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Latino Educators of Tomorrow:  
Culture-Specific Mentoring for the College Transition

Anna Trevino

A dissertation to be submitted to the faculty of  
Brigham Young University  
in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy

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## ABSTRACT

### Latino Educators of Tomorrow: Culture-Specific Mentoring for the College Transition

Anna Trevino

Department of Educational Leadership and Foundations

Doctor of Philosophy

The population of Latino students is growing faster than any other ethnic group in U.S. public schools today; however, the number of Latino teachers throughout the nation has remained low. The Latino Educators of Tomorrow is a new and ambitious Latino educational career program designed to increase the number of Latino students entering teaching as a profession. This research addressed the following questions: 1) What do participants identify as influential in their trajectory towards becoming an educator, and why?; 2) How do LET instructors, acting in the role of mentors, influence participants' desires and plans to become educators, and why?; and 3) What external obstacles hinder the participants' aspirations to become educators, and why?

This qualitative study examines the perspectives of 24 high-school and beginning college-age students who participated in the Latino Educators of Tomorrow (LET). Using open-ended surveys and semi-structured interviews, this study identified underlying themes regarding the influence of mentors on the participants' desires and plans to continue to major in education; the positive impact of mentors' appreciation of participants' culture; and the financial obstacles participants identified as hindering their obtaining a college degree. Findings point to the importance of cultural appreciation in mentoring relationships, specifically for these Latino students in the transition from high school to college. Theoretical implications suggest practical recommendations for cultural appreciation to be combined with existing mentoring theory to assist students in their educational goals.

Key words: Cultural awareness and appreciation, Latino students, mentoring, high school, higher education, education careers.

## ACKNOWLEDGMENTS

When I began my dissertation I purchased a picture with a quote which I put in a predominant place in our home. Each day, I was inspired as I read what I now call my “mantra” for completing this dissertation:

“Life is not a race – but indeed a journey...Work hard. Be choosy. Say “thank you”, “I love you”, and “great job” to someone each day. Go to church, take time for prayer. The Lord giveth and the Lord taketh... Love your life and what you’ve been given, it is not accidental – search for your purpose and do it as best you can. Dreaming does matter. It allows you to become that which you aspire to be. Laugh often. Appreciate the little things in life and enjoy them. Some of the best things really are free. Do not worry, less wrinkles are more becoming. Take time for yourself- plan for longevity. Recognize the special people you’ve been blessed to know. Live for today, enjoy the moment.” - Bonnie Mohr

I acknowledge all those who have helped to make my dream possible and extend a sincere thank you to my family, friends, faculty, and staff of the EDLF department (with additional heartfelt gratitude to: Scott Ferrin, Julie Hite, and Pam Hallam). And, above all – I acknowledge the presence of my Heavenly Father’s hand as He has assisted me throughout this journey - Gracias Padre Celestial.

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## INTRODUCTION OF STRUCTURE AND CONTENT

Educational leaders in high schools and in higher education institutions are seeking to understand how they can increase Latino students' graduation rates. Given there are a limited number of Latino educators (NCES, 2008), increasing the number of Latino instructors who serve as educational role models for Latino students may provide motivation for Latino students to achieve degree attainment. Educational leaders can use these Latino instructors as role models who would be culturally supportive of Latino students to implement mentoring programs designed to improve Latino students' confidence in their ability to attend college. These instructors can act as mentors to influence Latino students' perceptions of becoming educators.

This study seeks to better understand these questions:

1. What do participants identify as influential in their trajectory towards becoming an educator, and why?
2. How do LET instructors, acting in the role of mentors, influence participants' desires and plans to become educators, and why?
3. What external obstacles hinder the participants' aspirations to become educators, and why?

This study used qualitative methods to examine and analyze survey and interview data collected through purposive sampling of participants in a Latino educational program, the Latino Educators of Tomorrow (LET). The primary reason the LET program was selected for this research was that it may be one of the most intensive and influential programs in the State of Utah designed to involve more Latino students in their transition from high school into a college preparation experience. LET provided a research context for studying the influence of the program on the LET participants' desires to continue with higher education goals, specifically

related to becoming an educator. Data analysis used a concept-indicator model and individual-case and across-case analyses to ground findings in the data. These findings inform how mentoring influences the Latino participants to become educators, may provide insights to improve the achievement of the LET program's goals and mission, and may be useful for school leaders in other organizations who have similar programs or goals of increasing Latino education attainment.

