

PREDICTING HIGH SCHOOL GRADUATION FOR LATINO MALES USING  
EXPECTANCY VALUE THEORY OF MOTIVATION AND TENTH GRADE READING  
ACHIEVEMENT SCORES

By

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To my family

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## DEFINITION OF TERMS

Achievement gap	The difference in academic success between two or more groups of students, often identified by gender, race, or socioeconomic status.
Culturally Diverse	While this term can refer to a population in which a broad range of cultural and ethnic backgrounds are represented, in this study this term refers to individuals who identify as Black/African American or Hispanic/Latino American and who are most often impacted by academic achievement gaps (Cholewa & West-Olatunji, 2008).
Culture/ethnicity	Based on the federal standards for identifying one's racial or cultural background. The national database used in this study, the ELS:2002, uses the categories of "White," "Black/African American," "Asian or Pacific Islander, including Native Hawaiian," "American Indian or Alaska Native," "Hispanic or Latino," or "Multiracial" (Ingels & Scott, 2004). This database allows students to select more than one cultural group. However, professional counseling literature often describes ethnic categories differently, using the cultural descriptors of African American and Latino in place of the federal racial categories of Black and Hispanic (e.g. Darling-Hammond, 2000; Ingels & Scott, 2004; Llagas & Snyder, 2003). In this study, the terms Black and Hispanic will be used interchangeably with African American and Latino, respectively, to reflect the sources from which information has come.
Expectancy	how well a person anticipates performing on a given task or activity (Eccles et al., 1983).
Gender	often considered on a spectrum including masculine and feminine, in this study this term is used synonymously with sex to refer to being male or female.
Intersectionality	the combination or confluence of multiple social identities (i.e. ethnicity, socioeconomic status, sexual orientation, social roles) for an individual (Hurtado & Sinha, 2008).
Low income	a demographic indicator that shows if a family is situated in the bottom 20% of all family incomes in the United States (Planty et al., 2008). The Department of Education also defines low income schools as those where over 75% of students participate in the free or reduced lunch program (Planty et al., 2008). The National School Lunch Program of the Department of Agriculture's Food and Nutrition Services department provides free lunches to students whose families have incomes less than 130% of the poverty level, and reduced-price lunches to students whose families earn less than 185% of the poverty level (U.S. Department of Agriculture,

2009). For the 2009-2010 school year, these income levels for a household of 4 people were approximately \$28,665 to receive free lunches and \$40,793 to receive reduced price lunches (U.S. Department of Agriculture, 2009). Often, researchers will use free and reduced lunch status to indicate poverty or SES level (e.g. Taylor & Graham, 2007).

- Masculine/Masculinity** the qualities, character, or essence of being male, usually described in contrast with feminine qualities or femininity; a socially constructed set of values, practices, and roles for boys and men in a given society (Connell, 1995).
- Motivation** a person's desire and drive to accomplish a goal, such as succeeding in school or making good grades, and which is impacted by a variety of individual and contextual experiences (see Eccles et al, 1983).
- Sex** classified as male or female, this variable is based on genetic and physiological characteristics, and is primarily biological in nature. The national database used in this study asks respondents to select whether they are male or female. In this study, sex is used synonymously with gender.
- Socioeconomic status (SES)** comprised of a person's economic, social, cultural, and physical environments, typically stemming from a combination of family income, education level, demographics, and social positioning within a culture. The national database used in this study includes family income, parental education levels, and parental occupation in the composite SES variable, which is divided into quartiles (BYSES2QU).
- Task value** the importance a person places on achieving a certain goal or succeeding at a given task, which is impacted by one's cultural and social contexts (Eccles et al., 1983).
- Underachievement** the phenomenon that occurs when a student possesses the intellectual potential to succeed academically but the student's grades or school performance fall short of these expectations.

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Major: Mental Health Counseling

National education data indicate that young men of color and students living in poverty are not experiencing the same academic success as their female, White, or higher socioeconomic status peers, as evidenced by low reading achievement levels and high dropout rates. Of particular concern is the underachievement of Latino males, who currently have the lowest high school completion and postsecondary enrollment rates of any student population in the country. Latino students represent the largest and fastest growing demographic of culturally diverse school age children, and Latino males in particular face many institutional challenges and barriers that negatively impact their motivation and achievement. In their unique position of leadership and with a focus on the contexts impacting students' lives, school counselors represent key participants and advocates in the understanding and improvement of the educational experiences of Latino young men.

The purpose of this study is to use Eccles et al. (1983) Expectancy Value Theory of motivation and tenth grade reading achievement scores to identify the factors that predict high school graduation for Latino males from various socioeconomic levels.

Data from 1099 10<sup>th</sup> grade Latino male respondents from the nationally representative Education Longitudinal Study of 2002 were used, and structural regression analyses were performed using MPLUS computer software. Results indicate that high school graduation was significantly predicted by students' perceptions that parents expect success in school and by students' English teachers' educational expectations for academic attainment. Additionally, student reading achievement scores significantly predicted student academic expectations for lower, but not higher, socioeconomic Latino males. Implications for school counselors' work with Latino males are discussed, and directions for continued research are proposed.

## CHAPTER 1 INTRODUCTION

Educators and policymakers have given much attention to decreasing and eliminating gender, cultural, and socioeconomic gaps in educational achievement and attainment in the United States. Specifically, national data indicates that male students of color and students in poverty are not experiencing the same academic success as their female, White, or higher income peers (Bemak & Chung, 2005; Education Trust, 2005a, 2005b; KewalRamani, Gilbertson, Fox & Provasnik, 2007; Planty et al., 2008). Latino students represent the largest and fastest growing ethnic group in this country, and Hispanic males have the highest dropout rates of any student population in the U.S. (Bernstein, 2008; Planty et al., 2008; U.S. Census Bureau, 2008). Latino students are also three times more likely than White students to live in poverty and attend high poverty schools (Prelow & Loukas, 2003).

To tackle these existing gender, cultural, and socioeconomic achievement gaps, the No Child Left Behind Act (NCLB) mandated that all educators, including school counselors, focus their efforts on the academic success of all students, with particular emphasis on multicultural and low-income children (U.S. Department of Education, 2001). School counselors play a key role in the educational process and in ensuring that all students' academic needs are being met by the school (American School Counseling Association, 2005; Bemak, 2000; Bryan, 2005; Stone & Dahir, 2006). In addition, school counselors are in a unique leadership position to facilitate the connection between schools, families, and communities (Amatea & West-Olatunji, 2007a; Clark & Stone, 2007; Stone & Dahir, 2006; Walsh, Barrett, & DePaul, 2007) with the understanding of the multiple influences on student achievement and attainment,

based on Bronfenbrenner's ecological systems model (1986). There has also been a shift away from a deficit model of understanding student achievement to an emphasis on resilience and strengths-based counseling that stresses both the importance of partnerships among schools, families, and communities and the appreciation of student cultural and social resources (Amatea, Smith-Adcock, & Villares, 2006; Bryan, 2005; Galassi & Akos, 2007; Walsh et al., 2007). It is this unique position of leadership and a focus on the contexts surrounding students that allows school counselors to represent key participants and advocates in the understanding and improvement of the educational experiences of Latino young men.

### **Statement of the Problem**

In recent years, the topic of male underachievement has received attention from popular media and researchers alike, increasing the public's awareness of this problem in our country's schools. More often, parents hear their son's teachers say that their child is "not achieving to his full potential" or that he "just doesn't seem motivated" (Gurian & Stevens, 2005; Lopez, 2003; Sax, 2007). National studies lend support to teacher comments like these, showing that boys are falling far behind their female counterparts in several indicators of academic success including grades, test scores, discipline referrals, special education referrals, and dropout and graduation rates (Clark, Flower, Walton, & Oakley, 2008; Clark, Oakley, & Adams, 2006; Education Trust, 2005a; National Center for Education Statistics [NCES], 2006; The College Board, 2010). The largest gap in achievement between genders exists in the areas of reading and writing, as evidenced in educational literature (Bailey & Paisley, 2004; Blackhurst & Auger, 2008; Blair, Blair, & Madamba, 1999; Freeman, 2004; Gorard & Smith, 2004; Moss, 2000) and through the National Assessment of Educational Progress (NAEP),

national standardized exams issued by the U.S. Department of Education (NCES, 2005, 2006, 2007; Planty et al., 2008). Furthermore, significant gender gaps in educational attainment, namely high school graduation, are challenging for school counselors and other education stakeholders (NCES, 2006, Planty et al., 2008). Clearly, schools are not meeting the needs of all of their students equally.

### **Achievement of Males**

When considering achievement data, it is important for school counselors and other educators to understand the underachievement of males in the context of other gaps in educational success. It is essential to understand which students, and which males, are being underserved by the schools to best address the achievement gaps (Cholewa & West-Olatunji, 2008). The term “achievement gap” is used loosely to describe differences in academic achievement between groups of people, historically among students of various ethnicities, socioeconomic status (SES), and gender. The gender and cultural achievement gap in reading and writing in primary and secondary schools in the United States has been documented for many years, as well as the gap between lower and higher socioeconomic status (Children’s Defense Fund [CDF], 2005; Freeman, 2004; Gorard & Smith, 2004; NCES, 2007; Planty et al., 2008).

Similar gender, cultural, and socioeconomic gaps in educational attainment have also been well documented through high school and postsecondary graduation rates with males, students of color, and lower income students graduating high school at significantly lower rates than their respective female, White, and upper class peers (Amatea & West-Olatunji, 2007b; Education Trust, 2005a; KewalRamani et al., 2007; Planty et al., 2008; The College Board, 2010). Underscoring the prevalence of these achievement and attainment gaps, a survey of urban school leaders found that 80% of

these leaders ranked closing achievement gaps as the primary concern facing their school districts (Snipes, Williams, & Petteruti, 2006). Professional school counseling and education literature has drawn significant attention to the Black-White achievement gaps, with relatively less attention being given to the educational experiences of Latino students (Dotson-Blake, Foster, & Gressard, 2009; Saenz & Ponjuan, 2009). Hispanic males achieve far below their female counterparts on national standardized exams, and drop out of school at a significantly higher rate than White males (NCES, 2007). For example, Latinos have the highest dropout rates of any population, with approximately 22% not completing high school, in comparison to 6% of White students and 11% of African American students (Planty et al., 2008).

The underachievement of Latino students is concerning for school counselors and other educators, particularly given the shifting demographics of the American school population. The United States is becoming more ethnically diverse each year, and census data projects that by the year 2023, more than half of all children will be non-White (U.S. Census Bureau, 2008). Latinos represent the largest and fastest-growing of these non-White student populations, with almost 34% of the Hispanic population being under the age of 18 (Bernstein, 2008; U.S. Census Bureau, 2008). This increasing diversity is also reflected in the general population (adults and children), with a total of 45.5 million Hispanic individuals making up 15% of the total U.S. population as of 2007 (Bernstein, 2008). Furthermore, it is expected that non-White individuals will comprise 54% of the country by the year 2050, thus representing a majority of the population (U.S. Census Bureau, 2008).

## **Race, Gender, and Poverty**

In addition to the documented cultural achievement gaps, boys from lower socioeconomic groups perform less well than girls from lower SES groups on exams nationally and internationally (Francis & Skelton, 2005; NCES, 2007; OECD, 2003). In fact, the gap between boys and girls in reading is even wider for economically disadvantaged students than for middle class students (Francis & Skelton, 2005). Students of color, including Latino students, are overrepresented in lower socioeconomic groups (Prelow & Loukas, 2003). In addition to the increasing cultural diversity of the nation's population, Planty and his colleagues (2008) report in the U. S. Department of Education's annual *Conditions of Education* publication that the number of elementary and secondary students living below the poverty line has increased since 1979, with approximately 17% of students nationwide in poverty in 2006 (see also Berliner, 2006). Of special concern is the rapidly growing Latino student population, who are three times as likely as White students to live in poverty (Prelow & Loukas, 2003), with an estimated 28% of Latino children living below the poverty line (Llagas & Snyder, 2003). Often, student poverty and low SES status is indicated in school systems as eligibility for and participation in the free or reduced lunch program, which provides meals to students whose families are situated below or just above the poverty level (Berliner, 2006; Planty et al., 2008; U.S. Department of Agriculture, 2009).

Clearly, student poverty is prevalent in the United States in general, and in the Latino population specifically. While certainly many Latino males and many males from lower SES backgrounds are doing very well in school, school counselors need to be aware of the magnitude of the current and persisting achievement gaps concerning Latino students to effectively partner with other stakeholders (teachers, administrators,

parents, etc.) to improve the education of this sizeable and underserved group of students (Amatea & West-Olatunji, 2007b; Berliner, 2006).

### **Student Motivation**

Motivation in school can impact short-term goals such as grade completion and high school graduation (Dimmitt, 2003). Moreover, decreased motivation can potentially dampen other long-term educational and life goals, such as attending college or finding a fulfilling career (Kobrin, Patterson, Shaw, Mattern, & Barbuti, 2008; McCall, 1994; The College Board, 2008). Attitudinal and motivational data suggest that, as a group, boys do not think school or reading are as important to their lives as do girls (Clark et al., 2006; Flowers, 2003; Schwartz, 2002). For example, a national longitudinal study by NCES revealed that girls reported their coursework was more meaningful, interesting, and more applicable to their futures when compared to their male peers (NCES, 2005). When students do not see the relevance of schoolwork to their future, they lack the motivation to put forth the effort necessary to succeed academically (Carey & Martin, 2007; Dimmitt, 2003), and lower achievement motivation has been associated with underachieving students (Preckel, Holling, & Vock, 2006). However, school counselors have come to view motivation (and other related constructs) as not simply a standalone intrapsychic characteristic, but rather as being influenced by the various contexts and systems that surround a student (Amatea & Sherrard, 1994; Neill & Kniskern, 1982).

Furthermore, Gordon Rouse & Austin (2002) report that motivation is demonstrated differently across ethnic groups and genders, perhaps in part because of students' differential experiences in the school context. Several researchers have also pointed to a cultural mismatch, or discontinuity, between students of color, low-SES, or male students and the school settings they attend as a significant and essential

consideration when discussing the academic performance and motivation of these students (Cholewa & West-Olatunji, 2008; Howard, 2003). Additionally, Latino students' "race-gender experiences accumulate and ultimately affect how men and women come to understand the role of education in their lives as well as their prospects for social mobility" (Lopez, 2003, p. 6), pointing again to students' perceived value of (and motivation for) academic attainment. When schools repeatedly devalue certain cultural values and experiences within the classroom setting, Latino students, and males in particular, often disengage from the schooling process over time, and may become less motivated to succeed in that setting (Lopez, 2003). Clearly, motivation is shaped by ongoing race and gender processes in the classroom, in addition to other systemic experiences. School counselors need to gain a greater understanding of these gender, cultural, and socioeconomic differences in the expression of motivation toward school success in order to best serve these young men.

Researchers and school counselors must also consider how Latino males' social identities and attitudes influence their achievement motivations and behaviors. Previous studies have focused on the prevalence of and the negative effects of boys' attitudes that school is not "macho" or "cool" (Francis, 2000; Francis & Skelton, 2005; Sax, 2007), or is not socially acceptable for them (Van Houtte, 2004). Boys' social culture in school is extremely salient in the minds of male students, and this social culture can vary across ethnic groups as well as socioeconomic levels (Howard, 2003; Lopez, 2003). Researchers have indicated that the need to be accepted by peers can influence or even outweigh young men's desire to succeed academically (Van De Gaer, Pustjens, Van Damme, & De Munter, 2007).

## High School Requirements

High school represents a key time in the academic, social, and attitudinal development of adolescents. States conduct mandated achievement tests throughout the K-12 schooling process, but the tests during high school bear particular consequences on a student's academic progress (Center on Education Policy, 2008). For example, many states require that students demonstrate proficiency on the 10<sup>th</sup> grade achievement tests in order to graduate from high school (Florida Department of Education, 2007). In fact, by the year 2012, 26 states will require high school graduates to demonstrate proficiency on their state-mandated high school exit exams to graduate, and these exams are generally based on 9<sup>th</sup> or 10<sup>th</sup> grade competencies (Center on Education Policy, 2008). Furthermore, these 26 states will comprise 74% of the country's public high school students, indicating the significant impact that these exit examinations will have on American education (Center on Education Policy, 2008). Considering these relatively significant consequences for the 10<sup>th</sup> grade examinations in particular, this age group represents an ideal time for examining the impact of reading achievement and motivation on graduation. In addition to the testing consequences of 10<sup>th</sup> grade, mandatory schooling ends at age 16, and thus represents a time when students may drop out of school. Data from the ELS:2002 indicate that approximately 5% of students do not complete high school because they drop out, and that 65% of the 10<sup>th</sup> grade dropouts were male for the 2002-2003 school year (Hampden-Thompson, Warkentien, & Daniel, 2009). Students' motivation and achievement at the 10<sup>th</sup> grade level can have serious implications for future educational attainment.

## **Reading Achievement**

While achievement in all academic areas is encouraged and is important to the success of a student in high school, reading achievement appears to have significant implications for success in school and beyond (Kobrin et al., 2008; The College Board, 2008). As previously discussed, reading and writing represent the areas where, as a group, males tend to fall significantly behind their female counterparts at all grade levels, both in the United States and internationally (Francis & Skelton, 2005; Freeman, 2004; Gorard & Smith, 2004; Moss, 2000; Planty et al., 2008). Students use their literacy skills beyond just their English class; being able to read and write well is vital to student success in other subjects as well, as many primary, secondary, and post-secondary educational settings have adopted writing (or language) across the curriculum initiatives. As evidence of the desirability of this key skill, an additional writing component was added in 2005 to the College Board's Scholastic Aptitude Test (SAT), one of the two major college entrance examinations in the United States. The addition of this writing component, supplementing the mathematics and verbal sections, emphasizes the nation's focus on the importance of literacy skills beyond the high school years into college or the working world (Kobrin et al., 2008). Furthermore, validity studies indicate that students' writing scores on the SAT were the best predictor of first year college grade point averages when compared to the other two sections of the SAT (Kobrin et al., 2008). Clearly, reading and writing are fundamental skills, not only in the completion of high school, but also in success in college and beyond. Therefore, the achievement gaps in reading and writing for Latino males across socioeconomic levels are of particular concern for high school graduation as well as for the long-term success of these students.

