles, & Freedman-Doan, 1999; Roeser, Strobel, & Quihuis, 2002) to be reliable and valid as a measure of academic engagement. The questionnaire was

used to evaluate the students' perceived use of strategic approaches to learning. In the present study, it was used to measure cognitive engagement, which is defined as a student's self-regulated and strategic approach to learning (Wang & Holcombe, 2010; Fredericks, Blumenfeld, & Paris, 2004). The student questionnaire uses a four-point Likert scale, ranging from 1 (almost never) to 4 (almost always). Student total scores could range from 4 to 16. Higher scores indicate a higher use of self-regulation strategies. A copy of the questionnaire is in Appendix A.

Teacher questionnaire. The six middle school teachers who teach academic subjects were asked to complete a questionnaire that was used as a measure of students' class participation, which is part of behavioral engagement. The items on the teacher questionnaire are the classroom participation items used by Sciarra and Seirup (2008), which were from the Education Longitudinal Study of 2002 (National Center for Educational Statistics, 2004). The original questionnaire that was used in the Education Longitudinal Study included items relating to teacher expectations for the student, teacher perceptions of the student's parents' involvement in student's education, and the teacher's perception of student's skills. These items were not used in the teacher questionnaire for the present study. On the teacher questionnaire used for the present study, teachers were asked to individually rate each student on four types of class participation: (1) completion of class work, (2) attentiveness in class, (3) completion of homework, and (4) disruptive behavior in class. The individual teachers interpreted these categories on their own without definitions given by the researcher. In addition, the teachers were asked to rate each student on two uses of self-regulatory behavior – use of the student agenda to record assignments and student interest in learning about a topic

beyond classroom assignments. They rated each student on a five-point Likert scale, ranging from 1 (never) to 5 (always). The teachers also could mark that the answer is unknown. Each student received an overall score from the first four questions on the questionnaire by averaging teacher responses with question 4 (relating to disruptive behavior) being reversed coded. If the teacher marked "unknown" then that item was dropped when averaging the scores. Each student could receive a score ranging from 1 to 5 with higher scores representing greater class participation. The last two items were averaged separately as they relate to the teachers' perception of student use of self-regulatory behaviors. Again, if the teacher marked "unknown" that item was dropped and not included in the averaging. Student scores could range from 1 to 5 with higher scores representing a greater use of self-regulatory strategies. The items used in the questionnaire have been used with nationally representative samples with documented data quality (National Center for Educational Statistics, 2004). A copy of the teacher questionnaire can be found in Appendix A.

Focus group discussions. One aspect of academic engagement is relational engagement, which includes students' perceptions of teacher, parent, and peer support for academic achievement. In order to gather information on the students' relational engagement, five focus group discussions were held for about 30 minutes each and focused on perceived support from teachers, parents, and peers for academic achievement. The purpose of the focus group discussions was to encourage students to share ideas and perceptions with each other. Two sessions were with five high-achieving students each and three sessions with two to five low-achieving students. Because two low-achieving students were absent when the focus group discussions were

held, they met together on a different day to discuss the questions, resulting in three focus group discussion being held with the low-achieving students. All the discussions were held in English because all of the students are orally fluent in English. An interview guide was used to explore teacher, parent, and peer support (Patton, 2002, p. 343). The questions used in the interview guide were taken from the research related to academic engagement and perceived adult support (Green, Rhodes, Hirsch, Suárez-Orozco, & Camic, 2008; Hassinger & Plourde, 2005) and peer support (Jennings, 2003). The sessions were recorded and then transcribed. References to support from teachers, parents, and peers were coded separately and evaluated. Examples of what students consider support was also coded and reported. Differences between the responses of the high- and low-achieving groups were analyzed. The interview guide with the introductory statement, starting questions and follow-up questions for the focus group discussions can be found in Appendix A.

Individual student interviews. To further explore the relational dimension of academic engagement, individual student interviews were conducted with six selected participants, using the same questions that were used for the focus group discussions. The purpose of the individual student interviews was to make sure that students' individual responses were recorded and not just the group responses. Three of the students were from the high-achieving group and three of the students were from the low-achieving group. The students selected represented a spectrum of disruptive behavior in the classroom, with one student in the high-achieving group and one in the low-achieving group having 0 to 1 referral for behavior problems and one student in each group having 12 to 14 referrals for behavior. In addition, the students with the highest and lowest

scores on the CST were interviewed. Both of these students only had 0 to 1 referral for behavior. As with the focus group discussions, the sessions were recorded and then transcribed. References to support from teachers, parents, and peers were coded separately and evaluated. Although students were told that the interview could be in Spanish, all of the interviews were conducted in English.

Individual teacher interviews. The English language arts teacher and the Spanish language arts teacher were interviewed about what they perceive to be the support that they give all students in the seventh grade English and Spanish language arts classes and then what specific examples of support they have given this school year to the six students that were selected for individual student interviews. The responses given to the interview questions were coded for examples of support and compared to the student responses. The introductory statement, general questions about support given to all students, and the questions asked about the selected students can be found in Appendix A.

Classroom observations. Classroom observations were conducted two times for each English and Spanish language arts class for a total of eight observations. The days arranged for observation were chosen to be on days when all of the students were present. A checklist, plus a description of the setting and lesson topic and additional observations, was used to gather information on student participation, students' cognitive engagement, and teacher support offered to the students in the sample. Field notes were also written after the classroom observation was completed in order to recorded any additional observations or thoughts about the events that occurred during the observation. A copy of the classroom observation form can be found in Appendix A.

Procedures

Recruitment of students. Students were selected to participate in the present study based on their CST scores in sixth grade, their enrollment in seventh grade in the TWI program, and their status of language minority students as indicated by the home language survey that was completed at their initial enrollment in school. Seventh grade language minority students who receive special education support in language arts were excluded from the present study. The seventh-grade language minority students whose language arts CST scores placed them in the bottom third and the top third of the total group of seventh grade language minority students were selected to participate in the present study. Parental informed consent letters were sent home with the students selected. If the parents did not respond to the letter, the researcher called the parents as a follow-up.

Recruitment of teachers. Teachers were selected based on whether they teach an academic subject to seventh grade students. The purpose of the present study was explained to the middle school teachers individually, and the teachers completed informed consent forms. The researcher explained to them that teacher questionnaire would take about 15 minutes to complete and that selected teachers would participate in individual interviews that could take up to 60 minutes of their time. In addition, their cooperation in letting the students out of class was solicited so that the students could participate in the focus group discussions, the NNAT2 testing, and the completion of the student questionnaire. One of the teachers stated that the students could be released from her class on two days when she would have a substitute.

Testing of students. The student questionnaire relating to use of self-regulation strategies and the Naglieri Nonverbal Ability Test – Second Edition (NNAT2) were administered to all of the students together during two periods on a school day when one of the teachers had a substitute and stated that the students could be released. A vacant classroom was used for the administration of the tests and the questionnaire. The NNAT2 took about 45 minutes to complete, including the introduction and directions. The student questionnaire took about 5 minutes.

Focus group discussions. Four focus group discussions were held on a second day when one of the teachers had a substitute and stated that the students could be released. Four to five students participated in each focus group discussion on this day with high- and low-achieving students participating in separate groups. A vacant classroom was used for the focus group discussions. The focus group discussions lasted about 30 minutes, were audio recorded, and later transcribed. A total of five focus group discussions were held with one group consisting of two students who had been absent on the day that the other focus group discussions were held. These two students met in an empty classroom during a physical education period when it was raining.

Individual student interviews. Individual student interviews were conducted at a time mutually convenient to the student and the researcher. The interviews were held before or after normal school hours in order to avoid having the student miss instructional time in class. The individual student interviews were held within two weeks of the focus group discussions and lasted between 15 and 30 minutes. The individual student interviews were audio recorded and later transcribed.

Examination of school records. After permission had been received for students to participate in the study, student records as gathered in their cumulative files were accessed in order to obtain LAS scores and parent education levels scores. The school secretary was asked to provide information about each student's first semester grade point average. The on-line database Edusoft was used to obtain information about CST, Spanish language arts standards test, and CELDT scores. Information from the School-wide Information System (SWIS) used by the district to tract student behavioral referrals was accessed to gather information about students' history of rule infractions and behavioral concerns. The district attendance system was accessed to gather attendance data on the participants. The SWIS records and attendance records were accessed as of March 1 for all of the students.

Data Analysis

Student data were organized so that each research question could be answered separately. The research questions one through three ask about students' academic engagement. Information about each dimension of academic engagement was analyzed separately. For the behavioral dimension, information about attendance, behavioral referrals, grade point average, classroom observations, and teacher reports of class participation of high- and low-performing language minority students was compared. For the cognitive dimension, the average of students' reported use of self-regulatory strategies and teacher reports of use of self-regulatory strategies of high- and low-achieving language minority students were compared. Classroom observations included observing students' engagement in classroom discussions as indicated by the students raising their hands to contribute an idea or to ask a question about the topic being

discussed. For the relational dimension, response patterns of high- and low-achieving language minority students were compared. Patterns of academic engagement within and among the three dimensions of academic engagement were evaluated.

Quantitative data in this study were analyzed with the Statistical Package for the Social Sciences (SPSS 16.0 Graduate Student Version for the Mac) software. For research questions 1 and 2, data on behavioral referrals, grade point average, days absent, teacher perceptions of student class participation, students' reports of use of self-regulatory strategies, and teachers' reports of students' use of self-regulatory strategies were entered into SPSS. Means and standard deviations were computed for each variable and organized into a table. The means for each variable were compared using the Welch test, which is a statistical test used to compare means when the data violate the assumption of homogeneity of variances required by other tests. The Levene's test was used as a test of homogeneity of variance, but tests other than the Welch test could not be used to determine if there was a statistically significant difference between the means because the number of students in each group was small. Data from the Welch test were combined with information from classroom observations to determine if high- and low-achieving students differed in their behavioral and cognitive engagement.

Information to answer research question 3, which examined students' relational engagement, was gathered from the focus group discussions and individual interviews, which were transcribed and coded. Information related to teacher, parent, and peer support was coded separately. Student responses were put into categories and analyzed for themes and patterns. The themes and patterns that emerged from the student responses were then compared to the information gained from the teacher interviews.

Research question 4 asks whether reported SES level, gender, parent education, age, and current language proficiency status show differences between high- and low-achieving language minority students. The data except for age and current language proficiency were organized into a table and compared using the number and percentage of students that were in each category for the two groups of students. Because all the students are currently reclassified as fluent English proficient, no data analysis was needed for this category. SPSS software was used to compare the mean ages of the high- and low-achieving students.

Research questions 5 through 8 asked if there were statistically significant differences between the mean scores of high- and low-achieving seventh-grade language minority students on the Spanish language arts standards test, the NNAT2, the CELDT, and the LAS. Student data were analyzed using SPSS software. Descriptive data were put into tables, and a Welch test was used to determine if there was a statistically significant difference between the means.

As a way of further examining the relationships of the various variables investigated in this study, SPSS software was used to find correlations between selected variables. CST scores, NNAT2 scores, grade point average, Spanish LAS scores from kindergarten, scores from the Spanish language arts standards test, and results from the student questionnaire on the use of self-regulatory strategies and the teacher questionnaire on student use of self-regulatory strategies and class participation are all continuous variables. Correlations were found for these variables using Spearman's correlation coefficient, which is a non-parametric statistic that can be used when the data

have violated parametric assumptions such as non-normally distributed data (Field, 2005).

Chapter Summary

The purpose of the present study was to investigate how high- and low-achieving language minority students differ on various factors. Students' academic engagement was the focus of the study, and multiple measures were used to determine if high- and low-achieving language minority students differ in their academic engagement. The three dimensions of academic engagement were examined. Differences in behavioral engagement were assessed by analyzing high- and low-achieving language minority students' attendance, behavioral referrals; teacher reported participation in class; and language arts grades. Classroom observations were also used to document student participation in class. Differences in cognitive engagement were analyzed by comparing high- and low-achieving language minority students' self-reports of the use of self-regulatory strategies as well as teacher reports of students' use of self-regulatory strategies. Classroom observations were used to gather information about students' cognitive engagement during class activities. Finally, differences in relational engagement between the two groups were evaluated by comparing their self-reports of teacher, parent, and peer support for academic achievement. Classroom observations and teacher self-reports of support given to students were also analyzed to document examples of teacher support.

In addition to factors related to academic engagement, other factors were examined to determine if they differentiate high- and low-achieving language minority students. These factors included English oral language proficiency at school entry as

shown on the CELDT, Spanish oral language at school entry as shown on the LAS, general ability as shown on the NNAT2, and Spanish language arts achievement as shown by scores on the Spanish language arts standards tests. Background factors such as gender, age, SES level, parent education, and current language proficiency status were also compared to determine if there are differences between the high- and low-achieving language minority students.

CHAPTER IV

RESULTS

This exploratory mixed methods study examined how seventh grade language minority high-achieving students differ from language minority low-achieving students on several factors, focusing on academic engagement, but including as well English and Spanish oral language proficiency at school entry, current English and Spanish language proficiency, Spanish language arts achievement, general ability, and background factors such as SES, gender, and age. Academic engagement was investigated using a multi-dimensional model that looked at behavioral, cognitive, and relational engagement separately (Suárez-Orozco, Suárez-Orozco, & Doucet, 2004). Identifying the factors that relate to the success of language-minority students will allow teachers and schools to develop appropriate instructional strategies and interventions to improve student achievement.