The findings point to the importance of cultural appreciation in mentoring relationships, specifically for Latino students in the transition from high school to college. Furthermore, participation in this program that provided mentoring built confidence in the Latino students in their academic ability to attend college and navigate the college entrance system. Additionally, findings indicate that participation in a program with a strong mentoring component and participation in teaching field experiences helped the participants in understanding that they could become an example in their communities. These findings support theoretical implications and suggest practical recommendations for cultural awareness and support to be combined with existing mentoring theory to assist Latino students in their educational goals. These practical implications may have value for the LET program and other school leaders who seek to improve the graduation rates for Latino students in high school and in college, specifically those focused on entering education as a career.

This document is presented in the format of the hybrid dissertation as approved by Brigham Young University's McKay School of Education. Unlike a traditional "five chapter" format, the hybrid dissertation focuses on producing a journal-ready manuscript. Consequently, the final dissertation product has fewer chapters than the traditional format and focuses on the presentation of the scholarly manuscript as the centerpiece. Following the journal manuscript are

appendices, which include an extended review of literature and a methodological section sufficient for the requirements of an institutional review board.

TEXT OF ARTICLE

Latino Educators of Tomorrow:  
Culture-Specific Mentoring for the College Transition

**Abstract**

This qualitative study examines the perspectives of 24 high-school and beginning college-age students who participated in an educational program designed to increase the number of Latino students entering teaching as a profession: the Latino Educators of Tomorrow (LET). Using open-ended surveys and semi-structured interviews, this study sought to identify underlying themes regarding the LET program and its instructors, who acted as mentors, and their influence on the participants' desires and plans to continue in higher education toward education-related career goals. Findings point to the importance of cultural appreciation in mentoring relationships, specifically for Latino students in the transition from high school to college.

## Introduction

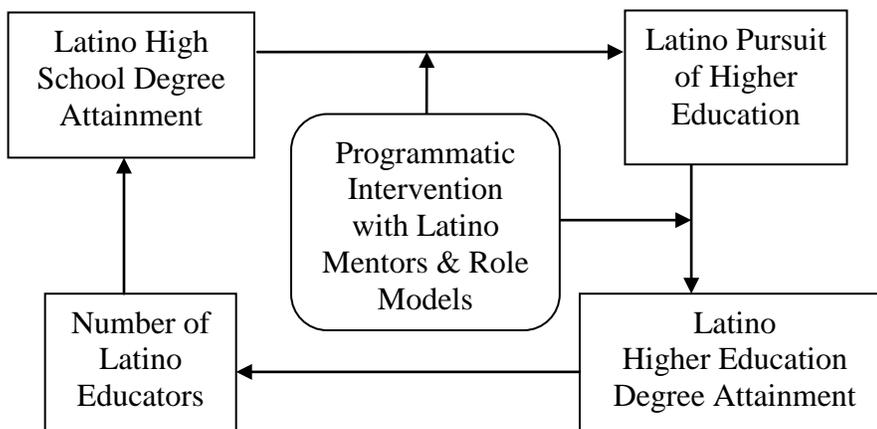
The Latino population makes up the largest and fastest-growing minority group in the country, projected to grow from 35.6 million in 2000 to 102.6 million in 2050, an increase of 188 percent (U.S. Census Bureau, 2009). The rapid growth in the Latino population brings to U.S. schools an attendant growth in Latino students, with their unique needs and strengths. However, the number of Latinos available to serve as educators and role models for such students is not keeping pace with the Latino population growth (NCES, 2010).

The dramatic increase in the Latino population is occurring at a time when federal, state, and district education systems seek to ensure *all* students achieve and leave the K-12 system with the skills and competencies needed to enter higher education and eventually the workforce (see No Child Left Behind Act of 2001). There are indications that educational attainment for Latinos is in a state of crisis. In the U.S., the high school graduation rate for Caucasian students is 75%; by contrast, only an estimated 53% of Latino students complete the 12<sup>th</sup> grade with a high school diploma (Huang, 2007; Sharon, 2007). The U.S. Department of Education, National Center of Educational Statistics reported that Caucasians had a 72.2% bachelor's degree attainment rate, compared to Latinos' 7.5% (2001).