## **Educational Attainment**

Given the general academic, attitudinal, and behavioral differences described by the literature thus far, school counselors need to consider the particular impact of Latino underachievement on educational attainment, post-secondary education, and entrance into the workforce for these young men. First, underachievement by culturally diverse males and low-SES males in high school has implications for postsecondary attainment (Kelly, Schneider, & Carey, 2010; Planty et al., 2008). Echoing an ecosystemic perspective, Lopez suggests that the impact of the high school context on Latino students can have lasting effects on the value of education in general, stating that “ordinary day-to-day school practices and classroom dynamics are racialized and gendered and in turn shape... youth views about the role of education in their lives” (2003, p. 68). Women currently represent the majority of all college students and earn a majority of the academic degrees offered, and the percentage of women attending college is increasing relative to men (Adebayo, 2008; Peter, Horn, & Carroll, 2005). Men of color are significantly underrepresented in higher education enrollments, and males earn only about a third of postsecondary degrees awarded to Hispanic students, a pattern similar to that of African American and Native American students (Blackhurst & Auger, 2008; Saenz & Ponjuan, 2009). The extremely low postsecondary completion rates of Hispanic males relative to Hispanic females and to males from other ethnic groups is cause for national attention (Kelly et al., 2010).

The concern surrounding underachievement also reaches beyond the school years into adulthood. McCall (1994), who studied high school underachievers into their adult lives, found that over a decade after high school graduation, individuals’ educational attainment and job status was more consistent with their school grades than

their actual abilities, meaning that they never really “caught up” to their potential. Additionally, McCall found that high school underachievers generally “demonstrated less persistence in completing their college degrees, holding on to their jobs, and maintaining their marriages” (1994, p. 18). Evidently, the disproportionate rates of educational attainment for underachieving Latino males warrant additional investigation to ensure this growing population attains a more positive future (Saenz & Ponjuan, 2009). National data and professional research clearly indicates the growing concern of Latino male underachievement through academics, attitudes, and educational attainment (Francis & Skelton, 2005; Freeman, 2004; Jones & Myhill, 2004; NCES 2007; Saenz & Ponjuan, 2009; Van Houtte, 2004).

### **Significance of the Study**

The Education Longitudinal Study of 2002, a national education database, will be investigated to isolate the motivation factors and reading achievement scores that predict high school graduation for Latino males across socioeconomic levels. By identifying these predictive factors within various socioeconomic groups, the findings may contribute to school counselors’ and other educators’ understanding of the significant gender achievement gaps in graduation for Latino students. The No Child Left Behind Act acknowledges the existing achievement gaps and mandates that all educators, including school counselors, strive for the academic success for all students, with particular attention to culturally diverse and low income learners (U.S. Department of Education, 2001).

### **School Counselors’ Role**

All educators, and particularly school counselors, need to be aware of the variety of contextual and systemic factors which impact the motivation and achievement of the

students within their schools. Based on the American School Counselor Association (ASCA) National Model for school counseling programs (2005), school counselors are encouraged to promote success for all students by integrating social, psychological, career, and academic development. Additionally, ASCA (2005) asserts that school counselors are in a unique position to call attention to situations where the school system is not meeting the academic needs of a given student population, such as Latino males. For example, by examining data that demonstrate achievement gaps between Latino and White students, the school counselor in a leadership position can seek to understand those students' needs and how the school is failing to meet those needs, and can collaborate with other stakeholders to make necessary changes (Amatea & West-Olatunji, 2007a; Bemak, 2000; Bryan, 2005; Clark & Stone, 2007; Lee, 2001; Smith-Adcock, Daniels, Lee, Villalba, & Indelicato, 2006; Stone & Dahir, 2006).

Additionally, one commonly discussed focus of school counselor-teacher collaboration, where counselors can bring their skills in multicultural competency and advocacy, is to develop culturally responsive and relevant pedagogy within the classrooms (Bemak & Chung, 2005; Cholewa & West-Olatunji, 2008; Goh, Wahl, McDonald, Bissett, & Yoon, 2007; Lee, 2001). Stanard (2003) also asserts that school as well as community counselors need to be concerned with and actively involved in the efforts to establish culturally responsive school policies and programs, as well as to develop connections among schools, communities, and families to promote academic success for students of color in particular.

### **Potential Implications of This Study**

With an increased focus on closing achievement gaps between genders, ethnicities, and varying socioeconomic statuses of students, there is a need for school

counselors, other educators, and researchers to further understand within-group as well as between-group differences (Gordon Rouse & Austin, 2002; Meece et al., 2006). “Despite the increasing cultural diversity of the school-aged population, little research has examined how gender differences in motivation differ by ethnicity, race, or socioeconomic status” (Meece et al., 2006, p. 365; Meece & Kurtz-Costes, 2001). Similarly, limited research has been conducted focusing on Latino achievement motivations across various socioeconomic levels. The results from this study have potential implications for educational policy coinciding with the national push to incorporate evidence-based and culturally responsive practices into schools across the country. The nationally representative Education Longitudinal Study of 2002 will allow the results of this research to generalize to large segments of the population, making the findings more relevant and robust than if smaller, more regional samples were used. Additionally, this study may provide support for a theoretical lens through which school counselors may view and understand the issue of Latino male underachievement across socioeconomic groups. Finally, school counselors, teachers, and administrators may use the results of this study to inform practice through the interventions, teaching strategies, and school policies they employ aimed at raising all students’ achievement and attainment.

### **Purpose of the Study**

The purpose of this study is to use Eccles et al. (1983) Expectancy Value Theory of motivation and tenth grade reading achievement scores to identify the factors that predict high school graduation for Latino males from various socioeconomic levels.

## **Research Questions**

The following research questions will be addressed in this study:

1. How do motivational factors and tenth grade reading achievement scores predict high school graduation for Hispanic males?
2. To what extent do motivational factors and tenth grade reading achievement scores differ among Hispanic males from varying levels of SES?

## **Hypotheses**

The following null hypotheses correspond to the research questions listed above:

1. Student motivational factors and tenth grade reading achievement scores do not predict student high school graduation for Hispanic males.
2. There is no difference in motivational factors and tenth grade reading achievement scores among Hispanic males from varying levels of SES.

## **Theoretical Framework**

The achievement motivations of high school Latino males will be examined from the framework of Expectancy-Value theory of motivation proposed by Eccles and her colleagues (1983), and this theory will guide the selection and operationalization of variables in this study. This theory posits that motivation is influenced by expectancy and task value beliefs, and that these beliefs impact a person's performance or achievement (Eccles et al., 1983; Wigfield & Eccles, 2002). According to Eccles and her colleagues, expectancies are people's beliefs about how well they will do on a given task, and are influenced by beliefs such as self-concept of ability, perception of task difficulty, perceptions of others' expectations, causal attributions, and locus of control (Eccles et al., 1983; Wigfield & Eccles, 2002). Task values, on the other hand, are influenced by the attainment value of the task, the intrinsic or interest value of the task, and the utility value of that task for achieving a future goal (Eccles et al., 1983).

This theory suggests that there are multiple factors that make up the broader concept of motivation, and that these factors can be based on personal experiences, perceptions, and one's social and cultural context. The inclusion of cultural and social influences in this theory echoes the emphasis on context and environment that is characteristic of ecosystemic theories (Amatea & Sherrard, 1994; Amatea & West-Olatunji, 2007a; Bronfenbrenner, 1986). In this way, motivation can be viewed in this study not as a simple intrapsychic characteristic, but rather as a set of factors that are influenced largely by environment, experience, and context (Amatea & Sherrard, 1994; Neill & Kniskern, 1982). Previously, Expectancy-Value theory has been applied frequently to motivation and achievement in mathematics, but not as often with reading, graduation, or Latino students (Meece, Glienke, & Burg, 2006). Specifically, this study will use the constructs from Expectancy-Value Theory in addition to students' reading achievement scores to understand the achievement motivations and educational attainment of Latino males. This theory will be explored further in Chapter 2 (Literature Review).

### **Methodology for the Study**

Data from the Education Longitudinal Study of 2002 (ELS:2002) will be analyzed to understand how high school Latino males' motivations for academic success and their reading achievement scores predict graduation from high school. The ELS:2002 database will be used for two main reasons. First, the ELS:2002 survey is a longitudinal study consisting of a large, nationally-representative sample of participants. Second, the students surveyed in the ELS:2002 represent more recent high school students than the participants of earlier Department of Education longitudinal studies, and would therefore represent more current trends in educational motivation and achievement.

The variable selection and data analysis for this study will be guided by Eccles' Expectancy-Value Theory (1983). Confirmatory factor analysis will be used to group questionnaire items into factors representing constructs from Expectancy-Value Theory, and these factors, in addition to students' reading achievement scores in 10<sup>th</sup> grade, will be used in a structural logistic regression model to predict high school graduation for Latino male students. The data will also be examined to assess significant differences in predictive motivation factors and reading achievement scores across varying levels of SES for these Hispanic males. Further details about the Education Longitudinal Study of 2002 and the data analysis can be found in the methodology chapter (Chapter 3).

The following chapters will provide a more thorough explanation of the background of the current achievement gap for Latino males and the way this problem will be investigated in this study. Chapter 2 will contain a review of the relevant literature and an explanation of the theoretical framework that guides the study. Chapter 3 will explain the research methodology and data analysis procedures to be used, as well as provide further information about the Education Longitudinal Study of 2002. Chapter 4 will review the results of the data analyses, and Chapter 5 will contain an in-depth discussion of the results and the implications of the findings.

## CHAPTER 2 LITERATURE REVIEW

The purpose of this study is to use Eccles et al. (1983) Expectancy Value Theory of motivation and tenth grade reading achievement scores to identify the factors that predict high school graduation for Latino males from various socioeconomic levels. This chapter contains a review of the evidence and literature relevant to the present investigation predicting graduation from motivational data and reading achievement scores. Additionally, expectancy value theory will be reviewed and previous studies concerning motivational factors, reading achievement, and educational attainment will be discussed.

### **Problem of Achievement Gap**

The term “achievement gap,” often cited in both professional and non-professional literature, essentially attempts to describe differences in achievement between groups of people, most notably among students of varying gender, ethnicities, and socioeconomic status (SES). Previous studies have shown that boys are falling behind their female counterparts in many subject areas, most significantly in reading and writing (NCES, 2007; Planty et al., 2008). The gender gap appears to be greater for students from low socioeconomic backgrounds and in particular for Latino and African American males (Planty et al., 2008). The gender and cultural achievement gap, as well as the gap between lower and higher socioeconomic status groups, has been documented for many decades in the United States (Children’s Defense Fund [CDF], 2005; Freeman, 2004; NCES, 2007; Planty et al., 2008). Additionally, gender, cultural, and SES differences in achievement have been shown to exist internationally (Berliner, 2006; Francis & Skelton, 2005; OECD, 2003; West & Pennell, 2003). Clearly, schools

are not meeting the needs of millions of male students each year, and more often these boys are students of color and come from lower socioeconomic backgrounds (Bemak & Chung, 2005; Cholewa & West-Olatunji, 2008; Education Trust, 2005a, 2005b; KewalRamani et al., 2007; Planty et al., 2008). First, data about the general achievement gap between males and females will be presented, then literature specific to the achievement gap between Latino students and White students will be discussed, followed by a presentation about information about the impact of poverty on academic success.

### **Gender Achievement Gap**

For several decades, through the National Center for Education Statistics, the U.S. Department of Education has tracked educational and demographic data on a wide range of academic constructs for elementary, middle, and high school age groups. Scores from the primary cognitive assessment used by the NCES, the National Assessment of Educational Progress survey (NAEP), have consistently shown the differences in achievement between males and females, most evident in the subjects of reading and writing (Planty et al., 2008). For example, for each grade level surveyed, a significantly higher percentage of females than males performed at or above the Basic, Proficient, and Advanced levels in reading, while more males than females annually performed below the Basic achievement level (Planty et al., 2008). Furthermore, in 4<sup>th</sup>, 8<sup>th</sup> and 10<sup>th</sup> grades, female students demonstrated significantly higher average writing scale scores than did their male peers for 2007 (Planty et al., 2008). As a whole, school-aged males are clearly not performing as well as their female classmates in reading and writing.

Gender differences in educational attainment also exist. For example, from 2007 to 2017, NCES data projects that men are expected to represent only 43% of total undergraduate enrollment, indicating that women are going on to pursue undergraduate degrees at a significantly higher rate than males (Adebayo, 2008; Peter, Horn, & Carroll, 2005; Planty et al., 2008). This gender gap in educational attainment is evidenced across all ethnic groups, with females earning close to two thirds of the postsecondary degrees awarded to African American, Latino, and Native American students (Blackhurst & Auger, 2008).

While educational achievement and attainment levels demonstrate students' abilities to perform well on standardized tests and make passing grades, they do not measure student effort or attitudes toward academics. One NCES national longitudinal study revealed that male students repeatedly reported schoolwork to be less meaningful on average than did the females (Freeman, 2004). When asked how interesting students found most courses, males answered "quite or very interesting" less often than did the females. Similarly, female students reported feeling that their school learning would be "quite or very important" consistently more than did the males (Freeman, 2004). Female twelfth graders also reported that they "often or always" tried to do their best work on average more often than their male counterparts. When asked how often they fooled around in class, males responded "often or always" more frequently than did their female classmates (Freeman, 2004; NCES 2002). Furthermore, literature has often focused on the prevalence of and negative effects of boys' attitudes that success in school is not "macho" or "cool" (Francis, 2000, Francis & Skelton, 2005; Sax, 2007), and that studying is not as socially acceptable for them (Van Houtte, 2004). In

particular, as Latino boys progress through school, they tend to view lower achieving male peers more positively than higher achieving males, indicating a possible social acceptability of lower achievement for these culturally diverse boys (Taylor & Graham, 2007).

Males are not only significantly behind in test scores and graduation rates. As a group, they also report fewer achievement-related behaviors and less classroom compliance than their female counterparts, which can often serve as indicators of motivation for school success. Boys more often come to school unprepared, as measured by bringing materials and homework to class (Jianzhong, 2006; NCES, 2007). Additionally, males on average fail to complete or hand in assignments more often than females, although there has been a slight improvement for the males in the frequency of turning in work over time (NCES, 2002). Girls are overrepresented in the advanced level courses (especially English classes), are more often the valedictorians, and have fewer discipline referrals than do their male counterparts (Clark et al, 2006; NCES, 2005). In fact, boys (and more often culturally diverse boys) are referred to the office and receive disciplinary consequences over four times as often as girls (Skiba, Michael, Nardo, & Peterson, 2002), and are more likely to be viewed as “problem” students (Lopez, 2003). Boys also make up more than two-thirds of the special education referrals in the United States (McIntyre & Tong, 1998; Skarbrevik, 2002; Smith, 2007; Wehmeyer & Schwartz, 2001). Males are more likely to be diagnosed with Attention Deficit Hyperactivity Disorder than females, which may result from gender differences in the presentation of behaviors associated with this diagnosis (Sciutto, Nolfi, & Bluhm, 2004). Males are almost twice as likely as females to be retained in a

grade and are much more likely to drop out of school completely (Lopez, 2003; NCES, 2006).

### **Cultural Achievement Gap**

Data from the U. S. Department of Education and professional school counseling and education literature indicates a continuing achievement gap between White students and students of color in most subject areas (Bemak & Chung, 2005; Education Trust, 2005a, 2005b; Howard, 2003; KewalRamani et al., 2007; NCES, 2007; Planty et al., 2008). In comparison with White students, Hispanic students more often performed below the Basic level in across grade levels (NCES, 2007). Additionally, the percentage of culturally diverse students scoring at or above Basic is significantly below that of their White peers across grade levels (Howard, 2003; NCES, 2007). These gaps in achievement are especially pronounced in the subject of reading (see table 2-1, NCES, 2007). On the 2007 national reading achievement tests, Hispanic students averaged 25 points lower than White students (Planty et al., 2008). These cultural gaps in reading achievement scores have held relatively constant since 1992 (Llagas & Snyder, 2003; Planty et al., 2008).

Similar cultural gaps have existed since the early 1990s in mathematics as well, with Hispanic students averaging scores far below White students at the 4<sup>th</sup> and 8<sup>th</sup> grade levels on the NAEP (Planty et al., 2008). White students also outperformed their Hispanic counterparts in writing achievement scores across all grade levels (Planty et al., 2008). The previously discussed gender achievement gaps are especially pronounced for culturally diverse students (Chatterji, 2006; Lopez, 2003; Meece et al., 2006). Gender differences in motivation may also exist within ethnic groups, with research indicating that Latina and African American high school girls report being more

motivated by homework, understanding class material, and gaining knowledge to help them in the future as compared to their respective male peers (Gordon Rouse & Austin, 2002).

Table 2-1. Percentage distribution of students across reading achievement levels, by race/ethnicity and grade: 2007

Grade and level	Total <sup>1</sup>	White	Black	Hispanic	Asian/ Pacific Islander	American Indian/ Alaska Native
<b>4th grade</b>						
Below basic	33	22	54	50	23	51
At or above basic	67	78	46	50	77	49
At or above proficient	33	43	14	17	46	18
At advanced	8	11	2	3	15	4
<b>8th grade</b>						
Below basic	26	16	45	42	20	44
At or above basic	74	84	55	58	80	56
At or above proficient	31	40	13	15	41	18
At advanced	3	4	#	1	5	2

# Rounds to zero.

<sup>1</sup> Total includes races/ethnicities not separately shown.

NOTE: Detail may not sum to totals because of rounding. The reading data include students for whom accommodations were permitted. For a discussion of the reading achievement level definitions, see <http://nces.ed.gov/nationsreportcard/reading/achieve.asp>. Race categories exclude persons of Hispanic ethnicity.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 Reading Assessments and NAEP Data Explorer, retrieved January 25, 2008, from [nces.ed.gov/nationsreportcard/nde/](http://nces.ed.gov/nationsreportcard/nde/).

## Dropout and retention rates

As previously discussed, achievement gaps between populations are often demonstrated through outcome measures other than test score data. For example, the cultural achievement gap can also be seen in retention and dropout rates. In 2006, Hispanic students dropped out at an alarming rate of 22% in comparison to Black students (11%) and White students, who dropped out at a rate of 6% (Planty et al., 2008). While some educators cite students' immigrant status as an explanation for this significant difference in dropout rates, even when one looks only at American-born

children, Hispanic students have a higher dropout rate than any other ethnic group (Llagas & Snyder, 2003).