The students participating in this study were enrolled in a Spanish two-way immersion (TWI) program where they received instruction in Spanish language arts as well as English language arts. Eleven of the selected seventh-grade students were in the top one-third of the language minority students on the language arts section of the CST taken in the spring of sixth grade. The remaining 10 of the selected students were in the bottom third of the language minority students on the same test. The present study investigated differences in the academic engagement of these students, using student interviews, the completion of a questionnaire by the students' teachers, focus group discussions, classroom observations, and an examination of school records. In addition, the study investigated to what degree these students differed in initial oral language

proficiency in English and Spanish, SES, current English oral language proficiency, current Spanish literacy skills, and general ability as measured by the Naglieri Nonverbal Ability Test – Second Edition.

The results are presented in two sections. The first section addresses the first three research questions that relate to academic engagement. Results related to behavioral, cognitive, and relational engagement will be discussed separately. The second section presents findings related to the last five research questions that investigate whether there is a difference between high- and low-achieving seventh grade language minority students when Spanish and English language proficiency at school entry, SES level, age, gender, current Spanish language arts skills, and ability are compared.

Academic Engagement

Research Question 1

The first research question asked what are the differences in behavioral engagement between high- and low achieving seventh grade language minority students when school behavioral referrals, grade point average, school attendance, classroom observation of student participation, and teacher perceptions of students' class participation are examined. Data in each of these categories except for the information gained from classroom observations were quantified and compared between the two groups using the Welch test.

School records and the teacher questionnaire were examined to obtain information about behavioral engagement. As can be seen in Table 1, high-achieving students differed from low-achieving students on each of the measures of behavioral engagement. Low-achieving students had more behavioral referrals ($M = 5.90$, $SD = 6.84$) than the

high-achieving students (M = 3.09, SD = 3.02). In addition, the standard deviations show a greater variance in number of behavioral referrals for the low-achieving students. When the number of days absent was compared, the low-achieving students (M = 3.54, SD = 3.54) missed more days than the high-achieving students (M = 2.45, SD = 2.38). The grade point average was higher for the high-achieving students (M = 2.85, SD = .78) than for the low-achieving students (M = 1.45, SD = 1.00), and teacher perceptions of class participation were higher for the high-achieving students (M = 4.19, SD = .63) than for the low-achieving students (M = 3.33, SD = .68).

Table 1

Means and Standard Deviations for Behavioral Referrals, Grade Point Average, School Attendance, and Teacher Perceptions of Students' Class Participation

	High-achieving (n=11)		Low-achieving (n=10)		Total (n=21)	
Variable	Mean	SD	Mean	SD	Mean	SD
Behavioral Referrals	3.09	3.02	5.90	6.84	4.43	5.26
Grade Point Average	2.85	.78	1.45	1.00	2.18	1.13
Days Absent	2.45	2.38	3.50	3.54	2.95	2.96
Teacher Perceptions	4.19	.63	3.33	.68	3.78	.77

A Welch test was used to compare high- and low-achieving students on number of behavioral referrals, grade point average, days absent, and teachers' perceptions of class participation. Table 2 gives the results of the Welch test when the means of the two groups are compared. The results of the Welch test indicate that there is a statistically significant difference between the high- and low-achieving groups for grade point average and teacher perceptions of students' class participation. High-achieving students have a significantly higher grade point average than low-achieving students, and teachers' perceptions of the class participation of high-achieving students were also

significantly higher than the perceptions for low-achieving students. When behavioral referrals and days absent were compared, no statistically significant difference was found between the two groups.

Table 2

Welch Test Results and Degrees of Freedom for Behavioral Referrals, Grade Point Average, School Attendance, and Teacher Perceptions of Students' Class Participation

Variable	*df1*	*df2*	Welch Statistic
Behavioral Referrals	1	12.12	1.43
Grade Point Average	1	17.06	12.55*
Days Absent	1	15.57	.62
Teacher Perceptions	1	18.41	9.07*

* $p < .01$

The behavioral engagement of the students was also observed through classroom observations. Each seventh-grade Spanish language arts class was observed two times and each seventh-grade English language arts class was observed two times. Behavior engagement was indicated by students' on-task behavior during the classroom observation. All of the students in both groups were engaged in completing the assigned class work and activities; however, differences were noted between the two groups. In the English language arts class, the teacher prompted more low-achieving students to pay attention than high-achieving students. In addition, the only student who did not come with the necessary book was a low-achieving student. In the Spanish language arts class, the only students who needed to be reminded to focus on their work were low-achieving students.

CST scores, grade point average, and teacher rating of participation as given on the teacher questionnaire were strongly correlated (Cohen, 1988). A statistically significant correlation was found between CST scores and grade point average ($r = .72$, r^2

= .52, $p < .001$), between CST scores and teacher ratings of participation ($r = .61$, $r^2 = .37$, $p < .01$), and between grade point average and teacher ratings of class participation (($r = .83$, $r^2 = .69$, $p < .001$).

Research Question 2

The second research question asked what are the differences in cognitive engagement between high- and low-achieving seventh grade language minority students when student- and teacher-reported use of self-regulatory strategies are analyzed. The student- and teacher-reported use of self-regulatory strategies was quantified and compared using the Welch test. Examples of students' cognitive engagement during class were tallied and the results for the two groups were compared.

Responses on the student and teacher questionnaires were used to obtain information about students' use of self-regulatory strategies. As can be seen in Table 3, student-reported use of self-regulation strategies is similar for high-achieving students ($M = 2.75$, $SD = .68$) and low-achieving students ($M = .2.68$, $SD = .46$). A greater difference exists for teacher-reported use of self-regulation strategies between high-achieving students ($M = 2.21$, $SD = .26$) and low-achieving students ($M = 1.99$, $SD = .34$). Neither difference was found to be statistically significant using the Welch test, indicating that there is not a statistically significant difference between the cognitive engagement of high- and low-achieving language minority students as indicated by their reported use of self-regulatory strategies.

Classroom observations were also used to gather information about differences in the cognitive engagement of high- and low-achieving language minority students. A student's cognitive engagement was indicated by the student raising his or her hand to

Table 3

Means and Standard Deviations for Student- and Teacher-reported Use of Self-regulatory Strategies

	High-achieving (n = 11)		Low-achieving (n = 10)		Total (n = 21_	
Variable	Mean	SD	Mean	SD	Mean	SD
Student-reported	2.75	.68	2.68	.46	2.71	.57
Teacher-reported	2.21	.26	1.99	.34	2.11	.32

comment on the topic being discussed or to ask a question related to the topic. In the English language arts classes, eight high-achieving students participated in the classroom discussion in contrast to five of the low-achieving students. Two of the high-achieving students were very involved in the discussions as indicated by these students repeatedly raising their hands to make comments on the topic being discussed. In the Spanish classes, both high- and low-achieving students participated equally in the classroom discussions.

Correlations were found between CST scores, grade point average students' self-reports of use of self-regulation strategies, and teacher ratings of student use of self-regulation strategies as given on the teacher questionnaire. No statistically significant correlation was found between CST scores and students' self-reports of use of self-regulation strategies, between CST scores and teachers' ratings of student use of self-regulation strategies, or between students' self-reports of use of self-regulation strategies and teachers' ratings of students' use of self-regulation strategies: however, a statistically significant correlation was found between teachers' reports of student use of self-regulation strategies and grade point average ($r = .63$, $r^2 = .40$, $p < .01$). Using Cohen's classification, this correlation would be considered a strong correlation.

Research Question 3

The third research question asked what are the differences in relational engagement between high- and low-achieving seventh grade language minority students when student reports of perceived teacher, parent, and peer support for academic achievement, classroom observations of support, and teacher reports of support are analyzed. Focus group discussions and individual student interviews were recorded, transcribed, and analyzed for patterns relating to the support that students receive from teachers, parents, and peers. Information gained from the classroom observations was then compared to and integrated with the information gained from the focus group discussions and individual student interviews. Individual interviews of the English and Spanish language arts teachers contributed additional information about how teachers support students.

Teacher Support

The first question asked in the focus group discussions and the individual student interviews was about how the students' teachers supported them in doing well in their classes. The student responses mainly fell into four categories. One related to the instructional strategies that teachers used in their classrooms, a second related to the types of help that teachers provide, the third related to the motivation, or incentives that the teachers use to encourage students to do well, and a fourth related to other school factors that the students felt helped them succeed in school.

Instructional strategies. Both the high-achieving (HA) and low-achieving (LA) students mentioned teachers' instructional strategies as an important way that teachers help students do well in school; however, what was stressed by the two groups differed.

The three themes that emerged in the students' comments were instructional strategies that helped students learn the material, such as study guides and review packets, instructional strategies that made the material more interesting, and working in groups.

The HA students repeatedly mentioned that they wanted the instruction to be interesting and fun. For example, one HA student stated: "One way to learn better is to make the periods more interesting 'cause sometimes the teachers explain stuff but it gets kind of boring 'cause they explain too much." The HA students also mentioned that they would like more participatory activities and fewer activities such as writing paragraphs about what you have read for homework.

Although the HA students mentioned instructional strategies such as study guides and guided notes, the LA group mentioned specific instructional strategies that helped them learn the material a great deal more frequently. The LA students mentioned instructional strategies such as reviewing the material before a test, asking questions about the material, giving packets for review, providing study guides and guided notes, and having posters about what was being studied on the walls. Several students mentioned that teachers supported student learning by providing examples and notes. For example, students said:

> *Student 1*. (Teacher) like she gives us notes. She like has us copy down what she puts on the board.
>
> *Student 2*. We take those notes home sometimes so we can study them. Study them and use them for our homework.

Another student said:

> Like for example, if there are like 10 questions, they do the first question with you. Or it is up on the board, and they give an example with almost the

> exact thing. They show you how to do it. But if it is by yourself at your desk, like they help you with the question, like almost give you the answer, but they like tell you like everything, but you have to come up with the answer.

Working in groups was another theme that emerged in the comments made by both HA and LA students. Both groups of students mentioned that working in groups helped them learn; however, the HA and LA students gave different reasons for liking group work. The HA students stated that working in a group made the lesson more interesting, and the LA students mentioned that it helped them learn the material. One high-achieving student stated:

> I like it when we do like mini-projects with the groups. 'Cause like people like to decorate and stuff and like make little posters and when teachers do that we kind a get more into like the work.

A low-achieving student said:

> (Letting us) work in a group, because alone like I don't feel like I know anything so I like to work in a group because I have help. So I like working better in a group with my friends.

Instructional strategies were not mentioned during the teacher interviews to the extent that they were in the student focus group discussions and student individual interviews. The language arts teachers who were interviewed did not interpret the question about support as relating to instructional strategies although the Spanish language arts teacher did mention that she planned partner activities so that students could help each other complete assignments and share information. She also stated that she planned instructional activities that provided the students with background information.

Teacher assistance. The second category of support that was mentioned by students was actual help that teachers offered to students. Although both HA and LA

students mentioned that teachers helped students individually during class and were available before and after school if students needed help, the two groups of students differed in the type of responses that they gave. HA students gave more general responses and LA students offered more detailed examples of the individual help that teachers offered. HA students gave responses such as:

> You can come before and after school if you need extra help because sometimes when you are having a hard time, teachers can help you understand more.

HA students also stated that they did not need the help that the teachers offered. LA students gave more specific responses, such as:

> *Student 1*. After school, lunchtime, break. I just tell them that I'm going to come after school like make an appointment with like (teacher). I make an appointment to go with her after school so she can help me or other people on their homework.
>
> *Student 2*. Some teachers... some of them help you. They show you the steps. Other ones show like the whole class. Like sometimes by yourself like you and the teacher or like other times like the whole class. They help them.
>
> *Student 3*. They make sure you understand it. Like if you're not sure that you don't know how to do it, they'll come to you like make it sound easier and make it so you do understand it.

Several of the LA students also mentioned that it was important that the teachers did not get mad at them when they asked for help. For example, one student said, "They don't like yell at us if we ask for help. They don't get mad."

The individual interviews with the English and Spanish language arts teachers confirmed they made an effort to provide help to students during class and before school, after school, and during lunch. The students are able to come in to get help on homework, projects, retake quizzes, and do make-up reading assignments. Both teachers say that they give examples during class of what would be appropriate responses to

questions and try to check individually on students' class work. When asked to comment on support given to six specific individual students, the English language art teacher differentiated between the support given the HA students and the LA students. With HA students, the focus was on helping them produce high-quality work and stay on task. With the LA students, he focused more on helping them learn the skills and knowledge that they need to complete the assignments and do well on tests. For example, when speaking about one LA student, the English language arts teacher stated:

> He's one that has a lot of difficulty with language, so the support I've offered him has been more in vocabulary... He has a really difficult time with the quizzes that we take especially with vocabulary, so the work that I've done with him is based on those words. For that week he'll have homework, and we'll talk about the words and use them in a sentence. He'll be doing the work at the same time.