With the increase in the Latino population and decreasing college degree attainment rate, one of the educational problems for Latino students may be the lack of Latino teachers who serve as role models. Research almost universally implies that the lack of Latino role models in education may negatively affect Latino students' educational outcomes (Allen, 2000; Campbell, 2007; Erlach, 2000; Salinas, 2002; Sanchez, 2008; Santos & Reigadas, 2005). Increasing the number of Latino educators in schools serving Latino students may have a positive influence on

Latino students' educational goal setting and may encourage them to obtain a high school diploma and continue to attain a diploma in higher education.

In response to such research and theory, a need exists for programs that successfully induct Latinos into higher education generally and into teaching as a career specifically. The purpose of this study is to investigate a program designed to influence Latino high school and early college age students to set and reach their higher education goals, obtain a degree, and adopt education as a career. The inclusion of Latino mentors and role models in these programmatic interventions may influence more Latino students to successfully pursue and attain higher education degrees, specifically in education. This outcome would increase the number of Latino educators who may themselves then act as mentors and role models to motivate future Latino students to begin their journey on this positive educational cycle (see Figure 1).



*Figure 1:* Basic conceptual model of the role of a Latino intervention program.

Because of the lack of Latino role models in education (NCES, 2010) Latino students may have lower motivation to finish their high school degrees or to pursue higher education opportunities, which can lead to fewer job opportunities, lower lifetime income potential, and less stable home and family conditions (Bureau of Labor Statistics, 2008). Understanding the

experiences of these targeted future educators may inform not only these programs, but may inform educational leaders and policy makers wishing to serve similar populations through such programs. The intention of this study is to explain, from the perspective of the target participants, how one specialized Latino educational program influences their plans for higher education and for careers in education.

### **Background**

In order to investigate how to increase the proportion of Latino educators to match that of Latino students, this background section will provide information on a promising new educational career program—the Latino Educators of Tomorrow. The educational pipeline and its implications for Latino degree attainment will then be presented, followed by background on teacher recruitment programs. Finally, the theoretical framework of this study based on Crisp and Cruz's (2009) mentoring framework will be presented.

### **Latino Educators of Tomorrow**

Latino Educators of Tomorrow (LET) focuses its efforts on high school and college students involved in a program for Latino youth. LET is a culture-specific program developed and implemented as a partnership between Utah Valley University (UVU) and a local school district in Provo, Utah. UVU began a Latino outreach program to encourage the local, fast-growing Latino population to attend the university. The aim of LET is to promote more Latino educators in the state of Utah.

The study examined its research questions in the context of the LET program because of the high percentage of Latino students in Provo School District (21%) compared to its low percentage of Latino educators (1%) (Perlich, 2008). Ayalon (2004) suggested that stronger school–university partnerships are one way to increase the number of Latino teachers.

Accordingly, the LET program provides the opportunity for UVU and Provo School District to work together to seek the Latino students' point of view and to encourage Latino high school students to envision their potential as future educators and mentors for future generations of Latino students.

The Latino Educators of Tomorrow program has three main areas of focus: first, preparation for academic rigor; second, exposure to educational mentors and motivational experiences; and third, university advisement combined with cultural support. These three areas of focus were selected as there is such a high risk for dropout or academic failure among Latino youth (Huang, 2007; Sharon, 2007). The LET program's overarching aim is to prepare more Latino educators that will help create a bridge between the high school and university settings—a connection Sanchez, Esparza, and Colon (2008) also view as critical to the Latino students' educational success.

### **The Educational Pipeline**

The "educational pipeline," the system of education from kindergarten into graduate school, is substantially inadequate for Latino students (Solórzano, Villalpando, & Oseguera, 2005). The transitions from junior high school to high school, and from high school to college, are particularly troublesome and lead to large numbers of Latino students leaving school early (Hernandez & Lopez, 2005). According to the Latino Eligibility Study, the single most important barrier to college access for Latino students in California is lack of instrumental knowledge of the steps needed to go to college (Gandara, 2002). The Kellogg Foundation (2003) found that students who do manage to go to college often face the challenge of navigating through the entrance process, face severe financial hardships, and some may also face an unsupportive university environment.

Unfortunately, these hardships often result in a “cooling down” effect, the phenomenon of junior colleges’ serving not as a springboard into a four-year institution, but rather serving as a sort of academic holding pen (Karl, Robert, & Doris, 2008). As a result, students of color feel trapped because of unresponsive multicultural curricula and limited student services which may lead students to experience a reduction or possible elimination of their larger academic aspirations—a cooling down of their goals (Trevino & Mayes, 2006).