In addition to differences in achievement levels, culturally diverse students are often overrepresented in areas of special education (MacMillan, Gresham, Lopez, & Bocian, 1996). Research suggests differences in gender and cultural expressions and classroom expectations lead to misunderstandings and inappropriate referrals for special education services (MacMillan et al., 1996; McIntyre & Tong, 1998; Neal, McCray, Webb-Johnson, Bridgest, 2003). Furthermore, Latinos are greatly underrepresented in services for gifted students (Howard, 2003; Smith, 2007). Latino students are also less likely than White students (and equally as likely as other multicultural students) to enroll in and complete advanced level courses in high school (Llagas & Snyder, 2003). For example, an analysis of transcript data from the ELS:2002 study revealed that only 16% of Hispanic high school graduates in 2004 earned credit for an advanced placement or International Baccalaureate class, compared to a third of White students and a quarter of Black students (Planty, Bozick, & Ingels, 2006). Additionally, Latino students are more likely than White students to be expelled or suspended from school at some point during their 7<sup>th</sup> to 12<sup>th</sup> grade school years (Llagas & Snyder, 2003).

### **Postsecondary enrollment and attainment**

Beyond high school, a cultural achievement gap persists in post-secondary educational attainment (Saenz & Ponjuan, 2009). Significant cultural differences in the rates of immediate college enrollment (enrolling in college immediately after completing high school) are evident throughout recent decades: White students enrolled at 69%, African American students enrolled at 55%, and Hispanic students enrolled at a rate of

58% in 2006, and these differences have fluctuated little over time (Planty et al., 2008). Additionally, gender differences in the educational attainment across ethnic groups remain significant, with a greater percentage of females of each ethnicity attaining a bachelor's degree or higher in 2007 (Blackhurst & Auger, 2008; Planty et al., 2008). For example, 32% of White males between the ages of 25 and 29 earned at least a bachelor's degree, while 19% of African American males and only 9% of Latino males earned this degree (Planty et al., 2008). In contrast, 40% of White females, 20% of African American females, and 15% of Latinas earned at least bachelor's degree (Planty et al., 2008). According to Goldenberg, Gallimore, Reese, & Garnier (2001):

A variety of factors have been nominated and investigated as contributing to the disproportionate underachievement of many ethnic and racial minority groups in our schools, e.g., poverty; cultural and linguistic discontinuities between home and school; the hidden curriculum of the classroom that privileges Euro-American, middle-class experiences; discrimination; and low aspirations or expectations rooted in inequalities and discrimination. (p. 575)

Clearly, a cultural gap persists in educational attainment as well as academic achievement, with Latino students attaining high school and postsecondary degrees much less frequently than their non-Hispanic peers.

### **Socioeconomic Achievement Gap**

In addition to gender and cultural achievement gaps, differences in achievement between low and high SES students are numerous and substantial, and are well documented in the literature (Amatea & West-Olatunji, 2007b; Berliner, 2006; Blair, Blair, & Madamba, 1999; Chatterji, 2006; Duncan & Brooks-Gunn, 2001; Flowers & Flowers, 2008; Jones & Myhill, 2004; Pagani, Boulterice, Vitaro, & Tremblay, 1999; Smith, 2007; Varlas, 2005). In addition, achievement gaps across socioeconomic status levels exist for all ethnic groups, including Latino students (Berliner, 2006; Ma,

2000). Flowers and Flowers (2008) found that family income had a positive effect on the reading achievement of culturally diverse high school students. Family poverty also decreases students' abilities to compete academically with their peers, predicts academic failure, and predicts students being in grade levels below their age group (Pagani et al., 1999).

Literature has also demonstrated a frequent interconnection between SES and ethnicity: while the majority of children in poverty in the United States are White, roughly 60% of Latino and African American students come from families situated near or below the poverty line (Berliner, 2006; Planty et al., 2008; Smith, 2007). In 2006, approximately 26% of Hispanic students were living below the poverty line, in comparison to only 10% of White students (Planty et al., 2008). Significantly larger percentages of culturally diverse students than White students attend high poverty schools, which are defined as schools where over 75% of students qualify for free or reduced lunch (Planty et al., 2008). In particular, roughly one third of Hispanic students attend a high poverty school, and almost 60% of Hispanic children attend schools where over 50% of the students qualify for free or reduced lunch programs (Llagas & Snyder, 2003).

Additionally, professional literature points to the connection between poverty and gender: for reading in particular, the achievement gap between boys and girls is even wider for economically disadvantaged students than for middle class students (Chatterji, 2006; Francis & Skelton, 2005). Boys of lower socioeconomic status perform less well than lower income girls on achievement tests and exams, nationally and internationally (Francis & Skelton, 2005; Planty et al., 2008). Additionally, researchers have found that

low-income males may be perceived less favorably by their teachers when compared to low-income females or higher income males (Auwarter & Aruguete, 2008).

Many students from low SES families start school disadvantaged due to a lack of prenatal care, health insurance, immunizations, and good nutrition (Berliner, 2006; CDF, 2005; Chatterji, 2006; Gutman, Sameroff, & Cole, 2003). Woolley and his colleagues (2008) also found that poor physical conditions associated with lower SES contributed to lower achievement in reading and mathematics, and that the poor conditions had more of an effect on achievement as students progressed through school. In addition, students from low income families may be at risk of lower achievement because of limited exposure to environmental stimulation at home such as books, cultural events, and scientific or other costly enrichment activities (Chatterji, 2006; Pagani et al., 1999). For example, gaps in reading achievement have been shown to increase over the summer months as wealthier students have greater access to educational materials and experiences between school years when compared to students in poverty (Berliner, 2006; Cooper, Nye, Charlton, Lindsay, & Greathouse, 1996).

High poverty areas of the country routinely lack high quality teachers and counselors, and have inappropriate funding for educational institutions and materials such as computers, library books, and supplemental enrichment programs (Amatea & West-Olatunji, 2007b; CDF, 2005; Smith, 2007). In fact, a report by the Education Trust (2005) found an average funding gap between low- and high-poverty schools and schools with higher proportions of culturally diverse students of over \$1300 per student. Additionally, teachers in high-poverty schools turn over at greater rates than those in low-poverty schools (Planty et al., 2008), leading to less continuity and stability in these

higher poverty schools. Furthermore, more of the nation's students in poverty are located in urban settings, which presents an additional set of stressors that can affect achievement (Berliner, 2006; Lopez, 2003). Thus, even if students themselves are not in poverty, the quality of their education may be negatively impacted if they live in a high-poverty area or attend a high-poverty school (Berliner, 2006; The Education Trust, 2005b).

Teachers' expectations also vary based on students' socioeconomic status. Teachers are also more likely to rate low-income males as less academically capable, and to have lower educational expectations for these young men when compared to both females and higher income males (Auwarter & Aruguete, 2008; Diamond, Randolph, & Spillane, 2004). Furthermore, when teachers rate low-SES boys less favorably than high-SES boys but rate low-SES girls more favorably than high-SES girls, this indicates an interaction effect of gender and SES on teacher perceptions of ability and academic expectations (Auwarter & Aruguete, 2008). In other words, the low-income boys might be particularly impacted by negative teacher expectations and evaluations (Auwarter & Aruguete, 2008). Finally, teachers may believe that student SES determines academic success, and may feel ineffective or lack the motivation to intervene because SES is out of their control, which may further perpetuate achievement issues with low SES students (Auwarter & Aruguete, 2008).

Beyond the school grounds, students raised in low income neighborhoods may lack successful academic role models in the community to serve as visible, motivating examples of achievement (Berliner, 2006). In fact, research suggests that the socioeconomic environment plays a stronger role than genetics in the expression of

intelligence for individuals living in poverty than for wealthier individuals, resulting in a misleading perception that all students from low SES backgrounds are unintelligent or unmotivated (Berliner, 2006; Duncan & Brooks-Gunn, 2001; Turkheimer, Haley, Waldron, D'Onofrio, & Gottesman, 2003). Clearly, school counselors need to be aware of how the environment of poverty profoundly impacts students' cognitive development and academic performance, and perhaps also the expression of motivation for these students.

Like the gender and cultural achievement gaps, the difference in achievement between higher and lower SES students is demonstrated in educational attainment data. ELS:2002 data reveals that 90% of the 10<sup>th</sup> grade dropouts for the 2002-2003 school year were from the bottom 3 quartiles of socioeconomic status (Hampden-Thompson et al., 2009). Since the 1970's, the difference between low and high income students in immediate college (2 or 4 year institutions) enrollment has generally decreased, although a significant gap still remains (Planty et al., 2008). Specifically, in 2006, 51% of low income students (lowest 20% of family incomes), 61% of middle income students (middle 60% of family incomes), and 81% of high income students (upper 20% of family incomes) enrolled in college immediately after completing high school (Planty et al., 2008).

Among a range of factors, student socioeconomic status represents the strongest predictor of academic performance for both culturally diverse groups and White students (Berliner, 2006; Blair et al., 1999). As a result, the influence of poverty on children's education represents the single biggest obstacle to achievement for students (Berliner, 2006; Jones & Myhill, 2004; Lee, 2005; Smith, 2007; Varlas, 2005).

Therefore, in their leadership positions school counselors represent key players in raising awareness and in improving the educational experiences of low-income students, and need to be aware of the significant impact of poverty on student achievement, motivation, and graduation (Amatea & West-Olatunji, 2007b; Lee, 2005; Stone & Dahir, 2006).

### **Masculinity and Intersectionality**

Connell's (1987; 1995) concept of subtypes of masculinities informs the interaction of gender, culture, and environment with achievement in school. Connell (1995) proposes that one's gender identity (masculine or feminine) is developed over time through an ongoing process of interaction with one's family and peers, and is set in the contexts of society, culture, school, and history. Given this socio-cultural view of the development of masculinity, Connell (1995) describes hegemonic masculinity as the prevailing or currently accepted expression of manhood in a society. In the United States, hegemonic masculinity is seen as White, middle-to-upper class, straight men (Connell, 1995; Hurtado & Sinha, 2008). Automatically based on this image, culturally diverse men, as well as men from low SES backgrounds and homosexual men, are devalued and seen as less "masculine" (Connell, 1987; 1995). These groups are marginalized because of their contrast to, or variance from, the White hegemonic masculinity (Connell, 1995). Because Latino high school males also experience these pressures and stigmas, it is important to recognize the range of expressions of masculinity (Blair et al., 1999; Hurtado & Sinha, 2008). Latino students also point to the presence of a traditionally Hispanic gender role pressure, *machismo*, that encourages young Latino men to be strong and tough, and that could impact the stance these young men take toward their education (Saenz & Ponjuan, 2009; The College Board, 2010).

There exists a need for increased understanding about diverse masculinities and for an exploration of the ways in which Latino boys from various socioeconomic groups experience achievement.

When discussing the experiences of any population, and particularly of disenfranchised populations within a society, one must consider the combined influences of multiple identities, or the intersection of identities. For example, identities can be cultural (Latino, African- American, Asian), socioeconomic (low SES, high SES), or gendered (male, female, gay, lesbian), among others. Shields (2008) emphasizes the need for research focusing on the intersection of identities as our society becomes more diverse. Moreover, the various identities to which a student belongs may interact to create unique influences on achievement. Blair et al. (1999) suggest that ethnicity can be “envisioned as a quality whose effects within the educational area are difficult, if not impossible, to separate from the class-based traits with which it is interwoven” (p. 553). Lopez (2003) discusses the cumulative impact of stigmatizing racial and gender processes on Latino students at both the micro (student-teacher interactions) and macro (system-wide problems at low-income or immigrant schools). For example, at the micro level culturally diverse males in many urban schools are singled out for security checks and stigmatized as being “troublesome” or problematic, and are often disciplined more often than their female or White counterparts (Lopez, 2003, Skiba et al., 2002). Additionally, at the macro level, the overwhelming lack of adequate resources and supplies combined with a less than challenging curriculum can lead to multicultural and low SES students to feel that their work and educational efforts are devalued, which can greatly impact achievement motivation (Lopez, 2003). While Blair

et al. discuss the intersection of ethnicity and socioeconomic status, Entwisle and her colleagues found that the intersectionality of being male, culturally diverse, and low-SES predicts reading achievement (Entwisle, Alexander, & Olson, 2007; Hurtado & Sinha, 2008). Clearly, current research on academic achievement and motivation needs to consider the complex contributions of gender, ethnicity, and socioeconomic status to understand Latino males' pathways to success.

### **Previous Approaches to Addressing Achievement Gaps**

Given the overwhelming statistics concerning male students (and Latinos in particular) and students in poverty who are underachieving and overrepresented in special education classes, research demonstrates that current educational practices may limit the success of millions of students (Cholewa & West-Olatunji, 2008; Haycock, 2006). After No Child Left Behind (2001), states and school systems have been held accountable for the existing achievement gaps, but data shows that the efforts to close these gaps have had mixed results (Berliner, 2006; The Education Trust, 2005a). For example, some improvements have been demonstrated at the elementary school levels but not at the secondary levels, and in some states the achievement gap in reading has narrowed, but only because the achievement of White students has declined (The Education Trust, 2005a). Current efforts are not working, and this may be because programs have been implemented without input from teachers, counselors, and parents. "Since many reform efforts are from the top down and are developed without significant school and community input, they often fail" (Ginsburg, Shapiro, & Brown, 2004, p. xix).

Perhaps another reason for the limited successes of current educational practices is because targeted populations have been historically viewed as monolithic groups, instead of recognizing the variance within groups and the significance of the intersection

of identities (Berliner, 2006). School counselors and other educators have identified “the continued need for conversation about the complex impact of race, gender, and socioeconomic status on academic achievement” in school (Dimmitt, 2003, p. 346). Therefore, when studying differences in achievement, there is a need “to disaggregate student data into as many combinations of subsets to understand the dynamic relationships that exist within and between groups” (Carpenter, Ramirez, & Severn, 2006, p. 123). There is a need to more clearly understand the various patterns of achievement motivation of Latino male students from a range of socioeconomic backgrounds.

### **Expectancy-Value Theoretical Framework**

Eccles and her colleagues (1983) developed and tested a social cognitive expectancy-value model of achievement-related choices, expanding upon the expectancy-value model proposed by Atkinson (1964). In the original Expectancy-Value Theory, Atkinson proposed that the strength of the achievement motive (or tendency to achieve) is derived from the sum of a person’s tendency to approach success and that person’s tendency to avoid failure (Atkinson, 1957; Spence & Helmreich, 1983). Furthermore, the strength of these two opposing tendencies is determined by the motive to approach success or failure, the probability (or expectancy) of an achievement-oriented behavior to result in success or failure, and the incentive value (task value) of success or failure (Spence & Helmreich, 1983). In subsequent years, other researchers have proposed additions and have elaborated on Atkinson’s Expectancy-Value Theory, choosing to focus more on cognitive and attribution processes that operate in real-life situations instead of a laboratory (Spence & Helmreich, 1983).

The Eccles et al. (1983) Expectancy-Value model represents a key example of this expansion of Atkinson's theory, in that it elaborates on several components of the original theory and incorporates a wider range of socio-cultural and psychological components (Eccles & Wigfield, 2000, 2002). The general premise of this expanded theory is that individuals' motivation for a task is influenced by expectancy-related and task-value beliefs, and that these beliefs directly impact individuals' performance, persistence, and task choices (Eccles et al., 1983; Wigfield & Eccles, 2000, 2002). Eccles et al. also include a socialization component that recognizes the role that the school (teachers, school counselors, and administrators), parents, and culture play in shaping student achievement beliefs and identity development (Meece, Glienke, & Burg, 2006), echoing the emphasis on context from ecosystemic perspectives (Bronfenbrenner, 1986). Below, the expectancy and task value components of this theory are explored in depth.

### **Expectancies**

In this model, expectancies are defined as personal beliefs about how well one will do on a given task in the near or distant future (Eccles et al., 1983; Wigfield & Eccles, 2000, 2002). Furthermore, Eccles et al. propose that expectancies are influenced by self-concept of ability, perception of task difficulty, perceptions of others' expectations, causal attributions, and locus of control (Eccles et al., 1983; Wigfield & Eccles, 2000, 2002).

Self-concept of ability is defined as "the assessment of one's own competency to perform specific tasks or to carry out role-appropriate behaviors" (Eccles et al., 1983, p. 82). Self-concept of ability is also referred to as competency beliefs in existing literature (Meece et al., 2006). Longitudinal research has shown that students' perceptions of

academic self-competence decline not only after elementary school, but also through middle school and high school (Jacobs et al., 2004). Gender differences in competency beliefs have been shown to exist as early as elementary school, and many fluctuate through middle school years and persist into high school years as well (Meece et al., 2006). For example, girls begin school with roughly similar (if not slightly more positive) perceptions of their language arts abilities as compared to boys, but this gender gap increases as students move through middle school into high school, with girls having significantly higher perceptions of language arts abilities in middle school and high school (Marsh & Yeung, 1998; Meece et al., 2006). Often, these perceptions of competence persist even when students perform equally well in these subject areas (Meece et al., 2006).

Evidence also suggests that boys' perceptions of their competence decline more sharply than girls throughout schooling, in both math and language arts (Jacobs et al., 2004). Interestingly, Howard (2003) found that culturally diverse high school students connect perceptions of their academic identities and competence to their gender and ethnicity. Counseling literature has drawn attention to the cultural mismatch, or discontinuity, that students of color may experience in schools when their culture is not reflected in the classroom experiences and expectations (Cholewa & West-Olatunji, 2008). Consequently, in efforts to achieve academic success, Latino students may feel that their school and cultural identities are at odds, which may present additional challenges to their motivation for success (Howard, 2003; Lopez, 2003). Finally, students' self concepts of ability, especially when supported by parents and teachers,

are strongly linked to academic achievement and motivation (Cokley, 2003; Wigfield & Eccles, 2000, 2002; Gordon, 1995).

Eccles et al. (1983) also suggest that gender differences in perceptions of task difficulty may exist, and may impact academic achievement behaviors by influencing self-concept of ability. While they admit that the effect of perception of task difficulty on achievement related behaviors is not clear, Eccles and her colleagues hypothesize that task difficulty may influence one's self-concept of ability and may mediate achievement expectancies (Eccles et al., 1983; Wigfield & Eccles, 2000, 2002).