When asked about the six individual students, the Spanish language arts teacher focused more on the need to motivate certain students to complete assignments. When talking about one HA student, the teacher stated:

> He does not really have a family situation where (his mother) can really effectively help him at home or support him to be more successful in school. So (student) and I usually work ... on agreements that we've made. He does really well if I give him a chance to get ahead of the group, and he's feeling really good about being ahead and he likes to go down to (5^{th} grade teacher's) class and tutor some of the kids if he's ahead and finished. So I've intentionally made opportunities for him to do that.

Observations were made in the Spanish and English language arts classrooms to investigate whether the amount or kind of support offered to HA and LA seventh-grade language minority students differed and whether the observed classroom teacher support was similar to the support mentioned in the focus groups and student and teacher interviews. Both teachers and students mentioned that students received individual help during class when they were working on independent assignments. Classroom

observations confirmed that the teachers checked student work and offered individual help to some students. During the classroom observations, the Spanish language arts teacher checked the work of the LA students more than she checked the work of the HA students. The English language arts teacher checked the work of students in both groups equally. More HA students asked for help in both classes. Both teachers spent more time individually helping HA students than LA students.

Motivation by teacher. Both HA and LA students mentioned that teachers supported them by motivating them to do better. Themes that emerged were that teachers had high expectations for students and that the importance of rewards and consequences differed between the groups. Both groups gave examples that indicated that teachers felt that they could get good grades if they worked hard and that they would go to college. For example, one HA student said, "They motivate and get you thinking about the future and how doing well is going to affect you later." One LA student said, "People ask like how is this going to help you in math, in life? (Teacher) says like it depends on what job you have. She starts to give examples." The HA students mentioned rewards and consequences that teachers use to motivate students while the LA students did not. The high-achieving students mentioned possible negative consequences more frequently than positive rewards. For example, one high-achieving student said, "Threats, like yeah, it scares you, and you don't want to get in trouble so you do your work." High-achieving students mentioned positive rewards as well. As one student said, "Positives 'cause I ... they make me feel like I'm doing a good job."

Other school factors. When students were asked if they would like to say anything else about the types of support that teacher give that help students do well in

school, they mentioned classroom discipline, teacher behavior with students, and access to food as reoccurring themes. The HA students mentioned that teachers having control of the class was important and not getting upset when a student makes a mistake or turns in a late assignment. The LA students mentioned that it was important for teachers to be fair and not treat students differently. As one LA student said:

> Like in (Teacher 1)'s, she like treats everybody equal. Like I do something bad and then like someone who never does anything bad does something bad, she treats us equal, but like (Teacher 2), he'll send me outside and then the person who doesn't usually get in trouble, he'll just tell them like to be good. He'll send me outside and then he'll give me detention.

Another thing that was important to the LA students was food and access to food. They mentioned that they wanted better food in the cafeteria for lunch and breakfast, vending machines, and being able to eat in class. As one student said, "If you don't eat in the morning (at home), better food in the morning (in the cafeteria) gives you energy."

Parent support

The second question asked in the focus group discussions and the individual student interviews was about how the students' parents supported them in doing well in school. Student responses focused on how parents help them and on consequences.

Help from parents. When asked about the types of help that parent give, themes mentioned by students were that parents monitored the completion of homework and motivated them to do well. Both HA and LA students shared that their parents would check the students' agendas for assigned homework, ask if the homework had been completed, and offer to help their child if she or he needed help. Students' parents were not always able to help with homework, but both HA and LA students had other family members like grandparents, aunts, uncles, brothers, and sisters who could help them.

More of the HA students reported that their parents motivated them to do well by talking with them about the future. For example, one HA student said:

> Like in elementary they're just worried about like making you happy and in middle school they like want you to be like more into your work and they want you to like respect the teachers. They're like worried about you getting into high school, a good high school.

Consequences. Both HA and LA students reported that their parents had consequences related to the completion of their homework as a reoccurring theme. The HA students reported that their parents would take away a privilege such as listening to music or visiting friends' houses if they did not complete their homework or did not do well in class. The LA students reported that their parents had similar consequences, but they also reported that their parents would offer incentives if they did well, such as buying them a cell phone or a WII or letting them go over to their friend's house more often.

Peer support

The third question asked in the focus group discussions and the individual student interviews was about how the students' friends supported them in doing well in school. Student responses mentioned help from friends and encouragement as two ways that their friends supported them in doing well in school.

Help from peers. A theme mentioned by both HA and LA students was that their friends would help them with their homework if they needed help or tell them where to find information that they need. One HA student stated:

> If you can't find something, they're all like, "I found it." They tell us what page or tell something what will help us get the answer. Your friends are with you the whole day. If you miss something, they probably know it.

Some LA students reported that their friends help them pay attention in class. For example, one LA student said:

> *They help me during class if I'm not paying attention. They tell me that I have to pay attention and help me with the subject if I don't know what it is, what it means.*

Encouragement. Another theme mentioned by both HA and LA students related the encouragement that they received from their friends. Both groups stated that some of their friends support them in doing well, telling them that they need to finish their homework or study for a test; however, both HA and LA students reported that other friends tell them that homework is not that important or that they can finish it later. As one LA student said, "Some friends don't care about the homework. They make you like not to do it. They don't make sure you do it." More HA students reported that their friends congratulated them when they received good grades on an assignment or a test. More LA students, a group of students that also included more boys, reported that their friends encouraged them to do well so that they could play sports.

Background, Ability, and Language Factors

Research Question 4

The fourth research question compared descriptive statistics related to background factors such as reported SES level, gender, age, parent education, and current language proficiency in English and Spanish for HA and LA seventh grade language minority students. Student records were examined to obtain this information.

Information on gender, age, parent education, and SES level was gathered and analyzed. Table 4 provides a summary of the descriptive statistics for the HA and LA seventh grade language minority students. As can be seen in Table 4, more females are

in the high-achieving group ($N = 8$) and more males are in the low-achieving group ($N = 7$), three students of the HA group have at least one parent that completed college while

Table 4

Totals and Percentages for Gender, Parent Education, and SES Level for Seventh Grade High- and Low-Achieving Language Minority Students

	High- Achieving		Low-Achieving		Total	
Variable	N	%	N	%	N	%
Gender						
Male	3	27.3	7	70.0	10	47.6
Female	8	72.7	3	30.0	11	52.4
Level of Parent Education						
Not a HS Graduate	2	18.2	3	30.0	5	23.8
HS Graduate	4	36.4	5	50.0	9	42.9
Some College	2	18.2	2	20.0	4	19.0
College Graduate	3	27.3	0	0	3	14.3
SES Level						
Free/Reduced Lunch	6	54.5	9	90.0	15	71.4
Not Free/Reduced Lunch	5	45.5	1	10.0	6	28.6

that was not true of any of the students in the LA group. A greater percentage of the low-achieving students receive free or reduced lunch (90%) compared to the high-achieving group (54.5%), indicating that the families of the LA students have a lower socio-economic level. All of the students in the sample are considered to be fluent in English and Spanish as of March 1, 2011. The age of the HA students ($M = 12.80$, $SD = .34$) was not significantly different from the age of the LA students ($M = 12.59$, $SD = .34$) using the Welch test.

Research Question 5

The fifth research question asked if there was a statistically significant difference between HA and LA seventh grade language minority students when the mean scores on the Spanish language arts standards test are compared. A Welch test was used to

determine if there was a statistically significant difference between the two groups.

Students' scores on the Spanish language arts standards test were analyzed and compared. As can be seen in Table 5, the mean of the HA students (M = 82.55, SD = 6.87) is higher than the mean of the LA students (M = 70.20, SD = 6.44).

Table 5

Means and Standard Deviations in the Scores on a Spanish Language Arts Standards Test for High- and Low-achieving Seventh Grade Language Minority Students

	High-achieving (n = 11)		Low-achieving (n = 10)		Total (n = 21_	
Variable	Mean	SD	Mean	SD	Mean	SD
Spanish scores	82.55	6.85	70.20	6.44	76.67	9.06

A Welch test was used to compare HA and LA students on their performance on the Spanish language arts standards test. The results of the Welch test as can be seen in Table 6 indicate that there is a statistically significant difference between the HA and LA groups in their performance on the Spanish language arts standards test. HA students had significantly higher scores than LA students.

Table 6

Welch Test Results and Degrees of Freedom for the Scores on the Spanish Language Arts Standards Test

Variable	*df1*	*df2*	Welch Statistic
Spanish standards test	1	18.97	18.12*

* $p < .01$

Correlations were found between CST scores and grade point average and the scores on the Spanish language arts standards test. A statistically significant correlation was found between CST scores and the scores on the Spanish language arts standards test

($r = .87$, $r^2 = .76$, $p < .001$) and between grade point average and scores on the Spanish language arts standards test ($r = .66$, $r^2 = .44$, $p < .01$). These results indicate that CST scores and grade point average have a moderate to strong correlation to the scores on the Spanish language arts standards test.

Research Question 6

The sixth research question asked whether there was a statistically significant difference between high- and low-achieving seventh grade language minority students when the mean scores from the Naglieri Nonverbal Ability Test – Second Edition (NNAT2) are compared. The Welch test was used to compare the scaled scores from the NNAT2.

The students' performance on the NNAT2 were analyzed and compared. Table 7 gives the means and standard deviations of the students' scores on the NNAT2. As can be seen in Table 7, the mean of non-verbal ability level of the high-achieving language minority students ($M = 672.0$, $SD = 16.28$) is higher than the low-achieving language minority students ($M = 658.2$, $SD = 27.06$); however, using the Welch test, no statistically significant difference was found. No statistically significant correlations were found between the scores on the NNAT2 and CST, grade point average, or scores on the Spanish language arts standards test.

Table 7

Means and Standard Deviations of Scaled Scores of the NNAT2 for High- and Low-achieving Seventh Grade Language Minority Students

	High-achieving		Low-achieving		Total	
Variable	Mean	SD	Mean	SD	Mean	SD
Scaled Score	672.0	16.28	658.2	27.06	665.1	22.85

Figure 1 compares the HA and LA students using a box plot. As can be seen in Figure 1, the range of the HA students (55) is less than the range for the LA students (81).

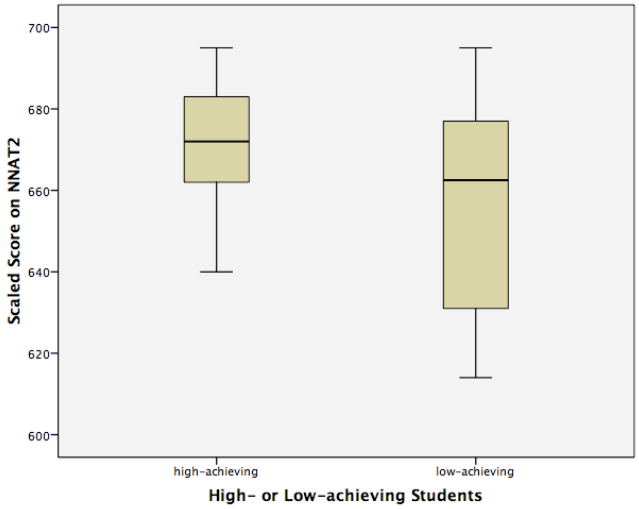

Figure 5. Box plots of NNAT2 scaled scores comparing high- and low-achieving language minority seventh grade students.

Research Questions 7 and 8

The seventh and eighth research questions asked whether there is a statistically significant difference between HA and LA seventh grade language minority students when the mean scores on the CELDT and the LAS given at school entry for the two groups are compared. The Welch test was used to compare the means of the HA and LA students.

Information about students' language proficiency in kindergarten was gathered from school records, analyzed, and compared. As can be seen in Table 8 the mean of the HA language minority students (M = 500.36, SD = 86.58) was higher on the CELDT than the LA language minority students (M = 457.50, SD = 104.28); however, the Welch test did not find a statistically significant difference between the two groups. On the LAS test in Spanish given in kindergarten, the mean of the HA students (M = 84.82, SD = 11.79) is

also higher than the mean for the low-achieving students (M = 72.50, SD = 23.15). No statistically significant difference was found between the two groups for the LAS scores using the Welch test.

Table 8

Means and Standard Deviations of the CELDT and the LAS Given in Kindergarten (K) for High- and Low-achieving Seventh Grade Language Minority Students

	High-achieving		Low-achieving		Total	
Variable	Mean	SD	Mean	SD	Mean	SD
CELDT in K	500.36	86.58	457.50	104.28	479.95	95.84
LAS in K	84.82	11.79	72.50	23.15	78.95	18.72

Initial language proficiency in kindergarten of the HA and LA students was analyzed and compared. As can be seen in Table 9, a greater percentage of HA students were initially proficient in English (45.5%), in Spanish (81.8%), and in both languages (27.3%) than LA students (40%, 60%, and 20%, respectively). More LA students were not considered proficient in either language in kindergarten (20%) when compared to HA students (9.1%).