In order to avoid the “cooling down” effect and retain Latino students, there are steps that colleges and universities should consider. Cantu (2004) suggests one step that colleges and universities may benefit from is developing a faculty and staff who are aware of additional helps needed by Latino students, specifically in areas such as “financial aid, articulation, and campus climate” (p. 4). A second step may be building a campus climate that specifically supports Latino student recruitment programs, especially in disciplines of high need. As America is currently undergoing a shortage of highly qualified teachers, Darling-Hammond (2006) suggests that education is one career track on which recruitment efforts should focus.

### **Teacher Recruitment Programs**

Based on available research (Hill, 2004) recruiting teachers of color (including Latinos) seems to function best as partnerships between universities and local schools. To enhance the recruitment of Latino teachers, Quiocho and Rios (2000) recommended the development of public school and higher education partnerships that focus on goal setting and achievement. Duncan-Andrade (2008) found that creating a partnership between high school, the university, and the community can assist in narrowing the achievement gap that sometimes exist between educational entities. Further, Gederman (2001) and Ng (2003) called for partnerships of

communication and collaboration that span grades K-16 to assist in teacher recruitment programs.

Gordon (2000) recommended that in order to increase the recruitment of teachers of color, public schools must improve the quality of the K-12 experience for students of color. Such recruitment must begin toward the beginning of students' high school years, if not before. Research conducted by Andrade (2009) found that recruitment efforts postponed until after secondary education is complete are too late. Another way to reach Latino students in recruitment efforts is not only to appeal to the students' intellect, but also to assist them in giving back to their community (Bauza et al., 2009), by asking them to be mentors or role models to others of their cultural background. The LET program facilitated these types of opportunities for students to both be mentored and to act as mentors for others.

### **Mentoring**

The theoretical framework of this study is based on Crisp and Cruz's (2009) explanation that mentoring may assist students towards a successful education through 1) psychological and emotional support, 2) goal setting and career path support, 3) academic subject knowledge support, and 4) role model support. In the first construct of psychological and emotional support, Crisp and Cruz (2009) draw from the theoretical perspectives of Cohen (2003), Miller (2002), and Roberts (2000). This construct involves listening, providing moral support and encouragement, identifying problems, and establishing a mutual understanding between the student and the mentor. Developing emotional support in educational programs is important because it gives students the skills to achieve greater academic success (Elias & Haynes, 2008).

The second construct of goal setting and career path support identified by Crisp and Cruz (2009) includes assessment of the students' strengths, weaknesses and abilities with setting

realistic academic and career goals (Nora & Crisp, 2007); a review and exploration of interests, abilities, ideas, and beliefs (Cohen, 2003); envisioning the future and developing personal and professional potential; taking time to reflect on the mentoring process (Roberts, 2000), which includes requesting information and offering suggestions to mentees concerning plans for progress, achievement, educational and career goals (Cohen, 2003); and challenging the explanations for decisions or avoidance of decisions by the mentees (Cohen, 2003). As students experience the success of reaching a goal, this success enhances goal commitment for subsequent achievement (Pintrich, 2000).

Crisp and Cruz's (2009) third construct is that of academic subject knowledge and support, which focuses on enlarging students' academic knowledge of school and also of their chosen career field. This construct incorporates the idea that a mentoring experience provides students with someone who supports their success, inside the classroom and out (Higgins & Kram, 2001). Support outside of the classroom may include support in field experiences or the work environment.

The fourth construct recognized by Crisp and Cruz (2009) is role model support, which includes the mentee's learning from a mentor's actions (Cohen, 2003; Higgins & Kram, 2001). Emphasis is placed on the mentor sharing life experiences and feelings with the mentee (Cohen, 2003; Higgins & Kram, 2001), the mentor serving as an example, and finally, the opportunity to watch the mentor with others, handling conflict and balancing professional and personal demands (Crisp & Cruz, 2009). All of these components of role model support allow the student to model their behavior after their mentor as they strive for academic success.