While the importance of parental or teacher expectations and attitudes for student achievement has been researched and reported, Eccles et al. posit that the effect of these attitudes is mediated by the students' perceptions of parent and teacher expectations (1983). It has also been well documented that teachers' perceptions of students vary based on student characteristics such as gender, ethnicity, and social class (Auwarter & Aruguete, 2008; Diamond, Randolph, & Spillane, 2004), and that these perceptions have an impact on student effort and achievement (Howard, 2003). Teachers more often rate boys of all ages as less competent in reading and writing than girls (Tournaki, 2003). Furthermore, Palardy (1998) reported that teachers' beliefs about boys' and girls' literacy abilities impacted boys' achievement on the Stanford Achievement Test at young ages: when teachers held negative expectations for boys, they performed significantly worse than their female peers. Additionally, teachers more often report lower academic expectations and abilities for low-income students and for culturally diverse students than for students from wealthier families or from other ethnic backgrounds (Diamond et al., 2004). The teachers with lower expectations for low-

income and students of color also reported a decreased sense of responsibility for the students' learning processes, which often perpetuates academic disadvantages of these populations (Diamond et al., 2004). Over time, these teacher perceptions are communicated to students through repeated verbal and non-verbal interactions, students begin to see themselves as their teachers see them, and their performance may then begin to match these perceptions (Howard, 2003; Palardy, 1998).

Similar to teacher expectations, parent expectations vary depending on student gender and can influence students' beliefs about their academic abilities (Meece et al., 2006). Parents play a key role in the development of student values and interests not only by supporting or discouraging certain activities or pursuits for their children, but also by serving as role models and exemplifying the characteristics and skills that they think are important (Meece et al., 2006). High parental expectations for student educational attainment positively influenced the reading achievement (Flowers & Flowers, 2008), grade point averages (Somers, Owens & Piliawsky, 2008), and the educational aspirations (Flowers, Milner, & Moore, 2003; Howard, 2003) of multicultural high school students. Furthermore, Goldenberg et al. (2001) discredit the possible perception that parents of Latino students have low academic aspirations for their students, and instead found generally high levels of aspirations as expressed by the Latino parents in their longitudinal study. Additionally, the longer that parents of Latino students have been in the United States, the more likely they are to expect that their children go to college (Goldenberg et al., 2001). Research also shows that students of color who have expectations to complete high school also tend to have better grades,

suggesting that a future orientation can motivate students to achieve (Somers, Owens, & Piliawsky, 2008).

Eccles et al. (1983) also suggest that whether a student attributes success or failure to stable or unstable factors influences that student's expectancies for success. Weiner's attribution theory (1972) provides the foundation for this aspect of expectancy value theory. Certain types of attributions have been shown to predict differences in motivation and achievement outcomes (Perry, Stupnisky, Daniels, & Haynes, 2008). Banks and Woolfson (2008) found that students who see themselves as low achievers report less perceived control over poor school performance than students who saw themselves as higher achievers, indicating the connection between perceptions of competence and causal attributions.

Finally, a student's locus of control represents the extent to which a student perceives having control over their life or in a given situation (Eccles et al., 1983). Somers et al. (2008) found that belief in personal control was related to positive educational outcomes for culturally diverse high school students, and that this personal control may partially explain how educational intentions correlate with academic success. Additionally, Flowers, Milner, & Moore (2003) reported that high school students of color with higher levels of locus of control (beliefs in personal control) had higher academic aspirations as well. A greater sense of control was also found to differentiate more resilient and higher achieving culturally diverse students from lower-achieving peers (Gordon, 1995). Finally, Sciarra & Whitson (2007) noted that locus of control and self-efficacy are important variables to consider and include when researching the educational attainment of Latino youth.

## **Task values**

Task value is the importance a person places on succeeding or failing at a certain task (Eccles et al., 1983, Wigfield & Eccles, 2000, 2002). The task value is determined by the attainment value of the task, the intrinsic or interest value of the task, and the utility value of that task for achieving a future goal (Eccles et al., 1983; Wigfield & Eccles, 2000, 2002; Meece et al., 2006). Task values are influenced by cultural contexts and societal experiences, expectations, and influences (Taylor & Graham, 2007). Furthermore, researchers have found that task values (and gender differences in these values) are domain specific, or unique to a subject or task, and not universal (Jacobs et al., 2004).

As with expectancy beliefs, gender differences in task value have been shown at various age groups, with girls valuing language arts more than boys across all school years (Meece et al., 2006). Interestingly, this difference in valuing of language arts persists even though value perceptions declined overall for both boys and girls over the course of schooling (Jacobs et al., 2004; Meece et al., 2006). Because measures of attitudes of task value are subject to social desirability bias, other authors have attempted to understand task value through students' selection of admired peers (Graham, Taylor, & Hudley, 1998; Taylor & Graham, 2007). This line of research has demonstrated that 7<sup>th</sup> grade Latina and African American girls and White boys will rate higher achieving peers as more favorable and admirable, whereas Latino and African American boys will rate lower achieving peers as more respected, perhaps indicating the value that these students place on academic achievement (Graham, Taylor, & Hudley, 1998; Taylor & Graham, 2007). It is important to note that in early elementary grades, Latino, African American, and White boys and girls all rated higher achieving

peers as more admirable, which may suggest a differential socialization process that occurs as ethnic minority boys enter adolescence (Taylor & Graham, 2007).

Attainment value, described by Eccles and her colleagues (1983) as the importance a person places on doing well on a task, incorporates one's perception of the "task's ability to confirm salient and valued characteristics of the self (e.g., masculinity, femininity, competence), to provide a challenge, and to offer a forum for fulfilling achievement, power, and social needs" (p. 89). If a student sees himself as a skilled writer, he may be more inclined to register for a higher level English course that could offer a challenge and a chance to prove his competence in this subject area.

Intrinsic value is described simply as a person's interest and enjoyment in participating in an activity or task (Eccles et al., 1983; Wigfield & Eccles, 2000, 2002). Flowers (2003) found that culturally diverse high school students who read outside of school for enjoyment performed better on standardized reading achievement tests than their peers who did not read for pleasure. Another study demonstrated that teachers hold stereotypes that boys as a group are disinterested in writing and are not skilled readers (Jones & Myhill, 2004). Researchers have also found that boys value the task of reading less than girls, and see reading as less pleasurable (Schwartz, 2002; Smith & Wilhelm, 2002).

Finally, utility value is the usefulness of a given task for achieving some future goal (Eccles et al., 1983; Wigfield & Eccles, 2000, 2002). For example, a student may choose to take a certain class, not because they are interested in that class per se, but because taking that class allows them to pursue more interesting classes or activities in the future. Additionally, Eccles et al. (1983) suggest that the value of a task may be

mediated by sex roles, cultural experiences, perceptions of the cost of success (including effort, loss of valued alternatives, and psychological cost of failure), and affective experiences with similar tasks in the past. Gordon (1995) found that resilient students of color (those with better grades and higher academic motivation despite experiencing hardship) valued material gain more than their less resilient peers, and suggested that perhaps these students recognize the link between material gain and economic independence.

In this chapter, literature relevant to understanding the existing gender and socioeconomic achievement gaps for Latino students was reviewed, and expectancy value theory of motivation from Eccles and colleagues was presented as the guiding theoretical approach for this study. In the next chapter, the research design of this study as well as the national database to be used will be discussed. Finally, the proposed statistical analyses and procedures will be reviewed.

## CHAPTER 3 METHODOLOGY

The purpose of this study was to use Eccles et al. (1983) Expectancy Value Theory of motivation and tenth grade reading achievement scores to identify the factors that predict high school graduation for Latino males from various socioeconomic levels. The Education Longitudinal Study of 2002 (ELS:2002), a large, nationally representative, longitudinal database developed by the National Center for Education Statistics, was used to explore the relationship between aspects of motivation and reading achievement and graduation for Latino males. Specifically, this study addressed the following research questions: how do motivational factors and tenth grade reading achievement scores predict high school graduation for Hispanic males, and to what extent do these factors differ among Hispanic males from varying levels of SES? In this chapter, the Educational Longitudinal Study of 2002 (the national database to be analyzed in this study), the study participants, the selected research variables, and data analysis procedures are discussed.

### **Education Longitudinal Study of 2002**

The Education Longitudinal Study of 2002 (ELS:2002) represents the most recent addition to a series of national longitudinal studies conducted by the U.S. Department of Education's National Center for Education Statistics (NCES) that began in 1972 with the National Longitudinal Study of the High School Class of 1972 (Ingels & Scott, 2004). This study, along with its predecessors, is designed to provide policymakers and researchers with longitudinal and trend data about students' experiences within the education system, their subsequent postsecondary education access and attainment, and their entry into the labor market (Ingels & Scott, 2004). The structure and content

of the ELS:2002 data is designed to allow researchers to conduct studies at multiple levels, including cross-sectional profiles, longitudinal analyses, intercohort comparisons with cohorts from previous NCES studies, and international comparisons (Ingels, Pratt, Rogers, Siegel, & Stutts, 2004; Ingels & Scott, 2004). The ELS:2002 study base-year elements included a survey of high school sophomores; cognitive tests in reading and mathematics; a survey for parents, English and mathematics teachers, and school administrators; a school facilities checklist; and a library questionnaire (Ingels et al., 2004; Ingels & Scott, 2004).

A two-stage stratified probability sample design was used in the ELS:2002 study: the first stage of selection was schools, and the second stage of selection was students (Ingels et al., 2004; Ingels & Scott, 2004). The ELS:2002 base-year study was conducted using a nationally representative sample of 752 public, Catholic, and private schools in the spring of the 2001–02 academic year (Ingels & Scott, 2004). From these 752 schools, 743 principals and 718 librarians completed questionnaires (Ingels & Scott, 2004). Within the participating schools, 17,591 eligible 10<sup>th</sup> grade students were randomly selected to participate, and 15,362 actually completed a base-year questionnaire (Ingels et al., 2004; Ingels & Scott, 2004). In addition to the student respondents, 13,488 parents and 7,135 teachers also completed questionnaires about themselves, the participating students, their interactions with the school, and their activities (Ingels & Scott, 2004). In the present study, the student is assumed to be the unit of analysis and data is taken from the student survey. Students answered questions about their background, school experiences and activities, future goals and

plans, employment, extracurricular activities, and attitudes toward education (Ingels & Scott, 2004).

The ELS:2002, like other studies through NCES, incorporates a weighting scheme to account for the unequal probabilities of selection of schools and students in the base-year sample, and to adjust for the unequal response rates of schools and students (Ingels & Scott, 2004). The student weight is a cross-sectional weight that allows for researchers to generalize results to the population of questionnaire-eligible 10<sup>th</sup> grade students in the 2001-2002 school year (Ingels & Scott, 2004). “The purpose of creating these panel weights was to facilitate analyses designed to examine how the two student populations change over time,” and can be used to conduct intracohort or cross-cohort analyses (Ingels et al., 2007, p. 153). For example, in this study the student panel weight can be used to look at a cohort of sophomores in 2002 and determine the proportion of that cohort that graduated in 2004.

The ELS:2002 also uses design effects, which measure “the impact of the departures of the ELS:2002 complex sample design from a simple random sample design on the precision of sample estimates” (Ingels et al., 2007, p.143). For first follow-up questionnaire data from all respondents, the average design effect for the ELS:2002 was 2.23, while the average design effect for the NELS:88 was 3.73, indicating that the ELS:2002 panel sampling was more efficient than the NELS:88 panel sampling for each respective sophomore class (Ingels et al., 2007). Additionally, when broken down into subpopulations (including dropouts), the ELS:2002 remained more efficient on average than the NELS:88 (Ingels et al., 2007).

## Participants

Of the participating students from the base-year ELS:2002 cohort, half are male and half are female (Ingels & Scott, 2004). Additionally, 36% of the responding sophomores identify themselves as belonging to a culturally diverse group (Black/African-American, Asian, American Indian, or Hispanic/Latino), 60% identified as White, and the remaining 4% identify themselves as having more than one cultural background (Ingels & Scott, 2004). Of the sophomores in the ELS:2002 base year study, Hispanic students comprise 16% of the respondents, representing the largest culturally diverse group among those surveyed (Ingels & Scott, 2004). During their sophomore year in 2002, most students (92%) reported that they attended public schools, 4% attended Catholic schools, and 3 % attended other private schools (Ingels & Scott, 2004). Additionally, of the base-year respondents, 30% attended an urban school, 50% attended a suburban school, and 20% attended a rural school (Ingels & Scott, 2004). For this study, only Latino males were selected for analysis.

In addition to demographic information about the participants, Ingels and Scott (2004) provide data on the educational expectations and the tested achievement levels of the 2002 sophomore class who participated in the ELS:2002 base-year study. For example, 90% of students reported a definite expectation of their future educational attainment, and a large majority expressed a goal of attaining a college degree or higher (see Table 3-1). The ELS:2002 also provides data on students' reading achievement levels as measured by their reading standardized score (T-score) on the National Education Assessment Program, an examination that is administered in conjunction with the ELS:2002 survey (Ingels & Scott, 2004).

Table 3-1. Percentage of high school sophomores, by student's highest level of education expected: 2002

Level of Education	Percent
Less than high school	0.9
High school completion or GED	7.3
Attend or complete 2-year community college or vocational school	6.4
Attend 4-year program, but not complete degree	3.9
Graduate from college	35.8
Obtain master's degree or equivalent	19.7
Obtain Ph.D., M.D., or other advanced degree	16.1
Don't know	9.8

NOTE: Details may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002).

### Access

Access to the ELS:2002 was obtained by following all NCES protocol relating to public use data access procedures as indicated on the study website ([http://nces.ed.gov/surveys/els2002/avail\\_data.asp](http://nces.ed.gov/surveys/els2002/avail_data.asp)). The public use data can be obtained in one of several ways, depending on the particular data needed. For public use data including only base-year and first follow-up surveys, interested parties can simply contact NCES through electronic mail for a CD copy of the public use data files and the Electronic Codebook (ECB), and this data will be mailed to them free of charge. For access to public use data that includes the second follow-up information, which was needed for this study, data can be downloaded to a personal computer using a new Education Data Analysis Tool (EDAT) computer application by accessing the EDAT website (<http://nces.ed.gov/edat/>) and following the command prompts. Additional protocol exists to obtain access to ELS:2002 restricted use data files that contain personally identifiable information because of the sensitive and confidential nature of these data.

## **Research Variables**

### **Dependent Variable**

The dependent variable in this study was graduation from high school, and was a dichotomous variable based on whether or not a student graduated from high school on time. The original categories of responses for this variable, F2F1HSST, included “fall 2003 – summer 2004 graduate,” “pre-fall 2003 graduate,” “received certificate of attendance,” “received GED,” “no high school credential as of summer 2004,” and “graduated, unknown if by August 2004.” For the purposes of this study, only those students who graduated on-time (fall 2003 – summer 2004) or early (pre-fall 2003) were considered as graduating, so this variable was recoded into a new variable, Graduationyesno, with only two categories, “non – high school grad” and “high school grad.”

### **Independent Variables**

Graduation may be influenced by multiple factors relating to previous achievement and motivation. Independent variables for this study were selected based on Expectancy-Value theory of Eccles and her colleagues (1983; Wigfield & Eccles, 2000). ELS:2002 student questionnaire items were selected that were similar to the original Expectancy-Value questionnaire (Eccles et al., 1983; Wigfield & Eccles, 2000) and that related conceptually to these theoretical constructs, and these items were then examined using confirmatory factor analysis to determine the appropriateness of the factors. Additionally, several composite variables had already been created and included in the second follow-up dataset, and these were included when appropriate. See Table 3-2 for a summary of the constructs and applicable questionnaire variables from the ELS:2002 study.

Table 3-2. Variable label, name, and description

Variable Label	Variable name	Variable description
Socioeconomic status	BYSES2	Composite SES variable
Reading achievement	BYTXRSTD	Standardized reading test score
How far parent expects student to go in school	BYP81	From the parent survey
How far English teacher expects student to go in school	BYTE20	From the teacher survey
BY English self-efficacy scale	BYENGLSE	Composite variable-comprised of BY89C, BY89F, BY89I, BY89K, BY89M
BY control expectation scale	BYCONEXP	Composite variable comprised of BY89E, BY89N, BY89Q, BY89T
Parents expect success in school	BYS27I	Ordinal variable
Teachers expect success in school	BYS27H	Ordinal variable
Student perception of school counselor's desire for student after high school	SCE	Reverse coded from BY66E by researcher
How far in school student thinks he will get	BYSTEXP	Composite variable based on BY56
BY Instrumental motivation/utility interest scale	BYINSTMO	Composite variable comprised of BY89D, BY89H, BY89P
Enjoys reading	ENJOY	Composite variable comprised of BY87B, BY87D, BY87E-created by researcher
Importance of good grades	BYS37	Ordinal variable
Importance of good education	BYS54O	Ordinal variable
How much likes school	BYS28	Ordinal variable
Classes are interesting and challenging	BYS27A	Ordinal variable
High school graduation status as of August 2004	GRADUATIONYESNO	Dichotomous variable created from F2F1HSST; dependent variable

Note: BY in variable label, name, and description categories is used to represent scores from the base year survey.

## **Expectancy variables**

Students' expectancies for academic achievement are influenced by their self-concept of ability, perception of task difficulty, perception of others' expectations, causal attributions, and locus of control (Eccles et al., 1983). Students' self-concept of ability suggests their general sense of self-worth and competence and were comprised of ELS:2002 questionnaire items such as "How well do you do the following: understand spoken English, speak English, read English, write English," and "I am confident I can do an excellent job on my English assignments." Perceptions of task difficulty describe how hard a task will be to master, and were assessed by items such as "I'm certain I can understand the most difficult material presented in English texts." Perceptions of others' expectations are measured directly in the ELS:2002 base-year student questionnaire, asking students about what key adult figures in their lives expect for them after high school. This construct included questions like "How far in school do you think your mother and father want you to go?" where students select from a range of postsecondary education options. Causal attributions are the extent to which students attribute success with stable or unstable factors, such as ability or luck. This construct was measured by questionnaire items such as "If I want to learn something well, I can." Finally, locus of control represents the degree to which students feel they have control over a situation or a task. This construct was assessed by questionnaire items such as "I am certain I can master the skills in my English class."