Table 9

Totals and Percentages for English Learner, Initially Proficient in English, Spanish Learner, and Initially Proficient in Spanish Categories at School Entry for High- and Low-achieving Seventh Grade Language Minority Students

	High- Achieving		Low-Achieving		Total	
Variable	N	%	N	%	N	%
Initially Proficient in English	5	45.5	4	40.0	9	43.0
English Learner	6	54.5	6	60.0	12	57.1
Initially Proficient in Spanish	9	81.8	6	60.0	15	71.4
Spanish Learner	2	18.2	4	40.0	6	28.6
Initially Proficient in Both	3	27.3	2	20.0	5	23.8
Not Proficient in Either	1	9.1	2	20.0	3	14.3

Correlations were found between CST scores, grade point average, scores on the Spanish language arts test, scores on the NNAT2, scores on the LAS given in kindergarten, and scores on the CELDT given in kindergarten. No statistically significant correlation was found between CST and the scores on the LAS or CELDT given in kindergarten, between grade point average or the Spanish language arts standards test and the CELDT given in kindergarten, or between the LAS given in kindergarten and the CELDT given in kindergarten. A statistically significant correlation was found between grade point average and the LAS given in kindergarten ($r = .56$, $r^2 = .31$, $p < .01$) and between scores on the Spanish language arts standards test and the LAS given in kindergarten ($r = .58$, $r^2 = .34$, $p < .01$). Using Cohen's classification system, these correlations would be considered strong.

Chapter Summary

In this study of the factors that differentiate HA and LA seventh-grade language minority students, academic engagement, background factors, ability, and language factors were compared. No statistically significant mean difference was found between HA and LA students for ability, age, current language proficiency, initial proficiency in English, or initial language proficiency in Spanish. A statistically significant mean difference did exist between the HA and LA students for current Spanish language arts achievement. In addition, differences were found between the two groups for academic engagement and the background factors of gender, SES level, and parent education.

The academic engagement of the two groups of students differed for behavioral engagement, cognitive engagement, and relational engagement. On two of measures of behavioral engagement (grade point average and teacher reports of participation), the HA

students scored on average significantly higher than the LA students. Classroom observations confirmed that HA students had a greater degree of behavioral engagement than LA students. No statistically significant mean difference in cognitive engagement was found between the HA and LA students based on students' and teachers' reports of the use of self-regulation strategies. More HA students were cognitively engaged in the lessons than LA students in the English language arts class during the classroom observations. Relational engagement was defined as the degree to which students were supported by teachers, parents, and peers. Both HA and LA students felt that teachers, parents, and peers supported them doing well in school; however, the two groups differed the support that they felt was most helpful. LA students stressed that instructional strategies, individual help that assisted them in learning the material, fair and equitable treatment, and access to food were most helpful. The HA students felt that instructional strategies that made the classes more interesting, consequences linked to work completion, and teachers' control of the classroom were the most important.

The high- and low-achieving seventh-grade language minority students differed on their scores on the Spanish language arts achievement test. Those students that scored higher on the California Standards Test (CST) in English also scored higher on the Spanish language arts standards test.

High- and low-achieving students differed on the background factors of gender, parent education, and socio-economic (SES) level. More HA students were female, more of them had a parent who had gone to college, and fewer of them received free/reduced lunch.

CHAPTER V

SUMMARY, LIMITATIONS, DISCUSSION, AND IMPLICATIONS

This chapter presents a summary and conclusion in four parts. First, the study is summarized with an overview of the problem, purpose, theoretical framework, research questions, and methods. Next, the limitations of the study are presented. The third section discusses the results and conclusions. The final section discusses the implications for research and practice.

Summary of Study

A growing number of students in the United States come from homes where a language other than English is the primary language, presenting challenges to educators who struggle to meet these students' educational needs. Standardized test scores confirm the achievement gap that exists between students of color and White students, and that the achievement gap between Hispanic and non-Hispanic White students has remained the same since 1992 for both fourth and eighth graders (Aud et al., 2010c). The urgency to close this achievement gap has increased with the No Child Left Behind Act of 2001, which requires that schools raise the academic performance of students on annual state test, such as the California Standards Test (CST), and states develop statewide progress objectives to ensure that all groups of students reach proficiency levels or better by the year 2013 – 2014 (Meyen & Bui, 2007).

In their attempt to reduce the achievement gap between White students and students of color, many educators and researchers overlook the fact that many students of color are able to achieve at high levels, receiving above average standardized state test scores and succeeding in their school courses (Bridgeman & Wendler, 2004). Gándara

(2004) examined four different areas that contributed to academic success for Hispanic students: intrapersonal (temperament and ability), extrapersonal (parent support for academic achievement), socio-cultural (peer support for academic achievement), and educational systems (individual intervention programs and high expectations for all students). The extrapersonal, socio-cultural, and educational systems areas that Gándara discusses relate to academic engagement, which is another factor that has been linked to higher academic achievement. Lower levels of academic engagement tend to correspond with lower levels of achievement while higher levels of academic engagement appears to relate positively to higher levels of academic achievement for all populations (De Bruyn, Dekovic, & Meijnen, 2003; Heller, Calderson, & Medrich, 2003). More research is needed to determine whether academic engagement is a critical factor in explaining the differences in academic achievement between high-performing and low-performing language minority students. In addition, research is needed on what contributes to academic engagement for language minority students so that programs and instruction can be implemented to foster academic engagement for these students. The present study examines whether academic engagement is differentiates high- and low-performing language minority students.

Other researchers have investigated the role of English oral language proficiency at school entry (Aguila, 2010; Genesee, Lindholm-Leary, Saunders, & Christian, 2006; Rumberger, 2007), socio-economic status (Sirin, 2005), and ability (Rohde & Thompson, 2007) in relation academic achievement; however, research is lacking on the role these factors play in the academic achievement of middle-school language minority students within a Spanish two-way immersion (TWI) program.

The purpose of this study was to examine how seventh-grade language minority high-achieving students differ from language minority low-performing students on several factors, including English and Spanish oral language proficiency at school entry, current English language proficiency; Spanish language arts achievement; academic engagement; and background factors such as socio-economic status (SES), gender, parent education, and age. Language minority students who scored in the top third of all language minority students on the sixth grade CST formed the high-achieving group. The low-achieving group consisted of language minority students who scored in the bottom third. All the students were enrolled in a TWI program and had been enrolled in a TWI program or late-exit bilingual education program for the majority of their previous school career. Students who received special education services for English language arts were excluded from the study. The intent of the study was to find which factors differentiated high- and low-achieving language minority students.

The significance of this study resides in its examination of factors that affect English language arts achievement for language minority students in a TWI program. The results of this study can be used by classroom teachers and school administrators to develop strategies and interventions that can improve academic achievement in the area of English language arts. The number of TWI programs in the United States is growing (Center for Applied Linguistics, 2010) because they have been found to be effective programs for language minority students; however, without knowledge of which factors are most important for academic success, schools cannot design the most effective programs to meet the needs of their student populations.

Three theoretical models provided the theoretical framework for this study. The first model comes from language acquisition theory and depicts language development in a student's first language (L1) as important for language acquisition in a second language (L2) (Cummins (1979a). This model portrays oral language development in a student's second language as essential for academic achievement in the second language. Next, this study was based on a conceptual model developed by Bernhardt (2005) that proposes a student's L1 and L2 interact during reading to increase academic success and that other factors such as academic engagement that also contribute to a student's success. The final conceptual model used is one that was developed by Suárez-Orozco, Suárez-Orozco, and Doucet (2004) that posits academic engagement is a determining factor in explaining why some students are academically successful and others are not. Suárez-Orozco, Suárez-Orozco, and Doucet divide academic engagement into three dimensions – behavioral, cognitive, and relational. Each of these dimensions was examined separately in this study.

The overall research design of this study was an exploratory mixed methods design, which utilized both quantitative and qualitative procedures. In the quantitative part of the study, descriptive statistics on socio-economic status (SES), gender, age, parent education, current English and Spanish language proficiency were gathered and analyzed to determine if they showed a difference between high- and low-achieving language minority students. A Welch test was used to determine how high- and low-achieving seventh-grade language minority students who attend a two-way immersion (TWI) program differed on English oral language proficiency at school entry as measured by the California English Language Development Test (CELDT), on Spanish oral

language proficiency at school entry as measured by the Language Assessment Scales (LAS), on the Naglieri Nonverbal Ability Test – Second Edition (NNAT2), and on a Spanish language arts standards test administered in March 2011.

The first three research questions addressed in this study focused on academic engagement. Information about the number of behavior referrals, language arts grades, and attendance records was recorded for the high- and low-achieving language minority students to investigate the behavioral dimension of academic engagement. In addition, classroom observation and teacher reports of classroom participation on a teacher questionnaire were used look for patterns in students' behavioral engagement. To determine if there are differences in the cognitive dimension of academic engagement, a student questionnaire was used to gather information on students' self-reported use of self-regulatory strategies. A teacher questionnaire also gathered additional information on students' use of self-regulatory strategies. In order to explore the relational dimension of academic engagement for high-and low-achieving language minority students, the students were gathered into five focus groups that met separately based on whether students were HA or LA to discuss their perceptions of teacher, parent, and peer support for academic achievement. These focus group discussions were followed up by individual student interviews that asked similar questions about perceived teacher, parent, and peer support for academic achievement. Classroom observations and teacher interviews were used to corroborate and document information about teacher support for selected students. The responses given during the focus group discussions and the interviews were coded for the perceived support received from teachers, parents, and peers. Transcriptions of the focus group discussions and interviews as well as the

information from the student and teacher questionnaires and the classroom observations was analyzed for patterns and themes that emerge and for differences between the responses of high- and low-achieving language minority students.

The following research questions were investigated:

1. What are the differences in behavioral engagement between high- and low-achieving seventh-grade language minority students when school behavioral referrals, grade point average, school attendance; classroom observations of student participation, and teacher perceptions of students' class participation are examined?
2. What are the differences in cognitive engagement between high- and low-achieving seventh-grade language minority students when student- and teacher-reported use of self-regulatory strategies and classroom observations of cognitive engagement are analyzed?
3. What are the differences in relational engagement between high- and low-achieving seventh-grade language minority students when student reports of perceived teacher, parent, and peer support for academic achievement; classroom observations of support; and teacher reports of support are analyzed?
4. What are the descriptive statistics of reported SES level, gender, current language proficiency, parent education, and age of high- and low-achieving seventh grade language minority students?
5. Is there a statistically significant difference between high- and low-achieving seventh-grade language minority students when the mean scores on the Spanish language arts standards test given in March 2011?

6. Is there a statistically significant difference between high- and low-achieving seventh-grade language minority students when the mean scores from the Naglieri Nonverbal Ability Test – Second Edition are compared?
7. Is there a statistically significant difference between high- and low-achieving seventh-grade language minority students when the mean scores on the CELDT test given at school entry are compared?
8. Is there a statistically significant difference between high- and low-achieving seventh-grade language minority students when the mean scores on the Language Assessment Scales given at school entry are compared?

Summary of Findings

The findings of the study will be presented in two sections. The first section addresses the first three research questions that relate to academic engagement. The second section presents findings related to the last five research questions that investigated whether there is a difference between high- and low-achieving seventh-grade language minority students when Spanish and English language proficiency at school entry, SES level, age, gender, current Spanish language arts skills, and ability are compared.

Academic Engagement

Research Question 1

The first research question asked what are the differences in behavioral engagement between high-achieving (HA) and low-achieving (LA) seventh grade language minority students when behavior referrals, grade point average, school attendance, classroom observation of student participation, and teacher perceptions of

students' class participation as reported on the teacher questionnaire are examined. A Welch test was used to compare the means for behavioral referrals, grade point average, days absent, and teacher perceptions of students' participation. HA students had statistically significant higher ($p < .01$) mean grade point average and mean rating of teachers' perception of class participation ($p < .01$) than the LA students. No statistically significant differences in mean behavioral referrals or mean days absent were found between the two groups. More LA students need to be reminded to focus on their work during the classroom observations.

Research Question 2

The second research question asked what are the differences in cognitive engagement between HA and LA seventh grade language minority students when student- and teacher-reported use of self-regulatory strategies are analyzed. Classroom observations were also used to gather information about differences in the cognitive engagement of the HA and LA students. No statistically significant difference was found in the mean student- or teacher-reported use of self-regulatory strategies between the two groups. During the classroom observations in the English language arts classes, more HA students showed cognitive engagement in the lessons than LA students. No difference was noted in the Spanish language arts classes.

Research Question 3

The third research question asked what are the differences in relational engagement between HA and LA seventh grade language minority students when student reports of perceived teacher, parent, and peer support for academic achievement, classroom observations of support, and teacher reports of support are analyzed.

Teacher support. Student reports of teacher support were divided into four categories – instructional strategies, teacher assistance, motivation, and other school factors. More LA students mentioned specific instructional strategies that helped them learn the material such as reviewing the material before a test, asking questions about the material, giving packets for review, providing study guides, and having posters about what was studied on the walls. HA students mentioned that they wanted the instruction to be interesting and fun. Both groups mentioned that working in groups helped them learn.

The second category of teacher support was teacher assistance. Both HA and LA students mentioned that teachers helped students individually during class and were available for before and after school if students needed help. The teacher interviews confirmed that the teachers were available to help students during class and outside of class. The English language arts teacher differentiated the type of support he gave the two groups of students, encouraging the HA students to produce high quality work and stay on task and helping the LA students learn the skills and knowledge that they needed to complete assignments and do well on tests. The Spanish language arts teacher checked the work of LA students during the classroom observations more than she did the HA students. More HA students asked for help in both classes, and both teachers spent more time individually helping HA students than LA students.