While Crisp and Cruz (2009) outline a clear mentoring framework, the LET program's mentoring process and relationships were rather informally structured. Informal mentoring

relationships typically develop naturally and involve the “mentor and protégé” seeking each other out and are typically focused on long term goals (Campbell 2007). Informal mentoring relationships are not structured, directed, or formally acknowledged by the institution (Rhodes, Grossman, & Resch, 2000). Even though LET’s mentoring was informal and the mentors were not trained specifically in Crisp and Cruz’s (2009) model, their mentoring constructs provided a useful model for describing and explaining mentoring in the educational context of the LET program. Figure 2 demonstrates how a programmatic intervention such as LET can provide early induction and exposure into the field of education, which may influence the Latino students’ goals to pursue higher education after high school and may focus them to seek an education degree.

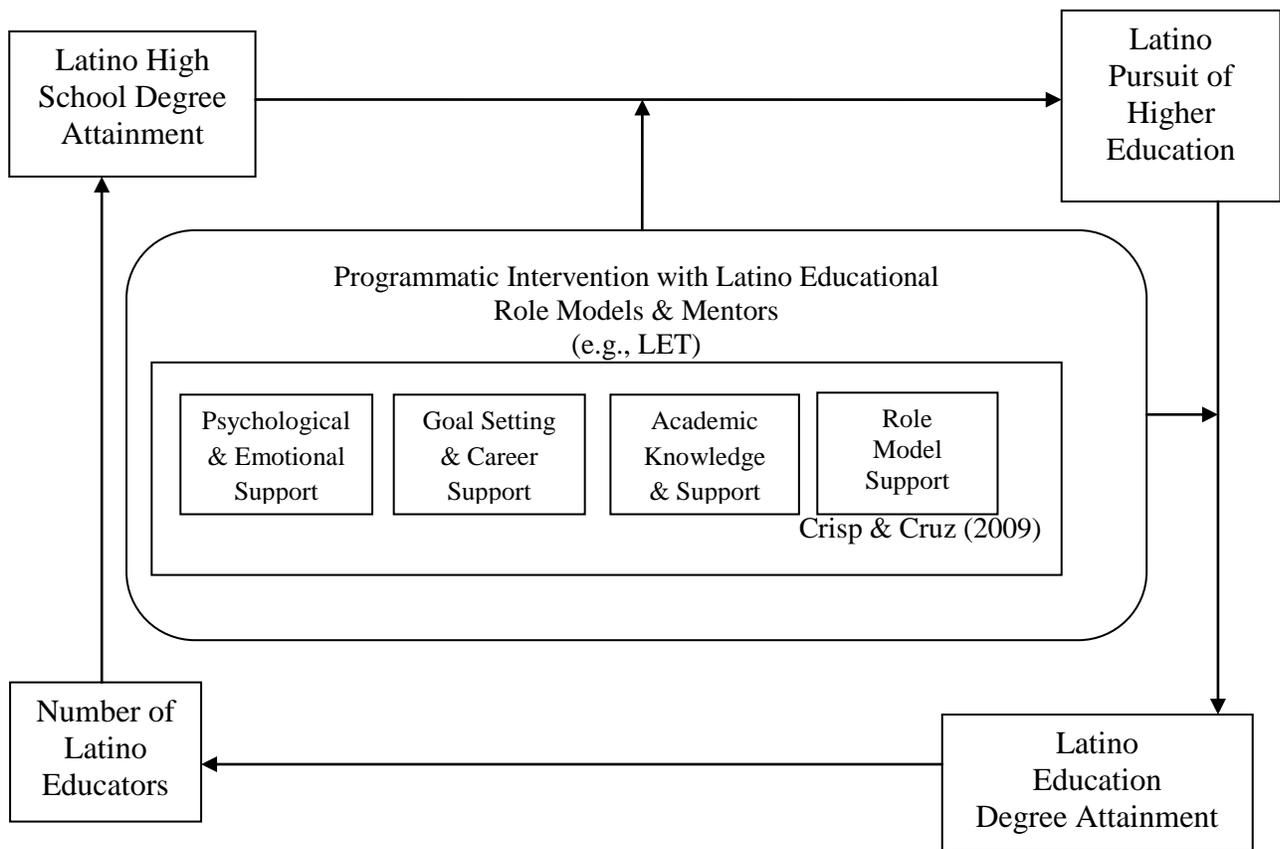


Figure 2: Theoretical framework for study of Latino Educators of Tomorrow, based on Crisp and Cruz’s (2009) mentoring constructs.