The ELS:2002 database included several composite variables created by NCES through principle factor analysis from multiple questionnaire items. For example, the BYENGLSE variable is a scale of students' base year English self-efficacy, with higher scores indicating higher self-efficacy. This composite variable was comprised of five

questionnaire items: “I’m certain I can understand the most difficult material presented in English texts,” “I’m confident I can understand the most complex material presented by my English teacher,” “I am confident I can do an excellent job on my English assignments,” “I’m confident I can do an excellent job on my English tests,” and “I’m certain I can master the skills being taught in my English class.” The BYENGLSE variable addresses the self-concept of ability, the perception of task difficulty, and the locus of control constructs from Expectancy-Value theory.

Another composite variable created by NCES using variables from the ELS:2002 database was the BYCONEXP variable, which is a scale that measures respondents’ success expectations at the base year. Higher values represent higher expectations of success in academics. This variable was created using principle factor analysis and the base year student weight from four questionnaire items: “When I sit myself down to learn something really hard, I can learn it,” “If I decide not to get any bad grades, I can really do it,” “If I decide not to get any problems wrong, I can really do it,” and “If I want to learn something well, I can.” The BYCONEXP variable addresses the causal attributions construct within Expectancy-Value theory.

### **Task value variables**

Task value can be defined as the importance of success on a given activity. Task value is influenced by attainment value, intrinsic/interest value, and utility value, as well as cost of success (Eccles et al., 1983). Attainment value, the importance of succeeding on a task, was measured by questionnaire items such as “How important are good grades to you?” Intrinsic or interest value is the amount of enjoyment a person gains from participating in an activity, and was measured using questionnaire items such as how much students agree with the statement “Because reading is fun, I

wouldn't want to give it up." Utility value, or the extent to which succeeding at a task will help a person attain some future goal, was measured using ELS:2002 questionnaire item such as students' agreement with the statement "I study to get a good job." Finally, cost of success is the amount of time or energy that is devoted to a task that takes focus away from other activities. For example, cost of success was measured by using items such as "In your current English course, how much time do you spend on homework each week, both in and out of school?"

As with the NCES-created composite variables that address student expectancies, the ELS:2002 also has a composite variable that addresses task values. The BYINSTMO variable measures base year respondent's instrumental (extrinsic) motivation or utility value, with higher scores representing higher instrumental motivation. In Expectancy-Value theory, this composite variable, in addition to other questionnaire items, addresses both the intrinsic/interest value construct as well as the utility value component. The BYINSTMO variable was created using principle factor analysis and the base year student weight from three questionnaire items: "I study to get a good job," "I study to increase my job opportunities," and "I study to ensure that my future will be financially secure."

### **Reading achievement**

An additional independent variable in this study was reading achievement as measured by the reading standardized score (T-score) on the National Education Assessment Program, administered as a part of the ELS:2002. This variable is coded as BYTXRSTD in the ELS:2002 database. This score represents a norm-referenced of reading achievement. Reading scores are based on three levels of mastery:

Simple reading comprehension, including reproduction of detail and/or the author's main thought; (2) Ability to make relatively simple inferences beyond the author's main thought and/or understand and evaluate abstract concepts; and (3) Ability to make complex inferences or evaluative judgments that require piecing together multiple sources of information from the passage. (Ingels & Scott, 2004, p. 5)

### **Data Analysis**

The data analysis for this research depended on determining the best operationalization of the constructs used in the model. Before analyses could be conducted using the data from the ELS:2002, the raw data had to be conditioned and some variables needed to be recoded for ease of analysis. To condition the data, the computer program SPSS was used. Additionally, confirmatory factor analysis was used to create composite variables from selected ELS:2002 questionnaire items, guided by constructs within expectancy-value theory. Confirmatory factor analysis represents one statistical tool within the larger category of structural equation modeling, or covariance structure analysis (Thompson, 2004). Factor analysis is used to determine which variables (or question items) clump together and correlate more strongly with each other than with other variables to create factors, or groups of closely related variables (Aron & Aron, 1999, Kline, 2005). Factors may also be defined as underlying latent variables, or variables that cannot be directly measured (Kline, 2005). The correlation of each individual variable (or question item) to a factor is its factor loading on that factor (Aron & Aron, 1999). The computer software program SPSS was used to conduct the factor analyses, and to generate a Cronbach's alpha level as a measure of internal consistency for these variables. Confirmatory factor analysis specifies how the "measured variables reflect certain latent variables," and therefore represents a preliminary measurement step before conducting additional structural analyses

(Thompson, 2004, p. 110). In summary, confirmatory factor analysis was used to determine the fit of items to the particular underlying factors.

After using factor analysis to determine the latent factors comprised of related questionnaire items, a structural regression analysis was conducted first for the 10<sup>th</sup> grade Latino male population as a whole, and then for each SES quartile within this sample. To conduct these regression analyses, the MPLUS software program was used, which is designed to handle the complex sampling designs and weighting procedures like those in NCES databases (Kline, 2005). Structural regression, another tool within structural equation modeling, is ideal for testing models that have both a structural component (similar to path analysis) and a measurement component (similar to confirmatory factor analysis) in the design (Kline, 2005). Path analysis would not have been appropriate for this data because this method requires a single measure of each construct (Kline, 2005), but in the proposed model there were several indicators for each latent construct from Expectancy-Value theory. Instead, structural regression incorporates a measurement component that allows for the analysis of observed variables as indicators of latent variables, as in confirmatory factor analysis (Kline, 2005; Thompson, 2004). Furthermore, structural regression allows for the analysis of these latent variables (or factors) within the structural model, rather than being limited to single observed variables as required by path analysis (Kline, 2005). However, like path analysis, structural regression also allows for the testing of hypotheses about direct and indirect effects (Kline, 2005). Finally, because graduation is a dichotomous variable, logistic regression was needed. For an analysis of each socioeconomic group, structural regression was used to estimate the model of indicators and factors that

significantly predict high school graduation and the models were examined and compared.

This chapter presented information about the ELS:2002, its participants, and how researchers can access this database. Additionally, the selection of research variables based on expectancy value theory of motivation by Eccles and her colleagues was explored. Finally, the appropriate data analysis techniques and statistical procedures were discussed. The following chapter will present the results of the analyses proposed in this chapter, and Chapter 5 will present a discussion of these findings.

## CHAPTER 4 RESULTS

The purpose of this study was to use Eccles et al. (1983) Expectancy Value Theory of motivation and tenth grade reading achievement scores to identify the factors that predict high school graduation for Latino males from various socioeconomic levels. Specifically, this study addressed the following research questions: how do motivational factors and tenth grade reading achievement scores predict high school graduation for Hispanic males, and to what extent do these factors differ among Hispanic males from varying levels of SES? The previous chapter described the Education Longitudinal Study of 2002, the research variables that were selected, and the research methodology that was used in this study. In this chapter, the results of the previously discussed data analysis are presented. General descriptive statistics about the data will be provided, followed by a review of the results of the factor analysis and of the structural regression analysis.

### **Descriptive Statistics**

To conduct the data analysis, the ELS:2002 dataset needed to be conditioned to prepare the data for further analyses. After selecting for only Hispanic males, the data was reduced to 1099 cases (or individuals). Descriptive statistics for all the variables used in this study were calculated using one of the panel weights for the data, BYSTUWT. The purpose of applying weights to student data is to account for the unequal probability of selection and sampling of certain populations. According to the ELS:2002 data documentation manual, this particular panel weight is applied to spring 2002 sophomores who completed data in the base year, and can be used for cross-cohort comparisons, and allows results to generalize to all 10<sup>th</sup> grade students capable

of completing the questionnaire (Ingels et al., 2007). Applying the appropriate student weight to the narrowed population of interest (n=1099) allows projections to be made to all 10<sup>th</sup> grade high school Hispanic males in the United States capable of completing the questionnaire, resulting in a total number of weighted cases of 267,622 students. See table 4-1 for a summary of descriptive statistics for the variables in this study, and refer to table 4-2 for a summary of the correlations between the variables.

Table 4-1. Descriptive Statistics for Variables in Model

Variable Name	Mean	Standard Deviation	Minimum	Maximum
BYS28	2.15	.613	1	3
BYENGLSE	-.141	.971	-2.197	1.596
BYCONEXP	-.168	1.016	-2.521	1.580
BYINSTMO	-.078	.970	-1.994	1.579
GRAD	.68	.467	0	1
BYS27A	2.33	.800	1	4
BYS27I	1.49	.706	1	4
BYS27H	2.27	.854	1	4
BYS37	3.26	.809	1	4
BYS54O	2.78	.457	1	3
BYP81	4.81	1.547	1	7
BYTE20	3.44	1.469	1	7
BYTXRSTD	44.326	9.699	22.69	71.98
ENJOY	0	1.00	-1.446	.760
SCE	6.196	1.858	1	7
BYSTEXP	4.00	2.121	0	7
BYSES2QU	1.89	1.029	1	4

When compared to all 10<sup>th</sup> grade high school male and female students of all ethnic groups, 48.4% of the Latino males in this study were categorized as being within the lowest socioeconomic quartile, 24.2% were categorized in the second quartile, 17.0% in the third quartile, and 10.4% in the highest quartile. The mean quartile classification for the 10<sup>th</sup> grade Latino males was 1.89, with a standard deviation of 1.029.

Table 4.2. Correlation matrix for variables included in the model

	BYS28	BYENGLSE	BYCONEXP	BYINSTMO	GRAD	BYS27A	BYS27I	BYS27H
BYS28	1							
BYENGLSE	0.229*	1						
BYCONEXP	0.226*	0.698*	1					
BYINSTMO	0.296*	0.563*	0.688*	1				
GRAD	0.183*	0.233*	0.269*	0.214*	1			
BYS27A	0.505*	0.146*	0.116*	0.232*	0.069	1		
BYS27I	0.22*	0.235*	0.252*	0.219*	0.273*	0.175*	1	
BYS27H	0.433*	0.097*	0.168*	0.193*	0.151*	0.508*	0.514*	1
BYS37	0.435*	0.23*	0.287*	0.379*	0.222*	0.277*	0.377*	0.316*
BYS54O	0.291*	0.243*	0.275*	0.308*	0.197*	0.178*	0.304*	0.291*
BYP81	0.207*	0.173*	0.215*	0.203*	0.218*	0.12*	0.158*	0.076
BYTE20	0.136*	0.265*	0.253*	0.222*	0.506*	0.138*	0.129*	0.089
BYTXRSTD	0.024	0.289*	0.278*	0.179*	0.349*	-0.113*	0.074	-0.128*
ENJOY	0.255*	0.286*	0.238*	0.24*	0.014	0.264*	0.091	0.263*
SCE	0.059	0.101	0.119	0.188*	0.032	0.114*	0.069	0.15*
BYSTEXP	0.159*	0.212*	0.243*	0.325*	0.213*	0.106*	0.134*	0.051

Table 4.2 (cont.). Correlation matrix for variables included in the model

	BYS37	BYS54O	BYP81	BYTE20	BYTXRSTD	ENJOY	SCE	BYSTEXP
BYS37	1							
BYS54O	0.477*	1						
BYP81	0.245*	0.199*	1					
BYTE20	0.22*	0.137*	0.292*	1				
BYTXRSTD	0.07	0.078	0.22*	0.467*	1			
ENJOY	0.18*	0.12*	0.136*	0.042	0.073	1		
SCE	0.13*	0.054	0.152*	0.125	0.026	0.009	1	
BYSTEXP	0.259*	0.208*	0.256*	0.281*	0.261*	0.119*	0.204*	1

Note: Correlations that are statistically significant at the  $p = .05$  level are noted with an asterisk.

For 10<sup>th</sup> grade Latino males in this study, 47.8% reported English as their native language, while 43.5% reported Spanish as their native language. As of the summer of 2004, which was two years after the base year questionnaire, 67.8% of the 10<sup>th</sup> grade Latino males in this study had graduated from high school and 32.2% of this sample had not received a high school diploma.

When asked how much they like school, 60.3% of the 10<sup>th</sup> grade Latino males reported that they “somewhat” liked school, 12.5% reported that they liked school “not at all,” and 27.2% reported that they liked school “a great deal.” When asked to respond about the personal importance of good grades, 3.2% of the 10<sup>th</sup> grade Latino males selected that grades were “not important” to them, 13.7% reported that grades were “somewhat important,” 37.4% stated grades were “important,” and 45.8% reported that good grades were “very important” to them. Similarly, when asked about the importance of getting a good education, 1.9% of the 10<sup>th</sup> grade Hispanic male survey respondents reported a good education was “not important,” 17.8% reported it was “somewhat important,” and 80.3% reported a good education was “very important” to them.

For the 10<sup>th</sup> grade Hispanic males in this study, the mean score on BYENGLSE (base-year English self-efficacy composite scale score) was -.141 with a standard deviation of .972, with a minimum of -2.197 and a maximum of 1.596. For the entire population of sophomores who completed the ELS:2002 base year survey, NCES standardized the mean for this variable at 0 with a standard deviation of 1. The mean score on BYCONEXP (base-year control expectation composite scale score) for this sample was -.168 with a standard deviation of 1.017, a minimum score of -2.521 and a

maximum score of 1.580. Again, NCES standardized the mean for all base year survey respondents at 0 with a standard deviation of 1. The mean score on BYINSTMO (base-year instrumental motivation/utility interest composite scale score) for the 10<sup>th</sup> grade Latino males who responded to this survey was -.078 and the standard deviation was .971, while the mean for all base year respondents was again standardized by NCES at 0 with a standard deviation of 1.

The mean reading test standardized T score (BYTXRSTD) for the 10<sup>th</sup> grade Latino male respondent sample was 44.326, and the standard deviation was 9.703, with a minimum score of 22.69 and a maximum score of 71.98. For the entire base year respondent population, the mean reading test standardized T score was 50 with a standard deviation of 10, indicating that the mean reading score for 10<sup>th</sup> grade Latino males is less than that of the entire base year respondent population.

### **Factor Analysis Results**

The researcher created one variable through factor analysis using the SPSS computer program. The variable, named ENJOY, combined three questionnaire items from the base year student survey. These three questions asked students to rate how much they agreed or disagreed with the statements “Because reading is fun, I wouldn’t want to give it up” (BYS87B), “I read in my spare time” (BYS87D), and “When I read, I sometimes get totally absorbed” (BYS87E). The ENJOY variable was created using principal factor analysis weighted by the base year student weight (BYSTUWT), following the example of the ELS:2002-created composite variables. Higher score on this variable indicate higher enjoyment of reading. The coefficient of reliability for this variable (Cronbach’s alpha) was .973. The mean score on this variable for the 10<sup>th</sup> grade Latino males capable of completing this survey was standardized at 0 with a

standard deviation of 1, as this variable was created using just the sample described above. The minimum score on this variable for the 10<sup>th</sup> grade Latino males who completed the survey was -1.446 and the maximum score was .760 for this same group.

### **Structural Regression Analysis**

To conduct the data analysis for this study, the computer program MPLUS was used because of this program's ability to automatically account for the complex analysis needed for the complex sampling design of the ELS:2002 database, and to allow the inclusion of all individuals (or cases) with any missing data (Kline, 2005). Additionally, the particular statistical method selected, structural regression, is a type of structural equation modeling that accounts for complex sampling inherent in these types of national databases (Kline, 2005).

To define the model for this study, the original model proposed in Chapter 3 was entered into MPLUS (see Figure 4-1), and the goodness of fit was assessed. The goodness of fit of any given model can be measured by several methods including the Chi-square test of model fit score, the Comparative Fit Index (CFI), and the Tucker-Lewis Index (TLI). The Chi-square test of model fit score is evaluated based on the associated *p*-value to determine significance. The maximum CFI score is 1.000, and CFI scores of greater than .95, are generally considered to indicate good fit. Similarly, TLI scores greater than .95 also indicate good model fit. The root mean square error of approximation (RMSEA) compares the estimates for the variable means, variances, and covariances between variables under the assumption that the model is correct to those same estimates without this assumption. Lower RMSEA estimates indicate a better model fit. The goodness of fit tests for the proposed model based on Expectancy-Value

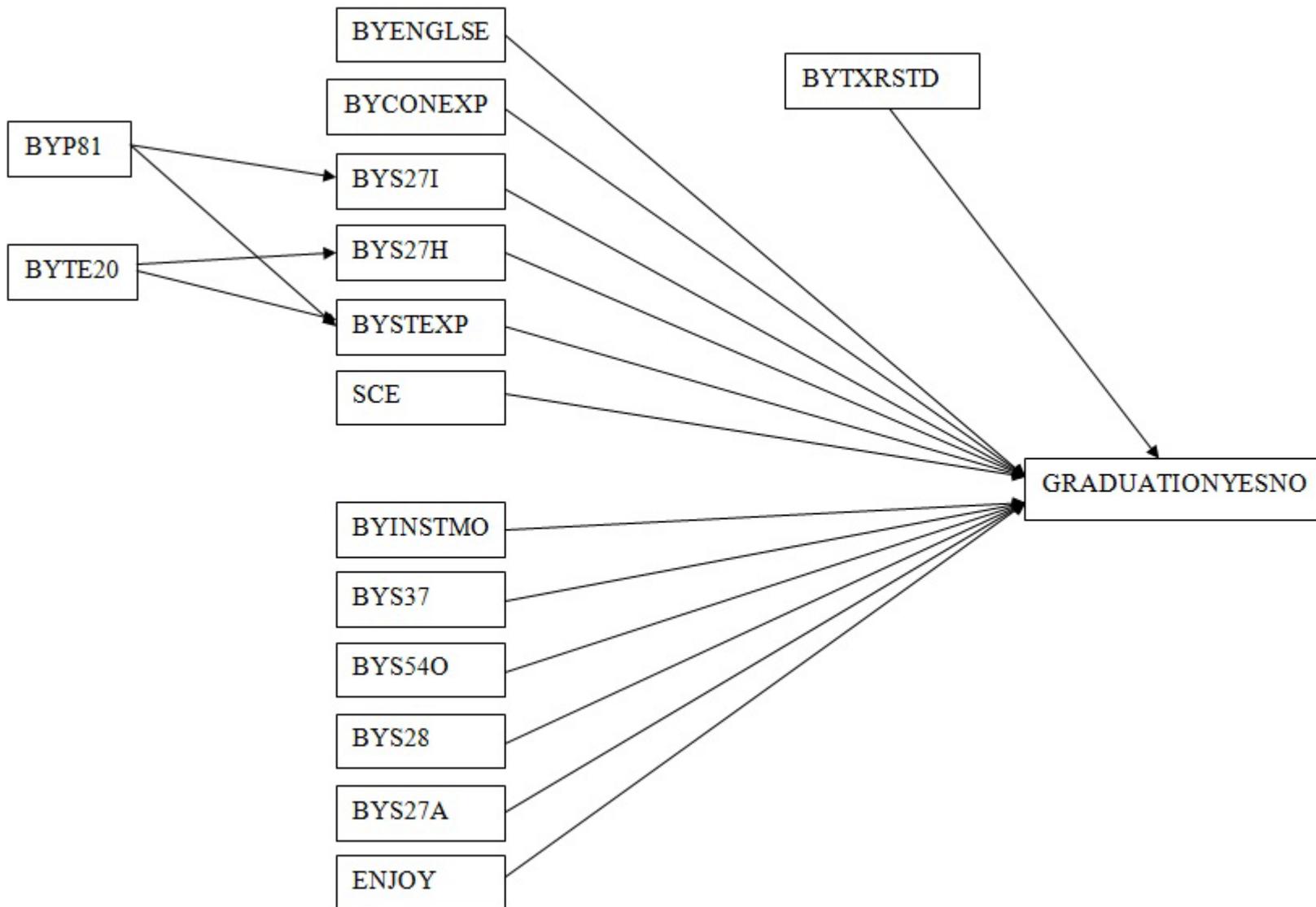


Figure 4-1. Hypothesized model based on Expectancy Value Theory

theory resulted in a significant chi-square statistic of 700.175 ( $p = 0.000$ ), indicating a significant lack of fit of the data to the model. The other goodness of fit indices also revealed a poor model fit (CFI = .774, TLI = .547, RMSEA = .099). Based on these results, an attempt was made by the researcher to modify the original model by adding parameters one at a time; however, this attempt resulted in models for which the estimation procedure would not converge.