The third category of teacher support was the motivation that teachers provided to help students do well in class. Both HA and LA students mentioned that teachers supported them by motivating them to do better. Both groups reported that teachers had high expectations for them. HA students reported that the rewards and consequences

teachers used were important while the LA students did not mention rewards and consequences.

The final category mentioned by the students was other school factors. HA students mentioned that teachers having control of the class was important as well as teachers not getting upset when a student makes a mistake or turns in a late assignment. The LA students mentioned that it was important for teachers to be fair and not treat students differently. Another thing important to the LA students was food and access to food.

Parent support. Both HA and LA students reported that their parents would check the students' agendas for assigned homework, ask if the homework had been completed, and offer to help their child if she or he needed help. Both HA and LA students reported that their parents had consequences related to the completion of homework. In addition, the LA students reported that their parents would offer incentives if they did well, such as buying them a cell phone or a WII or letting them go over to their friend's house more often.

Peer support. Both HA and LA students stated that their friends would help them with their homework if they needed help or tell them where to find information that they need. Both HA and LA students reported some of their friends support them in doing well, telling them that they need to finish their homework or study for a test. Both groups reported that other friends tell them that homework is not that important and they can finish it later. More HA students than LA students reported that their friends congratulated them when they received good grades on an assignment or a test.

Background, Ability, and Language Factors

Research Question 4

The fourth research question compared descriptive statistics related to background factors such as reported SES level, gender, age, and current language proficiency in English and Spanish for HA and LA seventh-grade language minority students. All students were fluent in English and Spanish as of March 1, 2011. No statistically significant difference existed in the mean age of the two groups of students. The LA group had a greater percentage of males and a higher percentage of lower SES students. The HA group had a higher percentage of females and more parents who had attended college.

Research Question 5

The fifth research question asked if there was a statistically significant difference between HA and LA seventh grade language minority students when the mean scores on the Spanish language arts standards test are compared. HA students scored statistically significantly higher than the LA students ($p < .01$) on the Spanish language arts standards test.

Research Question 6

The sixth research question asked whether there was a statistically significant difference between high- and low-achieving seventh grade language minority students when the mean scores from the Naglieri Nonverbal Ability Test – Second Edition (NNAT2) were compared. No statistically significant difference was found using the Welch test between the two groups. The mean of the HA group was higher than the

mean for the LA group, and the variance for the LA was much greater than the variance for the HA group.

Research Questions 7 and 8

The seventh and eighth research questions asked whether there is a statistically significant difference between HA and LA seventh-grade language minority students when the mean scores on the CELDT and the LAS given at school entry for the two groups are compared. No statistically significant difference was found between the two groups for the mean scores on either the CELDT or the LAS. A higher percentage of HA students were initially proficient in English, in Spanish, and in both languages than LA students. More LA students than HA students were not considered proficient in either language in kindergarten.

Limitations

This study has limitations in the areas of sample size, construct validity, and reliability.

One limitation of the study was its small sample size. The small sample size would limit the transferability of the results. The students in the sample were from one school and may not be representative of the general population of seventh-grade language minority students enrolled in TWI programs. Because all of the students were enrolled in a TWI program, the results might not be able to be generalized to language minority students who are in other types of programs.

Another limitation of the study is in the construct validity for cognitive engagement. The cognitive dimension of academic engagement was measured by a short questionnaire of students' self-reported use of self-regulation strategies. Questions on the

teacher questionnaire were used to confirm the students' self-reports of their use of self-regulation strategies. The use of self-regulation strategies is only one aspect of cognitive engagement. Although classroom observations were used to examine cognitive engagement as shown by students being actively involved in class discussions, other measures of cognitive engagement beyond the classroom observations would increase validity of this study in evaluating the students' cognitive engagement.

A third limitation is in the area of reliability. Student use of self-regulation strategies was self-reported. The reliability of the self-reports might have been affected by the students responding as they thought they should respond or by a lack of understanding about what the question was asking. A related limitation in the area of reliability is that teachers were asked to rate students' attentiveness in the classroom, but the researcher did not define attentiveness and teachers were not asked for their individual definitions of attentiveness.

Another limitation in the area reliability concerns the observations made in the classrooms. Only two classroom observations were made for each language arts class. Student participation and behavior and teacher support varies from day to day in a classroom. More classroom observations would be need to determine whether the student participation and behavior and teacher support observed as part of this study was typical of the majority of classes taught in English and Spanish language arts classes in the TWI program being studied.

The final limitation is also in the area of reliability. Although the present study was trying to elicit honest responses from the students about perceived teacher, parent, and peer support by having both focus group discussions and individual student

interviews, the student responses might be incomplete. The students' responses were triangulated with classroom observations and information from teacher interviews in order to obtain a more complete picture of teacher support for academic achievement. No triangulation of data was made for student responses about support received from parents and peers so the accuracy of the students' perceptions cannot be verified.

Discussion of Findings

The achievement gap between English learners (ELs) and English-only students and between students of color and White students is seen in schools across the United States from kindergarten through high school (Manning & Kovach, 2003). Various intervention strategies have been put in place with limited success. One program that has led to increased achievement for Hispanic students and ELs is two-way immersion (TWI) education; however, even within a TWI program not all Hispanic students and ELs are successful (Lindholm-Leary, 2001). This study was designed to investigate the factors that lead to or hinder the success of ELs and Hispanic students in TWI program. The identification of those factors can lead to the development of appropriate interventions strategies that lead to increased academic success for all students.

Academic Engagement

Educators and researchers have recognized for many years the importance of academic engagement as a critical influence on academic achievement for all students (Appleton, Christenson, & Furlong, 2008). Researchers have found that lower levels of academic engagement tend to correspond to lower levels of achievement while higher levels of academic engagement appears to relate positively to higher levels of academic achievement for all populations (De Bruyn, Dekovic, & Meijnen, (2003); Heller,

Calderson, & Medrich, 2003). The present study corroborates past research in that the HA students demonstrated good academic engagement on all the measures used. The LA students also demonstrated academic engagement but not in all areas.

Suárez-Orozco, Suárez-Orozco, and Doucet (2004) proposed a multidimensional meta-construct of academic engagement, discussing it as a way of examining the relationship of various behavioral, cognitive, and relational factors to academic achievement. The present study investigated whether HA and LA language minority students differ in behavioral, cognitive, and relational engagement.

Behavioral engagement. Behavioral engagement has been demonstrated to be positively associated with academic achievement. Students who attend school regularly, participate in class, complete class work, and homework, and avoid disruptive behaviors generally get better grades and perform better on standardized tests (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996: Caraway, Tucker, Reinke, & Hall, 2003). The present study corroborated the results of past research with the finding that that HA students demonstrate higher behavioral engagement than LA students, based on students' grade point average and teachers' perception of students' class participation. Grade point average is associated with the completion of assigned class work and homework, which would also be reflected on the teacher questionnaire about class participation, so these two measures are related. During classroom observations, the researcher also noted that more LA students needed to be reminded to focus on the assigned task, indicating lower behavioral engagement. HA students demonstrated higher behavioral engagement in those areas that are dependent on a student's ability to complete assigned work (e.g., grade point average and teacher ratings). Students with less knowledge about a topic and

a lower skill level would be rated lower in class participation on the teacher questionnaire and also receive lower grades, which would affect their grade point averages because they would have more trouble completing assignments. Students with a lower skill level would also have more trouble completing work during class, which might lead them to be more distracted in class. To the extent that students' behavioral engagement is related to students' skill levels, raising students' skill levels would increase behavioral engagement. Bodovski and Farkas (2007) found students with the lowest skill level showed the least academic engagement, and student achievement and students' engagement were interrelated. As students' skill levels increased so did their engagement and as students' engagement increased so did their skills level. In the present study, behavioral engagement and skill level also seem to be related.

Cognitive engagement. Cognitive engagement has been studied as an important factor linked to higher academic achievement (Fredericks, Blumenfeld, & Paris, 2004; Suárez-Orozco, Suárez-Orozco, & Doucet, 2004). Wang and Holcombe (2010) defined cognitive engagement as the use of self-regulatory strategies and the questionnaire that they developed was used in the present study. Wang and Holcombe study found that the use of self-regulatory strategies was positively associated with academic achievement, but they did not mention the inclusion of Hispanic or language minority students in their study. The present study did not find a significant difference in the use of self-regulatory strategies between HA and LA language minority students in a TWI program. Wang and Holcomb's study may have yielded different results for the relation of self-reported use of self-regulation strategies because their study used grade point average as the measure of achievement while the present study used CST language arts scores; however, in the

present study, CST scores and grade point average are correlated to a statistically significant degree. In the Wang and Holcomb study the correlation of self-reported use of self-regulatory strategies and grade point average was small ($r = .18$, $r^2 = .03$), although the result was statistically significant ($p < .01$). In the present study, the correlation between the self-reported use of self-regulatory strategies and grade point average was slightly smaller ($r = .10$, $r^2 = .01$) and not statistically significant. The difference in results between the present study and the Wang and Holcomb study might have only been the result of the present study having a small sample size.

Relational engagement. Researchers have found that relational engagement is an important factor to examine when predicting the academic success of Hispanic students (Sciarra & Seirup, 2008). One aspect of relational engagement is perceived support from teachers, parents, and peers. Both HA and LA students feel supported by the teachers at school; however, the two groups differ on the types of support that they feel are important. LA students want teachers to use instructional strategies and to give them individual help that will aid them in learning the material. The HA students want teachers to use instructional strategies that make the material interesting, to maintain control in the classroom, and to use rewards and consequences to help motivate them to do better work. The HA students are not as concerned as the LA students about their ability to learn the material presented. Researchers (Caraway, Tucker, Reinke, & Hall, 2003; Greene, Miller, Crowson, Duke, & Akey, 2004; Martin & Dowson, 2009) have found that students who believe they are capable of mastering their schoolwork have positive expectations for success, and, therefore, high motivation and achievement. In the present study, one of the factors that differentiates HA and LA students is that HA

students feel they can learn the material presented in class, while LA students are less confident and feel they need individual assistance from teachers to learn.

Gándara (2004) in her review of literature mentions that intrapersonal factors such as a temperamental predisposition to be open to help and guidance are associated with higher academic achievement. In the present study, classroom observations showed more HA students were more willing than LA students to ask teachers for help and as a consequence received more individual help in class from teachers. LA students might feel unable to ask for help either because they do not know what to ask or because they have personalities that make them less willing to ask for help. Not being willing to ask for help might cause LA students to not receive the individual help they need to master academic skills and acquire subject matter competency.

Relational engagement relates to more than just teacher support related to instruction. How connected a student feels to school is also part of relational engagement (Wang & Holcombe, 2010). Wang and Holcombe integrated factors such as teachers' caring about students and students' feelings of autonomy into a variable called school identification, which had a small correlation with achievement ($r = .23$, $r^2 = .05$, $p < .01$). In the present study, students' comments about the importance of all students being treated equitably and the school providing access to food indicates that teachers or the school caring about students is important. Students feel supported and more engaged when teachers are fair and equitable in their treatment of students. For example, some of the LA students feel that they are picked on for not paying attention. If they are having a more difficult time completing work, LA students might be more likely to stop working and be distracted in class. Another factor that is important to LA students as part of

school support for academic achievement is access to food. More of the LA students are at a lower SES level, which might explain why food supplied at school through the breakfast and lunch program is more important to them when they talk about school support.

Part of relational engagement involves perceived support from parents and peers. Both HA and LA students feel support from their parents and peers for academic achievement. Both HA and LA have some friends that support them in doing well and some friends that tell them that school work is not that important. For the boys in the LA group, doing well so that they can be in sports with their friends was an important motivator for completing school assignments. Sciarra and Seirup (2008) found that stronger peer relationships were related to higher academic achievement. Hassinger and Plurde (2005) reported that higher achieving students reported parent support as important. In the present study, no differences were found between HA and LA students in parent and peer support.

Background Factors

The present study explored other factors that might differentiate HA and LA seventh-grade language minority students, such as SES level, gender, and ability. Sirin (2005) found that SES level, which includes both measurements such as whether students receive free and reduced lunch and parent education levels, was positively associated with academic achievement but not to as great a degree for culturally and linguistically diverse students as for White students. More LA students than HA students in the present study receive free and reduced lunch and fewer of their parents have gone to college, which is agreement with Sirin's results. One factor that differentiates HA and LA

students in this study is SES level and parent education level. Lindholm-Leary (2001) found that girls out-performed boys in two-way immersion programs, and in the present study more of the HA students are girls.

In the present study, ability as measured by the NNAT2 is not a factor that differentiates HA and LA students in contrast to the study by Rohde and Thompson (2007) who found that cognitive ability was one predictor of academic achievement. The present study differed from the Rohde and Thompson study because Rohde and Thompson included vocabulary knowledge as part of their ability variable and tested mathematical as well as language arts achievement. HA and LA students may not differ on a non-verbal ability test when language arts achievement is being used to divide the students into high- and low-achieving students. The greater variance in the scores of LA students in comparison to the scores of the HA students could indicate that for some LA students non-verbal ability may be a factor contributing to low academic achievement but is not a factor for all of the LA students.