### **Summary of Research Problem**

With the large growth of the Latino population that is expected to continue throughout the nation, the number of Latino educators available to serve as role models is not keeping pace with the increase of Latino students (NCES, 2008). Salinas maintains that “it is important for students of color to have role models that they can look up to, role models who look like them, who have come from similar backgrounds, and who are important and influential in their lives” (2002, p. 613). Latino students who do not see Latino educators serving as role models in their schools may not be motivated to complete a degree. The lack of degree completion by Latino students leads to fewer job opportunities and a decreased income potential (Bureau of Labor Statistics, 2008). Lower income levels create a financial strain not only for the Latino population, but for society as a whole.

Intervention programs that assist Latino students with degree completion and teacher recruitment that are in place during high school and early in the college experience provide additional support for targeted future educators (Hill, 2003). Educational leaders, who are seeking to increase the number of Latino students reaching degree completion would benefit from knowledge about the design and implementation of such intervention programs. What is not well researched, however, is the Latino students’ perspective as they are involved in these programs designed to increase the number of Latino educators.

Crisp and Cruz (2009) along with others (Wallace, Able & Ropers-Huilman, 2000; Bordes & Arredondo, 2005; Mortenson, 2006; Strayhorn & Terrell, 2007; Zalaquett & Lopez, 2006) believe that it is “critical researchers continue to add to our theoretical understanding by continuing to unpack the ways in which mentoring is personally experienced and constructed by students, including students with different perspectives and backgrounds” (p. 540). Rayle,

Bordes, Zapata, Arredondo, Rutter, and Howard (2006) believe that mentoring theory should be expanded to include minorities in an effort to better understand how they perceive and experience mentoring differently than their Caucasian peers (also see Humble, Solomon, Allen & Blaisur, 2006; Rose, 2003).

### **Research Questions**

The purpose of this study is to seek Latino participant perspectives to describe and explain their experience with a specialized educational program designed to serve Latino high school and college students in their pursuit of higher education degrees and teaching careers. The study will focus on the LET program to address the following research questions:

1. What do participants identify as influential in their trajectory towards becoming an educator, and why?
2. How do LET instructors, acting in the role of mentors, influence participants' desires and plans to become educators, and why?
3. What external obstacles hinder the participants' aspirations to become educators, and why?

### **Methods**

This research utilized a qualitative methodology and case study approach to provide a systematic way of looking at events, collecting data, analyzing information, and reporting results. Case studies can provide an in-depth investigation of an individual, group, incident, or community (Yin, 2002). This study uses the Latino Educators of Tomorrow program to gather data through online surveys and qualitative interviews from its participants in order to address the research questions and report result to the educational stakeholders involved with the program.

The Latino Educators of Tomorrow (LET) program began as a partnership between UVU and Provo School District in the summer of 2008. Latino high-school students (15 to 19 years old) with an interest in education as a career were invited to participate in a rigorous college program for six weeks during the students traditional summer break. Each of the participants enrolled in two concurrent enrollment courses—"Introduction to Education" and "Student Success". LET students attended classes on the UVU campus daily, ate lunch together, listened to guest speakers, and participated in team building activities. During this summer program, students were also given the opportunity to participate in teaching field experiences in a nearby migrant school. LET students were in the migrant school classrooms teaching younger Latino students on a bi-weekly basis.

Latino instructors were recruited to teach the LET program courses. Every student who participated in the LET program had at least one Latino instructor for the two courses in which they were enrolled during each year of their summer course work. The LET program had two male Latino instructors and two Caucasian instructors—one male and one female. Both Caucasian instructors spoke Spanish and one had lived in a South American country for some time. The instructors for LET not only taught the courses in which the students were enrolled, they also ate lunch with the students, participated in team building activities and were involved in field experiences. The LET instructors acted as mentors to all of the LET students. The instructors have been and will be referred to as mentors throughout the remainder of this study.

During the school year, LET participants and their mentors were involved in additional monthly activities held in the evenings after the students' traditional school day. These activities included ACT prep courses, tutoring, team building exercises, education career exploration activities, and an educational conference. All of the activities were held on the UVU campus in

order to expose students to the university campus and continue to create a bridge between the high school and university settings in order to become what Sanchez, Esparza, and Colon (2008) refer to as an “imperative link” for Latino youth (p. 479).

During the summer of 2009, an additional group of students was invited to participate in the LET program. These students took the outlined courses listed above, while those who were in the second year of the program enrolled in the additional college level courses of “Human Development” and “Public Speaking”. The program continued to involve students in activities outside of the classroom and in teaching field experiences in the migrant schools. All of the college tuition and fees, lunches and transportation for the participant were paid for through a private donation.