As a result, a full model specifying all potential predictive associations between variables and all correlational associations among residuals for pairs of dependent variables was then entered into MPLUS. This method of model entry was used by the researcher to ensure that the MPLUS estimation procedure converged. The correlational associations in this full model allow for the residuals of the dependent variables to co-vary, and account for the possibility that the dependent variables share predictors that were not included in the model. On the other hand, predictive associations indicate a variable's ability to predict a change in another variable. In other words, a statistically significant predictive association indicates that a change in one variable predicts a change in the subsequent variable. Entering this full model in the MPLUS program resulted in a statistically significant chi-square value of 0.000 ( $p = 0.000$ ), indicating a non-significant lack of fit of the data to the model, and perfect goodness of fit indices (CFI = 1.00, TLI = 1.000, RMSEA = 0.000). Overall, the model exhibited excellent fit.

After starting with the full model, the individual associations, predictive or correlational, were then examined and the associations with the least significant two-tailed  $p$ -values were removed from the model one by one to reach the most simplified

model possible that would have a CFI of .95 or greater. When the model was simplified through the step-by-step reduction process, the goodness of fit indices suggested a good fit (CFI = 1.000, TLI = 1.004, RMSEA = 0.000) and the reduced model resulted in a Chi-square value of 50.935 ( $p = .6669$ ).

Several predictive associations were retained in the model despite having non-significant  $p$ -values because of their centrality to Expectancy-Value theory. Specifically, many of the relationships between the following variables and high school graduation were found to be not significant, but were kept in the model nonetheless: student English self-efficacy scores (BYENGLSE); student control expectation scores (BYCONEXP); student academic expectation (BYSTEXP); students' perceptions of teacher and school counselor expectations (BYS27H and SCE respectively); student instrumental motivation/utility value (BYINSTMO); student reading achievement score (BYTXRSTD); and student agreement with the importance of good education and how much they like school (BYS54O and BYS28 respectively). Table 4-3 presents the standardized coefficients for predictive associations that were retained in the model, including the non-significant associations that were central to Expectancy-Value theory.

### **First Research Question**

The first research question, how motivational factors and tenth grade reading achievement scores predict high school graduation for Hispanic males, was addressed by developing an overall model that included 10<sup>th</sup> grade Hispanic male respondents of all socioeconomic levels. As previously mentioned, the resulting reduced model for these males across all levels of SES indicated a good model fit. This final model is depicted in Figure 4-2. Only the statistically significant (at the  $p = .05$  level) predictive

Table 4-3. Predictive associations retained in the reduced model

Predictive Association	Estimate	<i>p</i> -value
GRADUATIONYESNO on BYTXRSTD	.018	.089
GRADUATIONYESNO on BYINSTMO	-.078	.606
GRADUATIONYESNO on BYS54O	.101	.540
GRADUATIONYESNO on BYS28	.117	.351
GRADUATIONYESNO on BYENGLSE	-.023	.859
GRADUATIONYESNO on BYCONEXP	.125	.369
GRADUATIONYESNO on BYSTEXP	.023	.477
GRADUATIONYESNO on BYS27I	.215*	.003
GRADUATIONYESNO on BYTE20	.319*	.000
BYENGLSE on BYTXRSTD	.021*	.000
BYENGLSE on BYINSTMO	.517*	.000
BYENGLSE on ENJOY	.163*	.000
BYCONEXP on BYTXRSTD	.017*	.000
BYCONEXP on BYINSTMO	.691*	.000
BYCONEXP on ENJOY	.082*	.032
BYSTEXP on BYTXRSTD	.046*	.000
BYSTEXP on BYINSTMO	.411*	.000
BYSTEXP on BYP81	.186*	.000
BYSTEXP on BYS37	.455*	.000
BYS27I on BYS37	.482*	.000
BYS27I on BYS54O	.415*	.000
BYS27H on BYS54O	.493*	.000
BYS27H on BYS28	.376*	.000
BYS27H on BYS27A	.539*	.000
BYS27H on BYTXRSTD	-.013*	.006
BYS27H on ENJOY	.125*	.008
SCE on BYINSTMO	.241*	.003

Note: In MPLUS language, “on” is short for “regressed on,” and can be read “predicted by.” *P*-values equal to or less than .050 are considered statistically significant. Significant associations are marked with an asterisk.

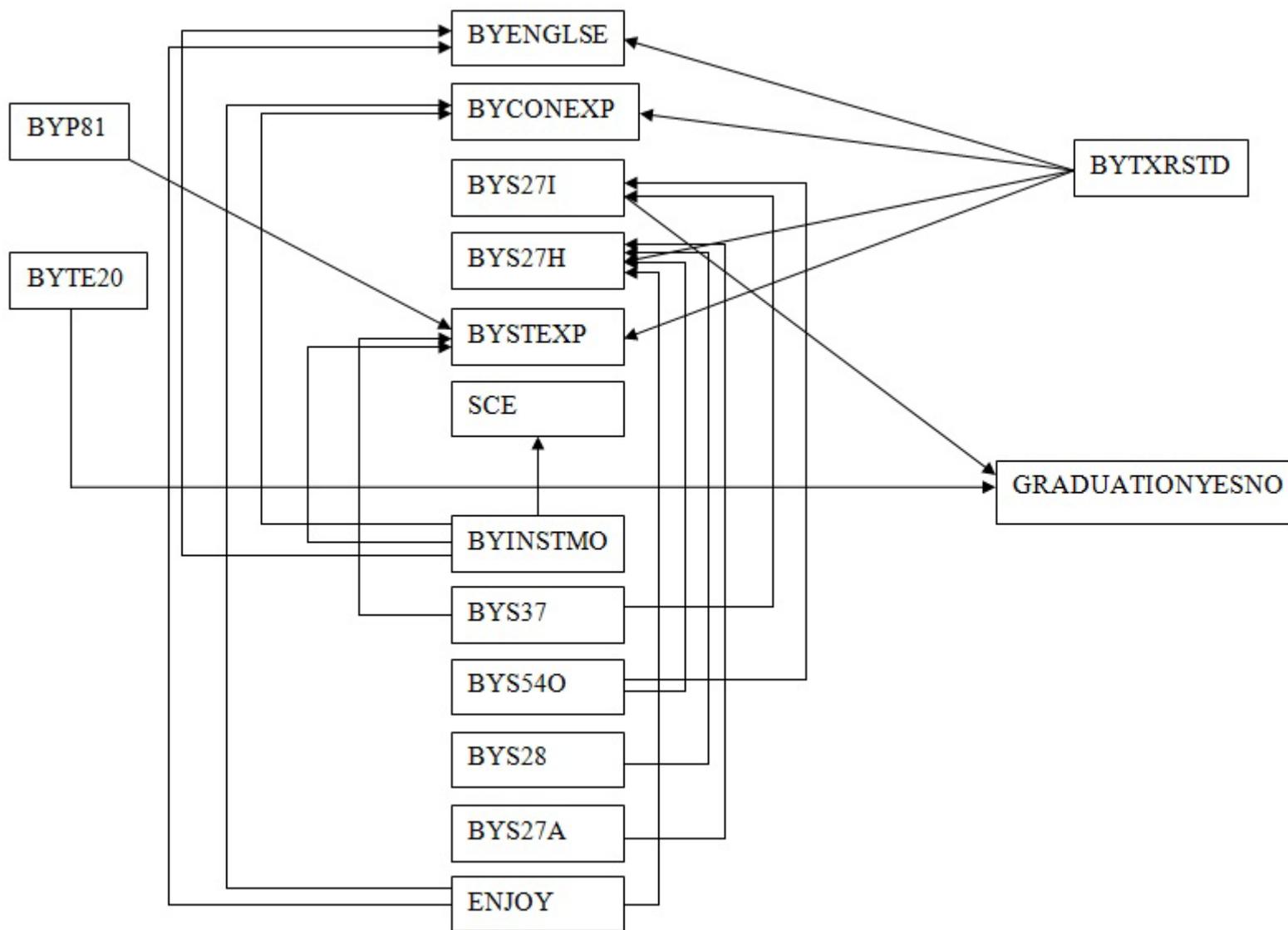


Figure 4-2. MPLUS model of predictive associations among selected ELS:2002 variables for 10<sup>th</sup> grade Latino males

associations are shown in this figure to simplify the depiction, even though many correlational associations in the model were also statistically significant. The non-significant predictive relationships that were retained in the model (because of their centrality to Expectancy-Value theory) are not depicted in Figure 4-2.

### **Significant predictive relationships**

High school graduation was significantly predicted by students' perceptions that parents expect success in school ( $\beta = .215, p = .003$ ) and by students' English teachers' educational expectations for academic attainment ( $\beta = .319, p = .000$ ). High school graduation as predicted by students' reading test standardized scores approached statistical significance ( $\beta = .018, p = .089$ ).

Many other statistically significant predictive relationships were described in the reduced model and are depicted in Figure 4-2. English self-efficacy scores were significantly predicted by students' instrumental motivation/utility interest, how much students enjoy reading, and reading achievement scores. Student control expectation scores were significantly predicted by reading achievement scores, instrumental motivation/utility interest scores, and how much students enjoy reading. Additionally, student attainment expectations were significantly predicted by instrumental motivation/utility interest, student reading achievement scores, the importance of good grades, as well as parents' academic attainment expectations. Student agreement with the importance of good grades also significantly predicted student perceptions that parents expect success in school.

Students' agreement with the importance of a good education significantly predicted students' perceptions that both teachers and parents expect success in school. Furthermore, students' perceptions that teachers expect success in school was

significantly predicted by student reading achievement scores, how much students enjoy reading, how much students like school, and how challenging and interesting students find classes. Student instrumental motivation/utility interest scores also significantly predicted student perceptions of school counselors' academic expectations.

### **Additional notable relationships and findings**

In addition to the many significant predictive relationships described, many correlational relationships were also found to be significant in the reduced model. In this reduced model, these relationships include, but are not limited to, significant correlations between residuals for English self-efficacy and control expectation, English self-efficacy and the perception that parents expect success in school, control expectation and the perception that parents expect success in school, and the perception that parents expect success in school and the perception that teachers expect success in school. Furthermore, reading achievement scores were significantly correlated with instrumental motivation/utility interest, as well as with both parent and teacher expectations for academic attainment. Parent expectations for attainment were significantly correlated with student agreement with both the importance of good grades and the importance of a good education. Many other significant correlations were included in the reduced model, and all of the statistically significant correlations are summarized in Table 4-4.

Several predictive relationships that were expected to be significant based on Expectancy-Value theory did not result in statistically significant p-values in the final model. For example, English self-efficacy, control expectation, and instrumental motivation/utility interest did not significantly predict high school graduation for 10<sup>th</sup> grade Latino males in this study. Additionally, parent expectations for students'

Table 4-4. Statistically significant correlations in final model

Correlational Association	Estimate	p-value
BYENGLSE with BYCONEXP	.240	.000
BYENGLSE with BYS27I	.127	.008
BYCONEXP with BYS27I	.126	.011
BYS27I with BYS27H	.505	.000
SCE with BYSTEXP	.288	.010
BYTXRSTD with BYINSTMO	1.593	.000
BYTXRSTD with BYS27A	-.912	.009
BYTXRSTD with BYS54O	.412	.029
BYTXRSTD with BYP81	3.256	.000
BYTXRSTD with BYTE20	7.022	.000
ENJOY with BYINSTMO	.223	.000
ENJOY with BYS28	.152	.000
ENJOY with BYS27A	.208	.000
ENJOY with BYS37	.145	.000
ENJOY with BYS54O	.055	.002
ENJOY with BYP81	.202	.015
BYS28 with BYINSTMO	.181	.000
BYS27A with BYINSTMO	.180	.000
BYS27A with BYS28	.245	.000
BYS37 with BYINSTMO	.305	.000
BYS37 with BYS28	.217	.000
BYS37 with BYS27A	.193	.000
BYS54O with BYINSTMO	.155	.000
BYS54O with BYS28	.081	.000
BYS54O with BYS27A	.067	.000
BYS54O with BYS37	.173	.000
BYP81 with BYINSTMO	.327	.000
BYP81 with BYS28	.185	.000
BYP81 with BYS27A	.143	.004
BYP81 with BYS37	.310	.000
BYP81 with BYS54O	.142	.000
BYTE20 with BYINSTMO	.378	.000
BYTE20 with BYS28	.130	.002
BYTE20 with BYS27A	.169	.005
BYTE20 with BYS37	.279	.000
BYTE20 with BYS54O	.101	.010
BYTE20 with BYP81	.708	.000

educational attainment did not predict student agreement with the idea that parents expect success in school. Similarly, teacher expectations for students' educational attainment did not predict student agreement with the idea that teachers expect success in school.

### **Second Research Question**

The second research question addressing the extent to which these factors differ among Hispanic males from varying levels of SES was also addressed based on the overall model developed to address the first research question. The MPLUS computer program was also used to calculate the difference between the predictive association estimates for lower and upper SES halves of the 10th grade Latino male respondent population. Socioeconomic halves were used instead of the intended socioeconomic quartiles to ensure that the number of cases (students) in each level of SES would be adequate for the statistical analysis. Furthermore, these halves were determined within the 10th grade Latino male population instead of in comparison to the entire 10th grade student population, so there was exactly half of the student sample in the lower SES half and half in the upper SES half. The predictive associations, estimates and p-values for these associations, estimate differences and p-values for the differences are shown in Table 4-5. The differences were calculated by subtracting the higher SES predictive association estimate from the lower SES predictive association estimate, and a p-value was obtained to determine if this difference was statistically significant.

The only statistically significant difference between the lower and higher socioeconomic groups of 10<sup>th</sup> grade Latino males in this study was for the predictive association BYSTEXP on BYTXRSTD, or student expectation for educational attainment regressed on student reading test standardized score ( $\beta = .055$ ,  $p = .001$ ).

Table 4-5. Comparison of two-tailed P-values for lower and higher SES 10<sup>th</sup> grade Latino males

Predictive Association	Lower SES Estimate	Lower SES P-value	Higher SES Estimate	Higher SES P-value	Estimate Difference	P-value for Difference
BYSTEXP on BYP81	.199	.001	.278	.001	-.079	.445
GRADUATIONYESNO on BYTXRSTD	.011	.468	.027	.100	-.016	.464
GRADUATIONYESNO on BYINSTMO	.021	.911	-.276	.425	.297	.449
GRADUATIONYESNO on BYS54O	.020	.926	.329	.363	-.309	.461
GRADUATIONYESNO on BYS28	.098	.511	.493	.128	-.395	.268
GRADUATIONYESNO on BYENGLSE	.074	.682	-.140	.486	.214	.429
GRADUATIONYESNO on BYCONEXP	-.052	.809	.224	.359	-.276	.397
GRADUATIONYESNO on BYSTEXP	-.025	.518	.069	.182	-.094	.146
GRADUATIONYESNO on BYS27I	.178	.096	.329	.008	-.150	.360
BYENGLSE on BYTXRSTD	.024	.000	.015	.005	.009	.281
BYCONEXP on BYTXRSTD	.008	.148	.021	.000	-.013	.107
BYSTEXP on BYTXRSTD	.063	.000	.007	.543	.055*	.001
BYS27H on BYTXRSTD	-.021	.010	-.005	.512	-.017	.118
BYENGLSE on BYINSTMO	.472	.000	.588	.000	-.115	.294
BYCONEXP on BYINSTMO	.762	.000	.655	.000	.108	.374
BYSTEXP on BYINSTMO	.282	.046	.562	.001	-.280	.192
SCE on BYINSTMO	.266	.027	.220	.041	.045	.778
BYSTEXP on BYS37	.663	.000	.184	.276	.478	.055
BYS27I on BYS37	.391	.000	.562	.000	-.171	.271
BYS27I on BYS54O	.397	.008	.435	.015	-.039	.867
BYS27H on BYS54O	.503	.000	.454	.005	.049	.808
BYS27H on BYS28	.332	.003	.457	.000	-.125	.418
BYS27H on BYS27A	.547	.000	.534	.000	.013	.914
BYENGLSE on ENJOY	.115	.041	.169	.008	-.053	.530
BYCONEXP on ENJOY	-.013	.793	.131	.026	-.145	.062
BYS27H on ENJOY	.077	.342	.153	.013	-.076	.453
GRADUATIONYESNO on BYTE20	.345	.003	.288	.024	.057	.741

Note: In MPLUS language, “on” is short for “regressed on,” and can be read “predicted by.” The estimate difference is calculated by subtracting the higher estimate from the lower estimate. *P*-values equal or less than .05 are considered statistically significant, and are marked with an asterisk.