Language Factors

English and Spanish language proficiency in kindergarten was also examined as a possible factor that might differentiate HA and LA seventh-grade language minority students. No significant difference exists between HA and LA students for English or Spanish language proficiency in kindergarten; however, a higher percentage of HA students were initially proficient in English, in Spanish, and in both languages than LA students. Researchers (Catts, Fey, Zhang, & Tomblin, 1999; Cutting & Scarborough, 2006; Nation & Snowling, 2004) have found that oral language proficiency is strongly predictive of reading skills both concurrently and longitudinally. In the present study

Spanish oral language scores in kindergarten correlated with Spanish language arts standards test scores in seventh grade confirming past research. Although no significant differences were found for scores on the CELDT and the LAS between the two groups, the greater percentage of HA students who were initially proficient in a language indicates that oral language proficiency in kindergarten may play a part in later academic achievement. Twenty percent more HA students were initially proficient in Spanish than low LA students which might affect academic achievement in a TWI program where kindergarten, first, and second grade are taught primarily in Spanish.

Both Cummins (1979a) and Bernhardt (2005) suggest that skills learned in a student's first language contribute to the mastery of skills in a student's second language. The results of the present study confirm the predictions made by Cummins and Bernhardt. HA students were significantly higher than LA students in their Spanish language arts skills as shown on the Spanish language arts standards test, indicating that language minority students who had high literacy skills in one language also had high literacy skills in their second language. Learning literacy skills in one language did not impede the learning of literacy skills in a second language.

Conclusions

The purpose of this study was to investigate the factors that differentiate HA and LA seventh-grade language minority students. The results indicate that the two groups differ in academic engagement, language proficiency, and background factors.

HA and LA students differ in both the behavioral and relational dimensions of academic engagement. The differences between the two groups for these dimensions are related to students' skill levels. LA students have more difficulty completing

assignments and have lower grades, which are aspects of behavioral engagement. They feel supported when teachers help them learn the material but also are less likely to ask for help. Teachers in turn provide less individual help to LA students during class, leading to lower relational engagement for the LA students. Higher skill levels lead to higher academic engagement, which in turn leads to higher academic achievement. Usually referred to as the Matthew Effect (Reschly, 2010), this spiraling pattern of achievement is evident in the responses of the LA and HA students in the present study.

Language proficiency is another factor that differentiates HA and LA students. Students who have strong oral language proficiency in at least one language when they enter kindergarten do better than students who do not. Spanish oral language proficiency in kindergarten is strongly related to later Spanish language arts achievement in a TWI program. HA students have higher Spanish language arts skills in seventh grade than LA students, indicating that mastery of skills in one language is matched by the development of skills in a students' second language within a TWI program.

Background factors also differentiate HA and LA students. More LA students are at a lower SES level and a greater percentage of them are male when compared to HA students. Both HA and LA students reported similar parent and peer support, so the differences found for SES level may be a result of differences in parent education levels, parental expectations, and family activities that support academic achievement such as trips to museum and historical sites. These factors were not examined in depth in the present study. The difference in the percentage of males in each group may be a result of the small sample size.

Implications for Research

More research is needed to examine factors that differentiate HA language minority students from LA language minority students. The present study was an exploratory mixed methods study with a small sample size. Future research needs to look at the role variables such as academic engagement, oral language proficiency, gender, SES level, and ability play in predicting academic achievement within a larger sample population. Differences in these variables among the students attending diverse academic programs such as TWI, Structured English Instruction, and early-exit bilingual programs need to be investigated.

Research is needed to develop the construct of cognitive engagement. The present study used students' self-reports of the use of self-regulation strategies, which is also what was used in the Wang and Holcomb (2010) study, plus teacher reports of students' use of their agendas and desire to learn more about a subject and classroom observations of students raising their hands to ask or answer questions about information presented. In the past researchers have defined cognitive engagement as intellectual curiosity about new ideas and pleasure in mastering new material (Suárez-Orozco, Suárez-Orozco, & Doucet, 2004), self-regulating behaviors and a strategic approach to learning (Fredricks, Blumenfeld, & Paris, 2004), and goal-directed learning (Dowson & McInerney, 2001). Fredricks, Blumenfeld, and Paris describe how the definition for cognitive engagement draws on definitions used in motivation literature, which relates it to intrinsic motivation to learn, and learning literature, which defines cognitive engagement as strategic learning or self-regulated learning. Student self-reporting questionnaires that address both the use of self-regulation strategies and intrinsic

motivation to learn and classroom observation checklists that operationalize the manifestation of cognitive engagement in the classroom need to be developed and piloted. In addition, research that asks teachers to specifically check students' use of self-regulation strategies and interest in learning during activities or in the completion of assigned work and then relates that information to academic achievement would contribute to knowledge about how cognitive engagement relates to academic achievement.

Another construct that needs further definition is attentiveness. In the present study, teachers were allowed to individually define attentiveness when they rated whether students were attentive in their classes. Students' attentiveness in class was one factor that constituted teachers' perceptions of students' participation in class, which was found to be statistically significantly different when the HA and LA language minority students were compared. To make the questions of students' attentiveness more meaningful, research is needed as to how teachers define attentiveness and how students manifest it in the classroom.

Middle school is often the time when the academic achievement for culturally and linguistically diverse students slows or declines (Heller, Calderon, & Medrich, 2003). A decline in academic engagement may be one factor that contributes to the slowing of academic achievement in middle school (De Bruyn, 2005). The present study was conducted at K – 8 school with only 60 students in its seventh grade class. Because of the small school size, more students in the study sample might have shown stronger levels of academic engagement than one might find in a larger school. Future research

needs to examine academic engagement in language minority students within larger schools and at high school as well as middle school level.

The present study found that Spanish oral language proficiency in kindergarten correlated at a statistically significant level with later Spanish language arts achievement. Research is need to examine whether the English oral language skills of kindergarteners who enter school as English-only speakers predict later Spanish and English language arts achievement in a TWI program. In the present study, initial English oral language proficiency did not correlate with later English or Spanish language arts achievement, but the sample in the present study were all language minority students.

The present study found that LA students were less likely to ask for help and receive help in the classroom. Research is need on intervention programs that include instruction on how to solicit help in general education classrooms and whether that type of instruction results in more LA students asking for and receiving help.

When students were asked how teachers supported them doing well in their classes, they mentioned various instructional strategies as helping them learn the material, but the strategies varied with LA students mentioning strategies such as study guides and reviewing material before a test while HA students mentioned strategies that helped make the material interesting. In addition, both LA and HA students stated that they liked working in groups. LA students said that they liked working in groups because they could receive help in learning the material from their friends. More research is needed on which instructional strategies foster academic engagement for which groups of students and whether structured activities in mixed groups of HA and LA students helps the LA students master material better than whole class instruction.

Both the present study and Lindholm-Leary found higher academic achievement among girls than among boys in a TWI program. The present study did not examine the reasons for this difference. More research is needed to determine whether this pattern is evident in across program types, school sizes, and grade levels. If differences are found for a given group of students, longitudinal research is needed to determine if differences found in elementary and middle school persist into high school. Research needs to be designed that investigates why middle-school girls who are language minority students might perform better on the CST language arts test than middle-school boys who are language minority students.

A final area where more research is needed is the importance of food for LA students who are also low SES. Valenzuela (1999, p. 111) shared the story of a teacher who gained the trust of his students by showing that he cared. One way that he showed that he cared was that he brought *taquitos* to school each day so that his students could have breakfast. In the current study the LA students mentioned that access to food was important to them and was an example of how the school supported their learning. More research is needed on how the providing of food indicates to students that they are supported in school and whether it increases academic engagement.

Implications for Practice

Fostering the academic achievement of all language minority students is a critical feature of successful TWI programs. In order to increase the achievement of LA students, schools must raise students' academic engagement and language proficiency.

Nurturing the academic engagement of LA language minority students becomes essential if a school is going to improve the academic achievement of these students. The

results of the present study indicate that providing interventions and instructional strategies that allow language minority students to succeed in their classes can support academic engagement. Early intervention programs are essential for helping struggling students to develop the skills they need so they can be successful in school. On intervention program that has proved successful with language minority students is Peer-Assisted Learning Strategies (PALS*:* Saenz, Fuchs, & Fuchs, 2005). The PALS program was originally designed to work in classrooms for grades 2 – 6, but a kindergarten and high-school version of the strategy have been added. In PALS students are paired by the teacher so that a higher- and lower-performing student work together for partner reading, retelling of the story, and making predictions. In a TWI program PALS might also be used to support a student's acquisition of his or her second language. Another intervention strategy that has been shown to be successful with language minority students is Collaborative Strategic Reading (CSR: Klingner, Vaughn, Hughes, Schumm, and Elbaum, 1998). In CSR students work together in collaborative groups to read expository material, each student taking a specific role to help the whole group understand what is being read. Originally designed to be used in grades 3 – 8, it has now been adapted for use in high school as well. Classroom instructional strategies such as working in groups and structured review of information are essential in helping LA students feel that they can be successful, increasing students' academic engagement and achievement.

Mentoring programs that foster students' perceptions that teachers care about them as individuals would also help raise the academic engagement of LA students. Wehlage, Rutter, Smith, Lesko, and Fernandez (1989) found that schools that were

successful with at-risk students fostered social bonds that connected students with the school. One type of social bond involved social and emotional ties to adults and peers in the school. The students made statements such as, "the teacher cares about me, and I care about my actions." The students develop a vested interest in meeting expectations of others and abiding by the norms of behavior expected in school. A mentoring program that would foster social bonds between teachers and students might involve teachers meeting with students once a week for lunch or after school to discuss any problems or concerns that the student might have as well as providing a venue where the student can share personal stories and events happening in his or her life.

In addition to academic engagement, the current study indicates that early oral language development is important for future academic achievement. Instructional programs in kindergarten and first grade in a TWI program should include a strong oral language component that will ensure all students have the language skills needed to be successful in school. Language development is facilitated by extensive interactions between students proficient in the language of instruction and those who are not (Long & Porter, 1985); however, in a review of the literature on English language development of ELs, Saunders and O'Brian (2006) reported that merely having students interact or work in groups does not necessarily enhance language development. Teachers need to carefully design the task and train the more proficient students in working with and promoting language development among the less proficient students. The teacher should provide frequent opportunities for interaction and discussion about lesson concepts between teacher and student and among students, and elaborated responses should be encouraged.

Two aspects of designing instruction that facilitates oral language development in a TWI program for students learning a second language are for the teacher to provide comprehensible input and opportunities for the students to produce comprehensible output (Howard, Sugarman, Christian, Lindholm-Leary, & Rogers, 2007). Comprehensible input consists of using speech that is appropriate for students' proficiency level (e.g., slower rate, enunciation, and simple sentence structure for beginners), explicitly linking past learning with new concepts, and emphasizing key vocabulary. Comprehensible output consists of providing a variety of question types and targeting specific question types to students at specific proficiency levels. For example, students at beginning levels might answer questions that just require one word answers while students at higher proficiency levels might be asked to answer questions that involve 'What if..." statements. Allowing for comprehensible output also consists of providing sufficient wait time for student responses throughout a lesson and teaching students participation structures and language frames that will enable them to interact effectively during group and classroom discussions.

Because the HA students showed significantly higher competency in Spanish language arts as well as English language arts, TWI programs should continue to stress high-level academic skills in both languages. Developing strong Spanish language arts skills does not interfere with the development of strong English language arts skills, and the development of skills in one language may increase the skills in the other.

Chapter Summary

In order to reduce the achievement gap between culturally and linguistically diverse students and White students, schools must implement instructional strategies that

are effective for increasing the academic achievement of all students. One way of determining which instructional strategies and interventions would be most effective is to examine the factors that differentiate HA and LA students. As an exploratory mixed-methods study, the present study began investigating critical factors for seventh-grade language minority students. Future research is needed to confirm which factors are the most important in which settings, but the results of the present study indicate that certain instructional strategies and school policies may make a difference in the academic achievement of language minority students who currently are struggling in school.

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Appendix A:

Study Instruments

Name:_____

Student Questionnaire
(from Wang & Holcomb, 2010)

Mark the answer that best represents how often you do the activities described in the question.

1. How often do you try to decide what you are supposed to learn, rather than just read the material when you are doing schoolwork?

   Almost never Not very often Sometimes Almost always

2. How often do you try to relate what you are studying to other things you know about?

   Almost never Not very often Sometimes Almost always

3. How often do you try to plan what you have to do for homework before you get started?

   Almost never Not very often Sometimes Almost always

4. How often do you check your homework to make sure it's done correctly when you finish it?

   Almost never Not very often Sometimes Almost always

Name _____

Teacher Questionnaire

For each student, indicate how you would rate him or her based on the scale shown below:

1 - Never 2 – Rarely 3 – Some of the time 4 – Most of the time 5 – All of the time 6 - Unknown

Students	*How often does this student complete the tasks assigned in class?	*How often does this student compete the assigned homework?	*How often is this student attentive in your class?	*How often is this student disruptive in your class?	How often does this student use his or her agenda to keep track of assignment?	How often does this student ask for help to learn more about a topic outside of assigned tasks?
1						
2						
3						
4						
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22						

*These questions are from the Education Longitudinal Study of 2002 (National Center for Educational Statistics, 2004).