### **Sampling**

The LET program was chosen as the case for this study through purposeful sampling because the local fast-growing Latino population has created a high percentage of Latino students in the surrounding school districts compared to the low percentage of Latino educators. The LET program was developed specifically as a partnership between Utah Valley University and a local school district in Provo, Utah to encourage more Latino educators. To enhance the recruitment of Latino teachers, Quiocho and Rios (2000) recommend the development of public school and higher education partnerships.

Students invited to participate in the Latino Educators of Tomorrow program were recruited by their High School counselors. Counselors encouraged Latino students to participate in the program that had a career interest in education and had at least a 3.0 grade point average (a UVU concurrent enrollment requirement). As a result, 42 students participated in LET during the first year in Cohort I, and 48 students participated in the LET program as part of Cohort II for a

total of 90 program participants. LET participants ranged in age from 15 to 19 years old, included both male and female participants and all of the participants were Latino and bilingual. Table 1 provides the demographic distribution of participants based on participants' high school grade level at the time they completed the 2010 survey, gender and cohort (participants in grade 13 were in their first year of college).

Table 1

*Participants by Cohort, Grade, and Gender*

Grade	10		11		12		13		Gender Totals		Total
	M	F	M	F	M	F	M	F	M	F	
Cohort I	0	0	0	10	0	14	2	16	2	40	42
Cohort II	2	10	3	12	8	13	0	0	13	35	48
Total	2	10	3	22	8	27	2	16	15	75	90

In the spring of 2010, the entire LET population of both cohorts ( $n = 90$ ) were invited to participate in an online, open-ended survey prepared using Qualtrics (2010). A total of 48% ( $n=43$ ) of the LET participants responded to the survey, representing a 60% response rate from Cohort I and a 38% response rate from Cohort II. Male participants had an 87% response rate, while only 40% of the female participants responded to the survey. Survey participants were in grades 10 through 12 in high school and in the first year of college (grade 13) as indicated in Table 2. (As there was only one participant who responded from both grades 10 and 11, the grade levels were combined for this table.)

Table 2

*Survey Respondents by Education Major, Cohort, Grade, and Gender*

	Grade Gender	10/11		12		13		Gender Totals		Total
		M	F	M	F	M	F	M	F	
Education: Yes	Cohort I	0	0	0	9	0	11	0	20	20
	Cohort II	1	0	3	0	0	0	4	0	4
Education: No	Cohort I	0	3	0	2	0	0	0	5	5
	Cohort II	4	2	5	3	0	0	9	5	14
Total		5	5	8	14	0	11	13	30	43

Multiple attempts were made by e-mail, mail, phone, and inquiry through family and friends to contact each the 47 (52%) participants who did not respond. A non-respondent bias does appear to be that all of these 47 participants were no longer involved with the LET program by the time of the survey. Thus, the 43 participants represent a 100% response rate of those still actively participating in LET. Of those LET participants who did not respond, 27 were high school students (grades 10 through 12), five were enrolled at UVU as non-education majors (grade 13), six participants had moved, six participants were involved in church or military service, and three participants remain unaccounted for.

**Education career track participants.** Of the 43 survey participants, only 24 (56%) have declared education as their intended major (see Table 3). Therefore, given that the research questions focus on what the LET program has done to assist participants towards becoming an educator, the data for this study will derive only from the perspectives of these 24 LET education major participants.

In addition, Table 3 identifies the education major participants by their cohort, grade, and gender (participants in grades 10 through 12 have been combined as “high school”, while those

in grade 13 are reported as “college”). This final sample consisted of 83% Cohort I participants, 54% of the participants currently enrolled in high school and 83% female participants.

Table 3

*Percent of Education Major Respondents by Cohort, Grade, and Gender*

Grade	High School		College		Total (%)
	M	F	M	F	
Cohort I	0	9	0	11	20 (83%)
Cohort II	4	0	0	0	4 (17%)
Total (%)	13 (54% )		11 (46%)		24 (100%)

**Interview participants.** After the online survey, eight LET participants (33%) were selected from the pool of declared education majors to take part in a semi-structured interview using purposive stratified sampling based on the three criteria: 1) LET cohort; 2) grade level (high school and college); and 3) gender (when possible). Gender representation was challenging due to the low participation of male participants in LET. In Cohort I, only two males participated and neither responded to the survey (see Table 4).