In other words, the ability of student standardized reading achievement to predict student academic expectations was significantly different for lower and higher socioeconomic Latino 10<sup>th</sup> grade males. Specifically, student reading scores significantly predicted student academic expectations for lower socioeconomic 10<sup>th</sup> grade Latino males, but not for higher socioeconomic 10<sup>th</sup> grade Latino males. In other words, higher reading scores predict higher student academic expectations for lower, but not higher, SES 10<sup>th</sup> grade Latino males.

Another association, BYSTEXP on BY37, or the ability of student-reported importance of good grades to predict student expectation for educational attainment approached statistical significance ( $\beta = .478, p = .055$ ). In other words, the importance of good grades predicts student expectation for educational attainment more for lower SES 10<sup>th</sup> grade Latino males than for higher SES 10<sup>th</sup> grade Latino males, but this difference is not quite to a statistically significant level. All other predictive associations from the overall model were not statistically significant between lower SES and higher SES 10<sup>th</sup> grade Latino males capable of completing the ELS:2002 questionnaire. Differences between the correlational associations for lower and higher SES were not calculated as these differences were not included in research questions guiding this study.

The purpose of this study was to use Eccles et al. (1983) Expectancy Value Theory of motivation and tenth grade reading achievement scores to identify the factors that predict high school graduation for Latino males from various socioeconomic levels. In this chapter, results of the data analyses used to answer the two research questions were discussed and presented. Specifically, this study addressed the following

research questions: how do motivational factors and tenth grade reading achievement scores predict high school graduation for Hispanic males, and to what extent do these factors differ among Hispanic males from varying levels of SES? Descriptive statistics for key variables were presented, followed by an explanation of the factor analysis results. Additionally, the results of the structural equation modeling analysis were presented and the predictive associations were depicted graphically, with the statistically associations identified. Finally, upper and lower SES groups of 10<sup>th</sup> grade Latino males were compared and statistically significant differences were reported. In the next chapter, the results will be discussed in greater depth and applied to the work of school counselors and other educators. Additionally, directions for future research will be explored and limitations to this study will be presented.

## CHAPTER 5 DISCUSSION

The purpose of this study was to use Eccles et al. (1983) Expectancy Value Theory of motivation and tenth grade reading achievement scores to identify the factors that predict high school graduation for Latino males from various socioeconomic levels. In the previous chapter, the results of the data analyses were presented. In this chapter, these results will be discussed in depth, challenges and barriers faced by many Latino males will be presented, and implications for school counselors will be proposed. Finally, potential limitations of this study will be reviewed and directions for future research will be explored.

### **Discussion of Results**

This study examined the impact of motivational variables and reading achievement on high school graduation for a nationally representative sample of 10<sup>th</sup> grade Latino males in the United States. To address this purpose, motivation as a larger construct was broken down into sub-constructs based on Expectancy-Value Theory (Eccles et al., 1983). In addition, reading achievement was included in the proposed model based on the extensive evidence of underachievement in reading by Latino males relative to Latina females and to students of other ethnic groups, a national trend also seen in general among low-income and culturally diverse youth (Bemak & Chung, 2005; Education Trust, 2005a, 2005b; KewalRamani et al., 2007; Lopez, 2009; Planty et al., 2008). The results from this study contribute to the literature on the achievement motivations of Latino males from higher and lower socioeconomic levels, and provide insight into the complex relationships among motivation sub-constructs, reading achievement, and high school graduation.

In this study, high school graduation was chosen as the dependent variable based on the national statistics that show Latino males' low graduation rates relative to Latina females and students of other ethnic groups (Kewal Ramani et al., 2007; Lopez, 2009). Latino adolescents (male and female) have the highest dropout rates of any population in the United States, with approximately 22% not completing high school, in comparison to 6% of White students and 11% of African American students (Planty et al., 2008). The data in the present study indicate that 32.2% of Latino males in the 10<sup>th</sup> grade in 2002 did not receive a high school diploma with their peers two years later. For this study, only students who graduated on time (spring/summer of 2004) or early (before spring/summer of 2004) were considered to have graduated with their peers, and this group did not include students who received a General Equivalency Diploma (GED), who dropped out, or who took longer to graduate, factors that likely contribute to the discrepancy between the high school completion rates found in the current study and other national statistics. In other words, the operationalization of the graduation variable needs to be considered when one compares the results of this study to those from other studies.

### **Predicting High School Graduation**

The results of this study indicated that a few key factors significantly predicted high school graduation for Latino males, two of which focus on adult expectations for student success. Specifically, students' perceptions that parents expect success in school as well as English teachers' educational expectations for students' academic attainment significantly predicted students' high school graduation status two years later. Similar findings from other studies have highlighted the connection among adult expectations, student perceptions of these expectations, and outcomes such as academic

achievement, especially for low-income students or culturally diverse students (Benner & Mistry, 2007).

The link between student perceptions of parent expectations and youth's educational outcomes has been well-established in the literature (Carpenter, 2008; Benner & Mistry, 2007; Davis-Kean, 2005; De Civita, Pagani, Vitaro, & Tremblay, 2004; Halle, Kurtz-Costes, & Mahoney, 1997). Similarly, Goldenberg et al. (2001) found that high parental academic expectations did not necessarily translate to higher student educational achievement for immigrant Latino families, and suggested that instead one must look at student perceptions of these expectations. In addition, education literature has consistently identified connections between teachers' expectations for students' success and students' educational outcomes, especially for low-income students and students of color (Benner & Mistry, 2007; Madon, Jussim, & Eccles, 1997). The significant impact of these adult expectations on student developmental outcomes such as educational attainment and success makes sense from an ecological systems perspective, given the interaction between person and environment (Bronfenbrenner & Morris, 1998). The present study highlights the importance of high academic expectations from significant adults (i.e. parents, teachers, school counselors) for the educational success and attainment of Hispanic male students.

### **Impact of Reading Achievement**

Reading achievement was also included in the current study based on data indicating that male students, and culturally diverse males in particular, had lower reading achievement scores than their female or White male peers (Bemak & Chung, 2005; Education Trust, 2005a, 2005b; KewalRamani et al., 2007; Planty et al., 2008; Lopez, 2009). Although this study found that the ability of reading achievement scores

to predict high school graduation for Latino males only approached statistical significance (but did not quite reach this level), this finding differs from previous studies where reading achievement was found to not predict educational attainment at all (Sciarra & Whitson, 2007; Trusty, 2002). However, reading achievement did significantly predict student English self-efficacy scores, student control expectation scores, student expectation for educational attainment, as well as student perception that teachers expect success in school. These results appear to support the Expectancy-Value model of student motivation by Eccles et al. (1983), in that previous experience with success (here, with reading achievement) contributes to or predicts an expectation for similar successes in the future.

Additionally, student reading scores significantly predicted student academic expectations for lower socioeconomic 10<sup>th</sup> grade Latino males, but not for higher socioeconomic 10<sup>th</sup> grade Latino males. This adds to the existing literature on the educational experiences of low-income students, and of low-income Latino males in particular. Previous research has shown that males from low socioeconomic backgrounds may be particularly impacted by negative teacher expectations and evaluations (Auwarter & Aruguete, 2008), and that gender gaps in reading achievement are wider for low-income students than for higher income students (Chatterji, 2006; Francis & Skelton, 2005). This study adds to school counselors' and other educators' understanding of the educational experiences of low-income Latino males, highlighting the need for an increased focus on improving the reading achievement of these young men.

## **Academic Attitudes and Attainment**

Another finding of note from this study was that although Latino male respondents expressed positive attitudes about the importance of a good education, these values did not predict high school completion and were not being reflected in the graduation rates. Additionally, the Latino males in this study reported generally high expectations for academic attainment, but these expectations did not predict high school graduation. These findings are similar to the findings reported by Carpenter (2008) and Goldenberg et al. (2001), where student expectations for success also were not related to achievement. This gap between knowledge of the importance of educational attainment versus actual high school graduation and college enrollment rates has been noted in other national studies. For example, recent research by the Pew Hispanic Center reflects this discrepancy: 89% of Latino students age 16 and older across the country agree strongly with the importance of higher education to succeed in life, but fewer than half of that group said that they actually plan to get a college degree (Lopez, 2009).

However, there exists a significant gap between the college aspirations of native-born and foreign-born Latino students, which may partially account for the previously mentioned discrepancy: 60% of native-born Latino students report wanting to attain at least a bachelor's degree, while only 29% of foreign-born Latino students plan to do so (Lopez, 2009). Several barriers could be related to this difference, including a need to enter the workforce to support a family as well as English language difficulties, and these challenges will be discussed more in depth in the following section.

## **Expectancy-Value Variables**

In this study, the impact of the Expectancy-Value theory variables on graduation proved to be very complex and indirect, with more predictive relationships emerging

among these independent variables than anticipated. One possible explanation for this complexity is the particular question items used to operationalize the constructs from Expectancy-Value theory, a challenge that is often encountered when using these large national databases (Sciarra & Whitson, 2007). Similarly, many of the variables in this study were composite variables created by the ELS:2002, so it makes sense that the relationships among several composite variables would be more complex than those among simpler variables. Generally, the expectancy variables and the task value variables in this study were strongly correlated and often predicted other independent variables more than the target dependent variable of graduation, as depicted in Figure 4-2. Interestingly, another trend that resulted from the data was that many of the task value variables predicted many of the expectancy variables for this study.

Conceptually, this follows with the Expectancy-Value theory in that when students place more value on a task, they may be more likely to think that adults in their lives expect success in that area, and perhaps more likely to expect success for themselves as well.

### **Challenges and Barriers**

When considering the academic achievements and motivations of Latino male students, one must also be aware of the unique set of challenges and barriers that these students must overcome to be successful in school (Brown, Santiago, & Lopez, 2003). When students and families are aware of the challenges they face, they can become more empowered to overcome these obstacles (West-Olatunji et al., 2010). Many institutional barriers and challenges have been presented in contemporary counselor education literature, some of which are faced by other marginalized populations, and some that are more specific to the Latino male population. Latino students often encounter several other barriers along their educational path, as

evidenced by their underrepresentation in advanced courses (and overrepresentation in special education classes), their low high school completion rates, and their low postsecondary enrollment and completion rates (Fry, 2009; Saenz & Ponjuan, 2009; Smith-Adcock et al., 2006). Issues such as high poverty levels, language barriers, and immigration status are some of the frequently cited group challenges that Latino students face (Martinez, DeGarmo, & Eddy, 2004). Latino male students face a high rate of institutional barriers that hinder their success in school.

### **Poverty**

A prime example of a major systemic barrier cited in the literature and faced by many Hispanic students is poverty: Latino students in general are more likely than their White peers to live in poverty, and poverty presents its own set of challenges to surmount in the school setting (Dotson-Blake et al., 2009; Prelow & Loukas, 2003). For example, children in poverty are more likely to attend high-poverty schools with less experienced teachers, lower quality teaching, fewer classroom resources, larger class sizes, and higher rates of teacher attrition (Amatea & West-Olatunji, 2007b; Martinez et al., 2004). Latino students are more likely to live in poverty and attend high poverty schools than White students (Prelow & Loukas, 2003), with an estimated 28% of Latino children living below the poverty line (Llagas & Snyder, 2003). Research has also indicated that many teachers have decreased academic expectations for students living in poverty, and especially for low SES males (Auwarter & Aruguete, 2008; Diamond et al., 2004). Furthermore, other researchers have found that the intersectionality of being male, culturally diverse, and low-SES predicts lower reading achievement (Entwisle et al., 2007), indicating that unique institutional barriers may impact this population. As a result, these disadvantaged educational settings often result in decreased educational

attainment and achievement for the large numbers of Latino students in poverty (Amatea & West-Olatunji, 2007b; Prelow & Loukas, 2003; The College Board, 2010).

### **English Proficiency**

In addition to the challenges faced by students in poverty, education literature frequently indicates that having English as a second language (and more specifically, being less than proficient in English) can often serve as a barrier to educational success in the United States, as almost all schools and all standardized tests are conducted in English and demand a certain level of English proficiency, and most communication between schools and families occurs in English (Dotson-Blake et al., 2009; Martinez et al., 2004; Saenz & Ponjuan, 2009; The College Board, 2010). In the current study, 43.5% of 10<sup>th</sup> grade Latino males reported Spanish as their native language, indicating that English may be their second language. It is important to note that simply having English as a second language does not imply a level of English proficiency. In other words, students can have a strong command of the English language even if it is their second language, and being multilingual should be viewed by school counselors and other educators as a strength rather than a weakness.

However, poor English skills were reported by Latino adults over the age of 26 as one of the most common explanations as to why Latino students do not do as well as other students in school (Lopez, 2009). Being less than proficient in English may affect student test scores, grades, and other achievement-related outcomes as students may not be able to demonstrate their knowledge or understanding of a topic as well as they might in their native language, or they may not understand lessons or instructions as well as native English speakers (Eamon, 2005). Similarly, Latino adults also believe that cultural differences (including language) between Latino students and their

predominately White, middle class teachers represents a major reason that Latino students do not achieve as highly as their non-Hispanic peers (Lopez, 2009). This view is echoed in counseling literature that speaks to the cultural discontinuity that many culturally diverse students experience in the school setting, causing them psychological distress and academic difficulties (Cholewa & West-Olatunji, 2008; Dotson-Blake et al., 2009). Latino students also report that not being proficient in English causes them further social and emotional stress in the school setting when other students draw attention to (or make fun of) their comprehension skills (Behnke, Piercy, & Diversi, 2004; The College Board, 2010). Finally, the Latino families in the study by Behnke et al. (2004) reported that they would appreciate and benefit from support from the school in gaining English proficiency themselves so they could better work with the school to benefit their children. While English as a second language status was not included as a variable in the model proposed in this study, it is nonetheless an important consideration for school counselors and other educators working with this population and their families given the impact that this cultural difference may have on students' achievement.

### **Other Barriers**

Latino families also experience several other institutional barriers that hinder academic success and attainment. For example, an additional challenge faced by a significant percentage of Latino students results from the higher rate of immigrant and migrant children attending schools in the United States, as compared to their White or African American peers (Dotson-Blake et al., 2009; Fry, 2005; Gibson & Hidalgo, 2009; Saenz & Ponjuan, 2009). Latino families with migrant workers move more frequently, and may not have the consistency in educational programming that less mobile

students are afforded (Cranston-Gingras & Anderson, 1990). Additionally, undocumented immigrant children experience anxiety and fear about deportation or being identified as being an undocumented immigrant (Dotson-Blake et al., 2009). Fry (2005) notes that foreign-born students are more likely to drop out of high school if they arrive to the United States later in school and if they were not making adequate academic progress in their country of origin before their move.

Another barrier to academic attainment mentioned in the literature is the lack of Latino individuals (and males in particular) in the teaching workforce as role models for adolescents (Saenz & Ponjuan, 2009; The College Board, 2010). Martinez (2003) also calls for more bilingual and ethnic educators to serve as role models and as sources of information about postsecondary education for high school Latino students.

Furthermore, when Latino students see school faculty and staff that represent their cultural background, their intellectual potential to succeed in high school is reinforced (Brown et al., 2003).

Finally, families also report needing increased access to information about academically related topics, including educational opportunities and options as well as financial assistance (Behnke et al., 2004; Epstein, 2007; Kelly et al., 2010; Martinez, 2003). Specifically, many Latino high school students lack adequate advising and do not get information about the necessary steps required to further their education or the many resources available to assist them in this effort (Kelly et al., 2010; Martinez, 2003). In addition, Latino students report that teachers and counselors hold generally low academic expectations for them (Brown et al., 2003; Martinez, 2003). These low expectations may lead these educators to engage in subtle racism by not encouraging

these students to take higher level classes (Sciarra & Whitson, 2007) or by not sharing information about necessary pathways for advancement and postsecondary opportunities (West-Olatunji et al., 2010). Furthermore, “for many Latino students economic uncertainties coupled with the lack of information about educational opportunities can impact their desire or willingness to pursue a college degree” (Martinez, 2003, p. 14). Finally, the aforementioned language barrier can often lead to families not feeling able or welcome to access services or information through their children’s school officials (Sciarra & Whitson, 2007). In general, Latino students and families report experiencing more barriers to their participation and involvement in the schools than do non-Latino families (Martinez et al., 2004).

### **Additional Challenges for Latino Males**

While these challenges are faced by many students within the larger Latino population, Latino male students are still underachieving in comparison to their Latina female peers (Saenz & Ponjuan, 2009). Furthermore, Latina females have regularly reported higher academic aspirations than Latino males in the United States (Saenz & Ponjuan, 2009). The Latino gender achievement and attainment gap persists into postsecondary education: enrollment gaps in undergraduate education continue to widen between Latino males and females in the United States even though gender gaps for other ethnic groups have held constant (Fry, 2009; Fuller, 2010; Kelly et al., 2010). Given the persisting achievement and attainment gap between Hispanic males and females, one must consider that Latino males are perhaps facing additional obstacles or pressures that contribute to their relatively low educational attainment even when compared to Latina females.

## **Discrimination**

Recent research in the area of the academic experiences of Latino students has pointed to the finding that Latino males report experiencing racial discrimination to a greater degree than Latina females (Alfaro, Umana-Taylor, Gonzales-Backen, Bamaca, & Zeiders, 2009; Lopez, 1995). Discrimination has been previously shown to negatively impact academic outcomes as well as achievement motivations for culturally diverse youth (Alfaro et al., 2009; Eccles, Wong, & Peck, 2006; Wong, Eccles & Sameroff, 2003). Furthermore, discrimination in the school setting, combined with additional institutional barriers, is related to decreased academic success for Latino students specifically (Alfaro et al., 2009; DeGarmo & Martinez, 2006; Martinez et al., 2004).