Focus Group and Individual Interview Questions

Introductory Statement

I have asked you to be part of this group discussion (or interview) because I want to know what are the things that teachers, parents, and your friends do that help you do well in school. I'm going to be tape-recording the session, but all the information is going to be kept confidential. That means that I won't be mentioning any of you by name when I write up my notes. Nothing you say in this discussion group (or interview) will affect your grades. I'm using this information as part of a research project on factors that help students do better in school. The information that you give me might be used to improve the program at River Glen. Your parents all signed consent forms to allow you to be part of this group (or your parent signed a consent form to allow you to be part of this interview). I want to thank you for participating.

1. First of all, how do teachers support you in doing well in their classes?

Follow-up questions:

   a. How do they show their support? What are some examples of how they support you?
   b. How do the teachers differ in how they support your doing well in their classes?
   c. What types of support are most useful?
   d. What types of support would help you do better in your classes?

2. By middle school, parents differ in what they feel should be their role in helping their child or children do well in school. What do your parents do?

Follow-up questions:

   a. What are some other examples of what your parents do?
   b. How do your parents differ in how they show support?
   c. How do other adults outside of school support you in doing well in your classes?

   (If the students are having problems thinking of what to say, I might say, "Some parents check their child's agenda and make sure homework is completed, other parents answer questions about how to do homework, and still other parents feel that their children need to be responsible for completing their assignments on their own. What do your parents do?"

3. How do your friends support you doing well in school?

Follow-up questions:

   a. How do they show their support?
   b. What are some of the differences between your friends in how they show support?
   c. How does the support you receive from your friends differ in different subjects?

Teacher Interview Questions

Introductory Statement

This interview is being conducted as a way of determining what kind of support is offered to students in your classes. You have signed a consent form, which indicates your consent to this interview. This interview will be audio recorded but the information from the interview will be kept confidential and names will not be used in the final report.

1. First of all, what types of support do you offer to all of your students in your classes?
2. Specifically, for the seventh grade students what are the types of support that you offer?
3. Are there any other examples of support that you might like to mention?
4. Now, I'm going to ask what kind of support you offer to six specific students. You can mention types of support that you have already mentioned or if other examples come to mind, you can talk about those types of support.
    a. For _____, what specific types of support have you offered to this student? (a similar question will be asked for each of the selected students)

Classroom Observation Form

Description of classroom (seating arrangements, audio-visual equipment, etc.):

Description of lesson (topic, teacher presentation, student tasks, etc.):

Observation checklist (put a tally mark for each time an event happened):

Students	Teacher checked on student's work	Student raised hand to contribute idea or ask about topic	Teacher called on student	Student asked for help	Teacher offered help to student	Teacher stood near student	Teacher worked with student individually for more than two minutes	Teacher talked with student before or after class
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								

Other observations (specifically if there were events that determined what type of interactions the teacher might have with the students such as a student talking with another student, a student misbehaving in class, etc.):

Student Information Sheet

Student Name: _____ Interviewed: Yes _____ No _____

CST Score (April, 2010): _____ Level (advanced, proficient, etc.: _____
Bottom third _____ Top third _____

Birth date: _____ Age: _____GPA (1st Semester): _____

CELDT Score at school entry: _____ Date of test: _____
LAS Score at school entry: _____ Date of test: _____
Initially Proficient: Yes _____ No _____

CELDT Score on most current test: _____ Date of test: _____
LAS score on most current test: _____ Date of test: _____
Reclassified as FEP: Yes ___ No ____ Date, if reclassified: _____

Free / Reduced Lunch: Yes _____ No _____
Education level of most educated parent (if in school records): _____

Spanish language arts standards test score _____

NNTA2 results: _____
Notes: _____

Use of Self-regulatory Strategies Questionnaire results: _____
Results from #5 – 6 on Teacher Questionnaire: _____
Notes: _____

Results from #1 – 4 on Teacher Questionnaire: _____
Notes: _____
Number of Referrals listed in SWIS website for behavior problems: _____
Types of problems: _____
_____
Days absent as of March 1, 2011: _____
Notes from Classroom observations about class participation: _____
_____
_____
_____

Notes from Classroom observations about teacher support: _____
_____
_____
_____

Teacher Information Sheet

Teacher name: _____

Age: _____ Ethnic background: _____

Degree of fluency in Spanish: Fluent _____ Passed Spanish Proficiency test _____

Speaks some Spanish, not fluent _____ Only a little or no Spanish _____

Notes: _____

Subjects taught to seventh graders: _____

Credentials held: _____

Total years of experience teaching: _____ Years teaching current subjects: _____

Years teaching in TWI program: _____Years taught at River Glen: _____

Notes: _____

Interviewed: Yes _____ No _____

Appendix B:

Consent Forms

PARENT INFORMED CONSENT FORM
University of San Francisco
Consent to be a Research Subject

Purpose and Background

Mary Howland, a graduate student in the school of education at the University of San Francisco and a teacher at River Glen School, is doing a study to investigate the factors that affect academic achievement of seventh grade students who entered school as bilingual or Spanish-dominant.

Your child is being asked to participate because on the language survey completed in kindergarten, you indicated that he or she had some exposure to a language other than English.

Procedures

If I agree to allow my child to participate in this study, the following will happen:

1. I will agree to let my child participate in a focus group discussion related to factors that support academic achievement. This focus group discussion will take place during the school day at a time that will minimize the disruption to my child's learning and will last approximately 45 minutes. The focus group discussion will be audio recorded.
2. I will agree to let my child be tested on the Naglieri Non-verbal Ability Test – Second Edition during the school day at a time that will minimize the disruption to my child's learning. The test will take 30 to 40 minutes to complete.
3. I will agree to let my child complete a four-question survey on his or her study habits. This questionnaire should take no longer than 10 minutes to complete.
4. I agree to let my child be interviewed by Mary Howland at time before or after school that is convenient for my child and our family. The interview will be audio recorded and take no longer than 30 minutes. Only some of the students will be interviewed so it is possible that your child may not be one of the students interviewed.
5. I understand that Mary Howland will be present in my child's English language arts classroom for two periods, observing the teacher's instruction and students' participation.
6. Mary Howland will have access to my child's relevant educational documents, which will remain confidential.

Risks and/or Discomfort

1. It is possible that some of the questions asked during the focus group discussion may make my child uncomfortable, but he/she is free to decline to answer any questions or to stop participation at any time.
2. Participation in research may mean a loss of confidentiality. Study records will be kept confidential and kept in a secure location at all times. No individual identities will be used in any reports or publications from the study. Only the researcher will have access to the files.

3. Your child will miss two period of regular class time, which may mean a loss of instructional time in those classes. Every effort will be made to choose a time when the loss of instructional time will be minimized.

Benefits

There will be no direct benefit to me or to my child from participating in this study. At the conclusion of the study, River Glen staff will receive information about the factors that improve academic achievement for seventh grade students, which may improve the academic program at River Glen School. I may receive a copy of the results of the study upon request.

Cost / Financial Considerations

There will be no financial costs to me or my child as a result of taking part in this study.

Payment / Reimbursement

I will not receive reimbursement for my child's participation in this study.

Question*s*

If I have further questions about this study, I may call Mary Howland at (xxx) xxx-xxxx or at (xxx) xxx-xxxx, or I may e-mail her at xxxxxxxxxxxxx or Dr. Yvonne Bui, her Chairperson at (xxx) xxx-xxxx or xxxxxxxxxxxxx.

If I have any questions or comments about my child's participation in this study, I should first talk with the researcher. If for some reason I do not wish to do this, I may contact IRBPHS, which is concerned with protection of volunteers in research projects. I may reach the IRBPHS office by calling (415) 422-6091 and leaving a message, by e-mailing IRBPHS@usfca.edu or by writing to the IRBPHS, Department of Psychology, University of San Francisco, 2130 Fulton Street, San Francisco, CA 94117-1080.

Consen*t*

I have been given a copy of the "Research Subject's Bill of Rights" and I have been given a copy of this consent form to keep.

PARTICIPATION IN RESEARCH IS VOLUNTARY. I am free to decline for my child to be in this study or to withdraw my child from it at any point. My decision as to whether or not my child participates in this study is entirely up to me and will have no impact on the quality of my child's education.

My signature below indicates that I agree to allow my child to participate in this study.

_____

Student Name

_____ _____

Signature of Subject's Parent/Guardian Date of Signature

Formulario de consentimiento informado
Universidad de San Francisco

CONSENTIMIENTO DE SER SUJETO DE INVESTIGACION

Propósito y antecedentes

Mary Howland, una estudiante graduada en la Escuela de Educación de la Universidad de San Francisco y una maestra en la Escuela River Glen, está haciendo un estudio para investigar los factores que afectan el rendimiento académico de los estudiantes del séptimo grado que ingresó a la escuela como bilingües o en español dominante.

Su hijo está siendo invitado a participar porque en el cuestionario del idioma completado en el kindergarten, usted indicó que él o ella tenía algo de exposición a un idioma que no sea inglés.

Procedimientos

Si doy permiso a mi hijo/a para participar en este estudio, lo que pasará es lo siguiente:

1. Estaré de acuerdo con que mi hijo/a participe en un grupo de discusión relacionados con los factores que apoyan el logro académico. Este grupo de discusión se llevará a cabo durante el día escolar durante una hora que minimizar la perturbación de aprendizaje de mi hijo y durará aproximadamente 45 minutos. El grupo de discusión será audio grabado.
2. Estaré de acuerdo con que mi hijo sea probado en la Prueba Naglieri de la capacidad no verbal - Segunda edición durante el día escolar a una hora que minimizar la perturbación de mi niño que aprende. La prueba tendrá 30 a 40 minutos para completar.
3. Estaré de acuerdo con que mi hijo/a completar un cuestionario de cuatro preguntas sobre sus hábitos de estudio. Este cuestionario no debe tardar más de 10 minutos para completar.
4. Estoy de acuerdo en que mi hijo/a sea entrevistado por Mary Howland antes o después de la escuela a una hora que sea conveniente para mi hijo/a y nuestra familia. La entrevista será audio grabada y no tomaría más de 30 minutos. Sólo algunos de los estudiantes serán entrevistados; por lo tanto es posible que mi hijo/a no sería uno de los estudiantes entrevistados.
5. Entiendo que Mary Howland estará presente en la clase de artes de lenguaje en inglés de mi hijo/a durante dos períodos para observar de las instrucciones del profesor y participación de los estudiantes.
6. Mary Howland tendrán acceso a los documentos pertinentes de la educación de mi hijo/a que quedarán confidencial.

Riesgos y/o incomodidades

1. Es posible que algunas de las preguntas formuladas durante la discusión del grupo puede hacer mi hijo/a incómodo/a, pero él / ella puede declinar a contestar cualquier pregunta o dejar de participar en cualquier momento.
2. Participación en un estudio puede resultar en una pérdida de información privada. Todos los archivos serán guardados en un lugar seguro todo el tiempo. Ninguna identidad se usará en cualquier informe o publicación resultando de este estudio. Solamente la investigadora tendrá acceso a la información.
3. Su hijo/a se perderá dos períodos de sus clases regulares, lo que puede significar una pérdida de tiempo de instrucción en las clases. Cada esfuerzo será hecho de elegir un momento en que la pérdida de tiempo de instrucción se reducirán al mínimo.

Beneficios

No habrá ningún beneficio directo para mí o a mi hijo/a al participar en este estudio. Al final del estudio, el personal de River Glen recibirá información sobre los factores que mejoran el rendimiento académico de los estudiantes del séptimo grado, lo que puede mejorar el programa académico en River Glen. Puedo recibir una copia de los resultados del estudio si así lo deseo.

Precios / consideraciones financieras

No hay ningún costos financieros para mí o mi hijo/a como resultado de participar en este estudio.

Pago / reembolso

Yo no seré reembolsado/a por la participación de mi hijo/a en este estudio.

Preguntas

Si tengo más preguntas sobre este estudio, puedo llamar a Mary Howland al (xxx) xxx-xxxx o a (xxx) xxx-xxxx o enviarle un correo electrónico a xxxxxxxxxxxx o a la Dra. Yvonne Bui, la presidenta de su comité, al (xxx) xxx-xxxx o xxxxxxxxxxxxxx.

Si tengo preguntas o comentarios sobre la participación en este estudio, debo hablar primero con la investigadora. Si por cualquier razón no quiero hacer esto, puedo ponerme en contacto con el IRBHS que está interesado en la protección de voluntarios en las investigaciones. Puedo establecer contacto con la oficina de IRBHS llamando al (415) 422-6091 y dejando un mensaje de correo de voz, mandando un correo electrónico a IRBHS@usfca.edu o escribiendo al IRBHS, Department of Psychology, University of San Francisco, 2130 Fulton Street, San Francisco, CA 94117-1080.

Consentimiento

Se me ha dado una copia de la "Declaración de derechos de los participantes en la investigación" y se me ha dado una copia de este formulario de consentimiento para mantener.

PARTICIPACIÓN EN ESTA INVESTIGACIÓN ES VOLUNTARIA. Soy libre para declinar la participación de mi hijo/a en este estudio o para sacar mi hijo/a en cualquier punto de la investigación. La decisión que mi hijo/a participe o no participe en este estudio es completamente mía y no tendrá influencia en las calificaciones o posición escolar de mi hijo/a.

Mi firma debajo indica que estoy de acuerdo que mi hijo/a pueda participar en este estudio.