## **Need to support family**

Many researchers point to the significant pressure that young Latino males experience to start earning money as soon as possible to support their families (Kelly et al., 2010; Lopez, 1995; Lopez, 2009; Martinez et al., 2004; Saenz & Ponjuan, 2009). In fact, Lopez (2009) found that the biggest reason for the gap between the value placed on educational attainment and Latino male students' plans to pursue postsecondary education is the pressure to support a family financially. The Pew Hispanic Study emphasizes that the expectation within Latino cultures that Latino males enter the work force to support their families as soon as possible exists significantly earlier than within other ethnic and gender groups (Lopez, 2009). Additionally, the desire and pressure to fulfill the traditional gender role of provider is often even stronger for foreign-born Latino male adolescents as compared to native-born Latino males (Fry, 2005). Furthermore, the traditional Hispanic value of *familismo* is often salient in the minds of young Latino males, a value that encourages a strong attachment, loyalty, and responsibility to

immediate and extended family (Kelly et al., 2010; Saenz & Ponjuan, 2009; The College Board, 2010). This particular value of fidelity to the family could conflict with the value Latino males place on pursuing postsecondary education, and personal sacrifices by these young men are often made to promote the well-being of the family (Kelly et al., 2010; Saenz & Ponjuan, 2009). “Ultimately, the social, familial, and socio-economic pressures faced by young Latino males (foreign born or native born) may manifest themselves in the decision to join the workforce earlier than their Latina female peers, indefinitely passing up the opportunity to seek a postsecondary education” (Saenz & Ponjuan, 2009, p. 63).

### **Implications for School Counselors**

The current study adds to previous research on the educational attainment of Latino males, and the results from this study and others can be used to inform the work that school counselors (and other educators) do with these young men. In general, the ASCA model encourages school counselors to increase their awareness of cultural differences and become advocates for students, in particular for students who are marginalized in the school system and in society, and to work to eliminate the barriers to success for these students (Amatea & West-Olatunji, 2007b; Bemak, 2000; Bemak & Chung, 2005; Lee, 2001; West-Olatunji et al., 2010). School counselors are encouraged to promote success for all students by integrating social, psychological, career, and academic development, and high school graduation represents a key benchmark of this success (ASCA, 2005). By examining quantitative data that demonstrate achievement and attainment patterns of Latino students, school counselors in a leadership position can better understand these students’ educational experiences, and can collaborate with other stakeholders to make necessary evidence-

based improvements (Amatea & West-Olatunji, 2007a; Bemak, 2000; Bryan, 2005; Clark & Stone, 2007; Lee, 2001; Smith-Adcock et al., 2006; Stone & Dahir, 2006). In these ways, school counselor efforts can be directly connected to educational outcomes such as high school graduation.

Translating theoretical implications into practical recommendations is essential for school counselors working with Latino males and their families to eliminate the existing systemic barriers and ensure the academic success of not only this population, but also of all students (Goh et al., 2007; Rodriguez & Morrobel, 2004). Creating a culturally responsive, asset-based developmental school counseling and guidance program involves school counselors acting in leadership positions, serving as student advocates, and connecting schools with the families and communities they serve (Amatea & West-Olatunji, 2007b; Bemak & Chung, 2005; Lee, 2001; Stone & Dahir, 2006). With Latino students now representing the largest and fastest growing culturally diverse student population (Bernstein, 2008; Planty et al., 2008; Sciarra & Whitson, 2007; U.S. Census Bureau, 2008), these skills are especially necessary for school counselors to possess and implement (Smith-Adcock et al., 2006).

### **School Counselors as Educational Leaders**

Within the school walls, school counselors have an obligation to operate in a leadership position and serve as student advocates to help all students succeed (ASCA, 2005). To this end, culturally responsive school counseling services (based in the worldviews of the students and families served) are necessary to provide equal educational access and opportunities, especially to those student populations who are not experiencing the same academic success and attainment as more advantaged students (Goh et al., 2007; Lee, 2001; Smith-Adcock et al., 2006). Essentially, the goal

of school counselors' culturally responsive and asset-based interventions for the Latino population is to "foster developmentally appropriate environments that embrace the culturally unique strengths of Latino youths in ways to enhance their ability to take advantage of the assets they have" (Rodriguez & Morrobel, 2004, 121).

Counseling research and literature reveals many effective means to provide culturally responsive school counseling services, including working with students, teachers, and administrators to promote academic success and improve high school graduation for all students. For example, through their understanding of systemic contexts and power relationships, school counselors as leaders and change agents can assist students directly in understanding the challenges they face, thereby empowering them to overcome these barriers (West-Olatunji et al., 2010). Additionally, in their positions as leaders in the academic setting, school counselors have a responsibility to be aware of their own influences on these students, as they may unintentionally perpetuate the previously discussed institutional barriers and limit the success of Latino male students or other socially marginalized students (Bemak & Chung, 2005; West-Olatunji et al., 2010). In this study, students' perceptions of their school counselors' expectations for them did not predict graduation, so perhaps school counselors are not adequately or effectively communicating their own high expectations for Latino males. An increased awareness of their own influences and expectations can lead to school counselors encouraging other educators and parents to set (and vocalize) high academic expectations for all students, and for Latino males in particular. All educators must actively confront the frequently reported low expectations for Latino students to help establish a rigorous academic program for postsecondary preparation (Brown et

al., 2003; Kelly et al., 2010), and the current study indicates that Latino male high school students can particularly benefit from higher expectations by teachers and other significant adults in their lives. School counselors have unique training in interpersonal communication, and can work with staff to improve both the teacher-student relationship as well as the teachers' communication of academic expectations.

School counselors as leaders and advocates in the academic setting can also work to educate teachers about the institutional barriers present in school settings that disadvantage Latino students (Brown et al., 2003), to offer insight or alternative perspectives to teachers about the academic behaviors of culturally diverse or low SES students and their families, to assist teachers with identifying student/family/community assets that can be maximized in the classroom, and to aid all educational staff in efforts to effectively communicate and collaborate with families (Amatea & West-Olatunji, 2007b; Goh et al., 2007). School counselors can also collaborate with teachers to develop culturally responsive and relevant curriculum and lessons (Amatea & West-Olatunji, 2007b; Clark & Stone, 2007; Goh et al., 2007). Many authors have also suggested that school counselors can promote the achievement and motivation of culturally diverse students by implementing culturally responsive programs that connect students with community members from diverse backgrounds, including programs such as job shadowing, mentoring, or internships with business partners, community leaders, and other similar role models (Bryan, 2005; Clark & Stone, 2007; Lee, 2001; The College Board, 2010). Additionally, Martinez (2003) reports that successful programs for improving the academic expectations, plans and motivations of Latino students also include aspects such as mentoring, tutoring, peer advising, and college preparatory

programs - programs that can be initiated by proactive school counselors. Finally, school counselors need to actively disseminate information about programs that have been effective in improving the academic motivation and achievement in their schools through professional journals and meetings (Brown et al., 2003).

### **School-Family Partnerships**

Additionally, school counselors in a leadership role can and should coordinate efforts to connect schools with the families they serve in meaningful ways (Clark & Stone, 2007; Epstein, 2007; Goh et al., 2007; Stanard, 2003). The current study indicates that the perception by Latino male students of high parental academic expectations significantly predicts high school graduation. Thus, counselors can work with families of Latino students to promote high expectations, access to information, and opportunities for involvement. Specifically, school counselors can facilitate effective communication between parents and students so students are able to articulate that their parents expect a certain level of educational attainment from them. In this role, school counselors can employ their understanding of communication and relationships to potentially enhance Latino males' academic motivation and success.

In addition, whenever possible or necessary, using a translator can assist non-Spanish speaking school counselors to better connect and communicate with Latino students, families, and community members, bridging the language gap that often distances these individuals (Sciarra & Whitson, 2007). School counselors can also make written materials available in Spanish as well as English and encourage fellow educators to do the same, especially when sending home written communication pertaining to academic needs and opportunities (Smith-Adcock et al., 2006). School administrators also report a need for more Spanish speaking school counselors to help

reduce the cultural barriers for Latino students and families and to best serve the academic, social, and career needs of these children (Smith-Adcock et al., 2006). An additional way that school counselors can help to bridge the cultural and language gap between Latino families and schools is to develop partnerships with paraprofessionals (Lee, 2001) or “cultural brokers” (Dotson-Blake et al., 2009) who are familiar with the language and customs of the families and communities served by the schools, and actively involve these individuals in family-school counseling initiatives (Goh et al., 2007). Furthermore, it has been suggested that school counselors can shift the hours in their work day to allow for after-school day visits to families who may have difficulty coming to the school during typical school hours (Lee, 2001; Sciarra & Whitson, 2007; Smith-Adcock et al., 2006).

Once again highlighting the importance of high academic expectations by significant adults in Latino students’ lives, results from a study by Behnke et al. (2004) indicate that when Latino parents have higher academic and occupational aspirations for themselves, these aspirations may transfer to, or influence, the aspirations of their children. Given this insight, educational programs that work with multiple generations of Latino families may positively impact the aspirations and motivations of Latino young men (Behnke et al., 2004). Furthermore, many Latino families reported simply not knowing about the educational pathways needed to achieve desired occupational outcomes (Behnke et al., 2004). Programs that effectively provide Latino families with specific information about requirements for high school completion, postsecondary opportunities and applications, and access to financial aid are imperative and would be

extremely valuable in improving postsecondary educational enrollment and completion (Behnke et al., 2004; Kelly et al., 2010).

Specific ways counselors can provide increased access to information include offering guidance services in community centers or places of worship in the neighborhoods where students live and socialize (Lee, 2001). Providing this information by going to the families and communities instead of forcing them to come to the school could help to bridge the gap between Latino families and the schools and help to reduce anxiety or fears about interacting with school officials (Lee, 2001). This effort by school counselors indicates that they are sensitive to the possible distrust of the school system that some families may have, demonstrates that the school (as represented by the school counselor) is willing to engage families in a variety of locations and cultural contexts, and shows supportive of family involvement in students' education (Lee, 2001). Providing information to and involving both Latino male students and families in culturally responsive ways can improve communication between home and school and may lead to higher parental expectations for success, which appear to be strong motivators for student achievement.

Another consideration for school counselors when working with the Latino population is the high rate of migrant families and students that are present in certain areas of the country. These families have unique needs, and many school counselors may not know how to work effectively with these students, or may not even be aware of the migrant status of their students (Cranston-Gingras & Anderson, 1990). To best serve and advocate for these students, school counselors need to make themselves aware of the various federal and local educational assistance programs available in

their area for these migrant families (Cranston-Gingras & Anderson, 1990; Gibson & Hidalgo, 2009). Additionally, school counselors can conduct a small group for migrant students to allow a space for these students to create connections to and a sense of community with other students in potentially similar life situations (Cranston-Gingras & Anderson, 1990). School counselors can also connect migrant students with successful adult role models who may have also been children of migrant families when they were younger (Gibson & Hidalgo, 2009). Finally, after getting to know the migrant communities around them, school counselors in areas with a high migrant student population can conduct in-service informational programs to educate teachers about the needs and assets of this population, thereby advocating for these students (Cranston-Gingras & Anderson, 1990).

### **Limitations of the Study**

Because of the focus on high school Latino males in the United States, one limitation of this study is the inability to generalize any findings to females, or to males from other ethnic groups, countries, or educational systems. These findings may not be applicable to any Latino males who are not in high school or who are not part of the national database being examined. Another limitation of this study is the reliance upon one data source and the subsequent assumption that the data from this source are accurate representations of students' motivation to achieve. Furthermore, using a national survey like the ELS:2002 does not allow a researcher to capture the contextual meanings, or qualitative aspects, of the real-life experiences of the individuals involved (Lopez, 2003). These national surveys also tend to treat race and gender as a priori rather than ongoing processes of socialization and development (Lopez, 2003). Finally, constructs like motivation, as well as the sub-constructs from Expectancy-Value theory

like expectancies and task values, are relatively complex in nature, and are difficult to capture using multiple choice questionnaire items from national databases designed to measure a range of attitudinal and behavioral attributes.

As with many quantitative studies that use data from a large, nationally representative database, caution must be taken when drawing conclusions about groups of people based on the results of the statistical analyses. Specifically, researchers must avoid the tendency to assume that each member of a group embodies the characteristics that might describe the group as a whole (Tinto, 1987). For example, one cannot assume that the general achievement or motivation patterns of a particular subpopulation apply to a specific student who identifies as a member of that group. However, data on the patterns of achievement motivation can provide an understanding of general group differences while also offering a springboard for discussions about the complex interaction of factors predicting graduation for groups of high school males. Finally, group data can be useful for the development of theory and policy recommendations (Tinto, 1987), and to understand the general experience of a subpopulation in order to translate theory into practice.

### **Directions for Future Research**

While this study offers contributions to the existing literature on the achievement of Latino males, more research still needs to be conducted to further understand the educational experiences of this diverse group of students. In general, future research should aim to better inform school counselors as to how they can use their leadership positions to promote multicultural awareness and competence, as well as to work toward the elimination of barriers to educational success for all students. Additionally, future studies should recognize that Latino males, as a group, are not monolithic, and

that great variety exists in the cultural backgrounds, experiences, and perspectives across the various Latino populations (The College Board, 2010). Research that acknowledges the more specific cultural backgrounds, immigrant status, and perspectives of a particular subpopulation would contribute to a more detailed understanding of the educational motivations and experiences of these specific groups (Carpenter, 2008; Eamon, 2005; Lopez, 2003).

Additionally, researchers need to include and report findings for Latino participants in their studies to broaden and deepen counselors' and other educators' understanding of this growing population (Rodriguez & Morrobel, 2004; Brown et al., 2003).

Furthermore, much of the existing research focusing on Latino populations uses a deficit-oriented approach, whereas future research, in order to contribute to the development of theory, needs to continue to originate from a strengths-based theoretical perspective that considers context as well as more specific cultural backgrounds (Amatea et al., 2006; Bryan, 2005; Galassi & Akos, 2007; Rodriguez & Morrobel, 2004; Walsh et al., 2007).

Research in the area of Latino educational experiences and motivations could greatly benefit from more qualitative studies that could provide a more rich description of the lived experiences of this large and diverse student population. Studies like the ones by Lopez (2003) and Behnke et al. (2004) offer insight into the qualitative aspects of student and family educational experiences that are difficult, if not impossible, to understand purely through quantitative research. For example, students' own comments can shed light on their perceptions of strengths they possess, what motivates them, and what barriers they experience in their school lives. Additionally, hard-to-

define constructs like masculinity and family expectations that may impact Latino male achievement motivations are extremely difficult concepts to understand through quantitative methods, and more detail can be gained through open-ended questions and interviews. Finally, there is relatively little research that focuses specifically on the Latino male experience in either high school or postsecondary education, and qualitative research could help to fill this gap (Rodriguez & Morrobel, 2004; Saenz & Ponjuan, 2009).

Additional research, both quantitative and qualitative, can continue to use an ecological systems perspective to focus on the complex interactions of influences on the educational outcomes of Latino male students (Benner & Mistry, 2007). Results from the present study clearly point to an intricate web of both personal characteristics and contextual or systemic factors and experiences that predict academic motivation and success. Future research that recognizes the direct and indirect influences on development could help to better clarify these processes and interactions, which could then aid school counselors and other educators in their work with these students and families (Amatea & West-Olatunji, 2007a).

Also, research in the area of school counselors' roles as leaders and advocates in the school system, as well as their impact on the achievement of culturally diverse and low-income students, is imperative. As previously stated, a significant body of research has pointed out the effect of adult expectations on student achievement and attainment, particularly for low-income and culturally diverse student populations (Benner & Mistry, 2007; Carpenter, 2008; De Civita et al., 2004; Davis-Kean, 2005; Halle et al., 1997; Lopez, 1995). For example, positionality research has the potential to draw attention to

the ways in which school counselors (and other educators) impact the achievement motivations and experiences of Latino males and other traditionally disenfranchised students (West-Olatunji et al., 2010).

Finally, further research using the ELS:2002 database can build on the results of this study. For example, another study could compare motivation variables between the 10<sup>th</sup> grade and 12<sup>th</sup> grade years to see how these aspects of motivation change over the two years as students progress through high school and approach graduation. Further studies can also more closely examine aspects of relationships between students and their parents, teachers, and school counselors to better understand how students perceive adults' expectations for their future. More data from future studies can expand the understanding of the motivational patterns of Latino male students, and can inform school counselors' evidence-based practice within the school setting. Clearly, many avenues of research can continue to build on the findings of this study and others, and have the potential to significantly improve the educational experiences and prospects of Latino male high school students.

### **Conclusion**

The previous chapters have described this research study in detail. The purpose of this study was to use Eccles et al. (1983) Expectancy Value Theory of motivation and tenth grade reading achievement scores to identify the factors that predict high school graduation for Latino males from various socioeconomic levels. Chapter 1 provided an introduction to the issue of Latino male underachievement as measured by significantly lower high school graduation rates than any other demographic population in the United States. Chapter 2 presented a literature review in which Latino male achievement was explored and Expectancy-Value Theory was explained in detail (Eccles et al., 1983).

Chapter 3 presented information about the ELS:2002 data to be used in this study and the data analysis procedures to be conducted, and Chapter 4 detailed the results of these analyses. Finally, in this chapter, the results from the data analyses were discussed in depth, and implications for school counselors and other educators were explored. Additionally, limitations of this study were explained and directions for future research with Latino males were proposed.

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## BIOGRAPHICAL SKETCH

Erin Leigh Oakley was born in Richmond, Virginia to parents Rick and Pam Oakley. She was joined by a brother, Craig David Oakley, two years later, and was raised in this loving family of four in Midlothian, Virginia. She had an active childhood, always involved in school, church, and athletics. She attended J. B. Watkins Elementary School, Midlothian Middle School, and Midlothian High School. After graduating from high school, she attended the University of Virginia in Charlottesville, where she double majored in psychology and French language and literature.

Upon graduation from UVA, she made plans to attend the University of Florida for graduate studies in counselor education. She was awarded an Alumni Fellowship to pursue her Master of Education and Education Specialist degrees as well as her doctorate in the field of Mental Health Counseling. Erin graduated with her M.Ed. and Ed.S. in 2005. Then, after completing her doctoral coursework and clinical work, Erin moved to Virginia for one year, during which time she married Robert Mark Knape, M.D. and worked at Christopher Newport University's counseling center. Now Erin Oakley Knape, she returned to Gainesville to resume work on her doctoral degree, and expects to graduate from the University of Florida with her Ph.D. in counselor education in December of 2010.

Erin and her husband, Rob, currently reside in Gainesville, Florida with their cat, Bear. The couple is expecting their first child, a son, in the fall of 2010. During rare free time, Erin enjoys reading, swimming, going to the beach, traveling, and spending time with friends and family.