_____
Nombre del estudiante

_____
Firma del padre/madre o tutor Fecha de firma

TEACHER INFORMED CONSENT FORM
University of San Francisco
Consent to be a Research Subject

Purpose and Background

Mary Howland, a graduate student in the school of education at the University of San Francisco and a teacher at River Glen School, is doing a study to investigate the factors that affect academic achievement of seventh grade students who entered school as bilingual or Spanish-dominant.

You are being asked to participate because you teach seventh grade language minority students in an academic subject in a Spanish two-way immersion program.

Procedures

If I agree to participate in this study, the following will happen:

1. I agree to complete a questionnaire detailing information about the behavior, use of self-regulation strategies, and participation of the student participants in the study. Completion of this questionnaire should take no longer than 20 minutes.
2. If I teach English or Spanish language arts, I agree to be interviewed about the types of support I offer students in my classes and about specific supports I have offered to six specific students. The interview will take approximately 30 minutes and will be audio recorded.
3. Student participants need to miss two class periods during the course of this study, I agree to work with the other middle school teachers to arrange a time for these students to participate in the study that will minimize a loss of instructional time.
4. If I teach English or Spanish language arts, I agree to be observed during four periods of instruction to seventh grade students at a time convenient to me.
5. I agree to keep all my responses confidential.

Risks and/or Discomfort

1. Participation in research may mean a loss of confidentiality. Study records will be kept confidential and kept in a secure location at all times. No individual identities will be used in any reports or publications from the study. Only the researcher will have access to the files.
2. Because of the time required for my participation in this study, I may have to rearrange my schedule before or after school so that I am able to complete the questionnaire and be interviewed.

Benefits

I realize that I am contributing to research that may increase knowledge about the factors that can lead to higher academic achievement for seventh grade students. At the

conclusion of the study, River Glen staff will receive information about the factors that improve academic achievement for seventh grade students, which may improve the academic program at River Glen School. I may receive a copy of the results of the study upon request.

Cost / Financial Considerations

There will be no financial costs to me as a result of taking part in this study.

Payment / Reimbursement

I will not be reimbursed for my participation in this study.

Questions

If I have further questions about this study, I may call Mary Howland at (xxx) xxx-xxxx or at (xxx) xxx-xxxx, or I may e-mail her at xxxxxxxxxxxxxxx or Dr. Yvonne Bui, her Chairperson at (xxx) xxx-xxxx or xxxxxxxxxxxxxxx.

If I have any questions or comments about participation in this study, I should first talk with the researcher. If for some reason I do not wish to do this, I may contact IRBPHS, which is concerned with protection of volunteers in research projects. I may reach the IRBPHS office by calling (415) 422-6091 and leaving a message, by e-mailing IRBPHS@usfca.edu or by writing to the IRBPHS, Department of Psychology, University of San Francisco, 2130 Fulton Street, San Francisco, CA 94117-1080.

Consent

I have been given a copy of the "Research Subject's Bill of Rights" and I have been given a copy of this consent form to keep.

PARTICIPATION IN RESEARCH IS VOLUNTARY. I am free to decline to be in this study at any point. My decision as to whether or not I participate in this study is entirely up to me and will have no impact on my standing or status at River Glen School or in the district.

My signature below indicates that I agree to participate in this study.

_____ _____

Signature of Teacher Date of Signature

RESEARCH SUBJECTS' BILL OF RIGHTS

The rights below are the rights of every person who is asked to be in a research study. As a research subject, I have the following rights:

Research Subjects
Bill of Rights

Research subjects can expect:

- To be told the extent to which confidentiality of records identifying the subject will be maintained and of the possibility that specified individuals, internal and external regulatory agencies, or study sponsors may inspect information in the medical record specifically related to participation in the clinical trial.
- To be told of any benefits that may reasonably be expected from the research.
- To be told of any reasonably foreseeable discomforts or risks.
- To be told of appropriate alternative procedures or courses of treatment that might be of benefit to the subject.
- To be told of the procedures to be followed during the course of participation, especially those that are experimental in nature.
- To be told that they may refuse to participate (participation is voluntary), and that declining to participate will not compromise access to services and will not result in penalty or loss of benefits to which the subject is otherwise entitled.
- To be told about compensation and medical treatment if research related injury occurs and where further information may be obtained when participating in research involving more than minimal risk. To be told whom to contact for answers to pertinent questions about the research, about the research subjects' rights and whom to contact in the event of a research related injury to the subject.
- To be told of anticipated circumstances under which the investigator without regard to the subject's consent may terminate the subject's participation.
- To be told of any additional costs to the subject that may result from participation in the research.
- To be told of the consequences of a subjects' decision to withdraw from the research and procedures for orderly termination of participation by the subject.
- To be told that significant new findings developed during the course of the research that may relate to the subject's willingness to continue participation will be provided to the subject.
- To be told the approximate number of subjects involved in the study.
- To be told what the study is trying to find out;
- To be told what will happen to me and whether any of the procedures, drugs, or devices are different from what would be used in standard practice;
- To be told about the frequent and/or important risks, side effects, or discomforts of the things that will happen to me for research purposes;
- To be told if I can expect any benefit from participating, and, if so, what the benefit might be;
- To be told of the other choices I have and how they may be better or worse than being in the study; To be allowed to ask any questions concerning the study both before agreeing to be involved and during the course of the study;

- To be told what sort of medical or psychological treatment is available if any complications arise;
- To refuse to participate at all or to change my mind about participation after the study is started; if I were to make such a decision, it will not affect my right to receive the care or privileges I would receive if I were not in the study;
- To receive a copy of the signed and dated consent form; and
- To be free of pressure when considering whether I wish to agree to be in the study. If I have other questions, I should ask the researcher or the research assistant. In addition, I may contact the Institutional Review Board for the Protection of Human Subjects (IRBPHS), which is concerned with protection of volunteers in research projects. I may reach the IRBPHS by calling (415) 422-6091, by electronic mail at IRBPHS@usfca.edu, or by writing to USF IRBPHS, Counseling Psychology Department, Education Building, 2130 Fulton Street, San Francisco, CA 94117-1071.

References: JCAHO and Research Regulatory Bodies

1. To be told what the study is trying to find out;
2. To be told what will happen to me and whether any of the procedures, drugs, or devices are different from what would be used in standard practice;
3. To be told about the frequent and/or important risks, side effects, or discomforts of the things that will happen to me for research purposes;
4. To be told if I can expect any benefit from participating, and, if so, what the benefit might be;
5. To be told of the other choices I have and how they may be better or worse than being in the study;
6. To be allowed to ask any questions concerning the study both before agreeing to be involved and during the course of the study;
7. To be told what sort of medical or psychological treatment is available if any complications arise;
8. To refuse to participate at all or to change my mind about participation after the study is started; if I were to make such a decision, it will not affect my right to receive the care or privileges I would receive if I were not in the study;
9. To receive a copy of the signed and dated consent form; and
10. To be free of pressure when considering whether I wish to agree to be in the study.

- If I have other questions, I should ask the researcher or the research assistant. In addition, I may contact the Institutional Review Board for the Protection of Human Subjects (IRBPHS), which is concerned with protection of volunteers in research projects. I may reach the IRBPHS by calling (415) 422-6091, by electronic mail at IRBPHS@usfca.edu or by writing to USF IRBPHS, Counseling Psychology Department, Education Building, 2130 Fulton Street, San Francisco, CA 94117-1071.

CARTA DE DERECOS PARA INDIVIDUALES QUE PARICIPAN EN UN

ESTUDIO DE INVESTIGACION

Los derechos mencionados en la página de abajo son para cada persona que ha sido invitada a participar en un estudio de investigación, la persona tiene los siguientes derechos:

Participantes sujetos a un estudio de investigación
CARTA DE DERECHOS

Sujetos de la investigación pueden esperar:

- Se le dejará saber sobre la confidencialidad de sus archivos y sobre la posibilidad de que individuos específicos, ya sean internos o externos y agencias reguladoras, interno y externo por agencias reguladoras y al sujeto que patrocinadores o estudios del programa

- A ser informado de los beneficios que razonablemente se esperan de la investigación.

- Se les dirá de cualquier incomodes o riesgo previsible.

- A dejar saber de cualquier alternativa o transcurso del procedimiento que pueda ser beneficial.

- A dejar saber el procedimiento a seguir en el transcurso de la participación, especialmente aquellas que son de naturaleza experimental.

- A dejar saber que pueden negarse a participar (la participación es voluntaria), y negarse a participar, no pondrá en peligro el acceso a los servicios y no resultara en multa o sanción o perdida de beneficios a los que el sujeto esta en derecho.

- A dejar saber acerca de la compensación y el tratamiento médico si la lesiones relacionadas con la investigación se produce y más información adicional puede ser obtenida al participar en la investigación involucrando más del riesgo mínimo.

- Que se le diga a quién contactar a las respuestas a las preguntas pertinentes sobre la investigación acerca de la investigación, los derechos de los sujetos y con quién contactar en el caso de la investigación – lesiones relacionada con el sujeto.

- Que le digan las circunstancias anticipadas del cual el investigador sin tener en cuenta el consentimiento de el sujeto podrán anular la participación de el sujeto.

- Que se les diga de los gastos adicionales al sujeto que pueda resultar de la participación en la investigación.

- Que se les diga de la consecuencias de una decisión tomada por el sujeto de retirarse y de los procedimientos para la terminación ordenada de la participación del sujeto.

- Que se les diga el número aproximado de sujetos involucrados en el estudio.

- Que se les diga lo que el estudio está tratando de averiguar.

- Que se les diga qué me va a pasar a mí y si alguno de los procedimientos, drogas, o aparatos son diferentes de lo que se utiliza en la práctica estándar.

- A ser informado sobre la frecuencia y / o riesgos importantes, los efectos secundarios, o molestias por las cosas que me van a pasar con fines de investigación.

- Que se les diga si me puede esperar algún beneficio de la participación, y, en caso afirmativo, cuál es el beneficio podría ser.

- Que se les diga de las otras opciones que tengo y cómo puede ser mejor o peor que estar en el estudio, que se le permita hacer cualquier pregunta sobre el estudio, tanto antes de aceptar participar y durante el transcurso del estudio.

- Que se les diga qué tipo de tratamiento médico o psicológico está disponible si surgen complicaciones.

- A negarse a participar en todos o para cambiar de opinión acerca de la participación después de que el estudio se inicia, si yo fuera a tomar tal decisión, no afectará mi derecho a recibir la atención o me privilegios que recibiría si no estuviera en el estudio.

- Para recibir una copia del formulario de consentimiento firmado y fechado; y

- Para estar libre de presión cuando este tomando la decisión si quiero llegar a un acuerdo para participar en el estudio. Si tengo otras preguntas, debo pedir al investigador o al asistente de la investigación. Además, puedo contactar, La Junta de Revisión Institucional para la Protección de Humanos Sujetos (IRBPHS), que refiere a la protección de los voluntarios en proyectos de investigación. Yo puedo investigar IRBPHS llamando (415) 422- 6091, o por

correo electrónico IRBPHS@usfca.edu, o por escrito a (Conserjería Departamento de Psicología, Edificio de Educación) a esta dirección: USF IRBPHS, Counceling Psychology Department,Education Building, 2130 Fulton Street, San Francisco, CA 94117- 1071.

Referencias: Organismos de JCAHO y la Investigación de regulación

1. Que se les diga lo que el estudio está tratando de averiguar:

2. Que se les diga qué me va a pasar a mí y si alguno de los procedimientos, drogas, o aparatos son diferentes de lo que se utiliza en la práctica estándar.

3. A ser informado sobre la frecuencia y / o riesgos importantes, los efectos secundarios o molestias de las cosas que me va a pasar con fines de investigación.

4. Que se les diga si me puede esperar algún beneficio de la participación, y, en caso afirmativo, cuál es el beneficio podría ser.

5. Que se les diga de las otras opciones que tengo y cómo puede ser mejor o peor que estar en el estudio,

6. Que se le permita hacer cualquier pregunta sobre el estudio, tanto antes de aceptar participar y durante el transcurso del estudio.

7. Que se les diga qué tipo de tratamiento médico o psicológico está disponible si surgen complicaciones.

8. A negarse a participar en todos o para cambiar de opinión acerca de la participación después de que el estudio se inicia, si yo fuera a tomar tal decisión, no afectará mi derecho a recibir la atención o me privilegios que recibiría si no estuviera en el estudio.

9. Para recibir una copia del formulario de consentimiento firmado y fechado; y

10. Para estar libre de presión cuando este tomando la decisión si quiero llegar a un acuerdo para participar en el estudio. Si tengo otras preguntas, debo pedir al investigador o al asistente de la investigación. Además, puedo contactar, La Junta de Revisión Institucional para la Protección de Humanos Sujetos (IRBPHS), que refiere a la protección de los voluntarios en proyectos de investigación. Yo puedo investigar IRBPHS llamando (415) 422- 6091, o por correo electrónico IRBPHS@usfca.edu, o por escrito a (Conserjería Departamento de Psicología, Edificio de Educación) a esta dirección:
    USF IRBPHS, Counseling Psychology Department
    Education Building, 2130 Fulton Street,
    San Francisco, CA 94117- 1071.