Table 4

*Interview Participants by Cohort, Grade, and Gender*

Grade	High School		College		Gender Total		Total (%)
	M	F	M	F	M	F	
Cohort I	0	3	0	3	0	6	6 (75%)
Cohort II	2	0	0	0	2	0	2 (25%)
Total (%)	5 (63% )		3 (37%)		8 (100%)		

A random number generator was used to select the students who were interviewed from those who had responded to the online survey and were listed as education majors; therefore all eight of the interviewed students had participated in the online survey. The stratification criteria of cohort and grade level were chosen to represent perspectives from the transition years between high school and college, the amount of time involved in the program, and, where possible, gender.

### **Data Collection**

For this study, each LET participant was invited to participate in an on-line survey using the research software program—Qualtrics (2010). At the onset of the Qualtrics survey, participants were asked to agree to consent in order to participate (consent was written in both English and Spanish in order to avoid any misunderstanding). Participants were asked to answer a few demographic questions and respond to five open-ended survey questions (see Table 5).

Following the survey, eight in-depth interviews were conducted with LET participants who indicated interest in education as a college major (Cohort I,  $n = 6$ ; Cohort II,  $n = 2$ ), utilizing the same questions used for the open-ended surveys. All interviews were audio-taped, transcribed, and then e-mailed to the interviewed LET participants in order for them to correct any mistakes that may have been made. After the interviews were returned to the primary researcher, data from the Qualtrics open-ended survey and the interviews were imported into NVivo8 (QSR, 2008) to facilitate qualification analysis.

Table 5

*Questions for Research*

Research Question	Pilot Survey Questions	Questions for Survey & Interview
1. What do participants identify as influential in their trajectory towards becoming an educator, and why?	What are you hoping to gain from the LET experience?	1. What elements of the program have had the greatest influence on you? Why? 2. How has the program influenced your thinking on what you want to do after high school?
2. How do LET instructors, acting in the role of mentors, influence participants' desires and plans to become educators, and why?	Who has been a role model for you as you strive to become an educator? During the LET program, who has influenced you to want to be an educator?	3. What did you learn from the LET instructors? What type of support did your LET mentors provide? 4. How do you think you can be a role model to other Latino youth?
3. What external obstacles hinder the participants' aspirations to become an educator and why?	What are your concerns in preparing for college?	5. What might prevent you from attending college or becoming an educator?

**Data Analysis**

The data collected from the on-line survey and interview transcripts were analyzed using NVivo8 (QSR, 2008) software to identify core categories and emerging themes and patterns (Strauss & Corbin, 1990). A concept-indicator model (Glaser, 1978), was used to organize the data from participants' survey and interviews to generate categories, themes, and patterns; to code the data (open, axial, selective); and to compare emerging indicators to categories in order to add further definition and understanding. Analysis of the data yielded over 130 relevant categorical nodes and four main themes emerged that addressed the research questions regarding the participants' experiences with LET. Use of the concept indicator model allowed the researcher to compare the already existing mentoring constructs of Crisp and Cruz (2009) to

emerging concepts grounded in the data. The comparison of mentoring constructs allowed the researcher to see “similarities, differences, and consistency of meaning, which resulted in the construction of a concept (or category) and its dimensions (Glaser, 1978, p. 62).

The emergence of a theme or pattern in the data was determined by representation from a threshold of 75% of the cases or a minimum of 18 participant responses to understand what the “majority” of the LET participants were expressing as important to them regarding the three research questions and their decision to enter education as a career. These themes and patterns provided the basis for the development and substantiation of theoretical explanations regarding the research questions.

### **Limitations and Delimitations**

The main limitation of this study is that the findings are only generalizable to the education majors in the LET program. The findings are, however, analytically generalizable to the further development of mentoring theory. In addition, other mentoring and educational programs involving Latino high school and early college age students may find potential transferability of the findings. A second limitation, the low response rate of only 48% ( $n=43$ ) of the total LET participant population, was addressed by identifying 52% ( $n=47$ ) of participants who did not respond to the survey were no longer in the LET program. Third, the finding that only 56% of the participants were education majors and the resulting reduction in the number of actual respondents was addressed through the utilization of a 75% case threshold (i.e., 18 of the 24 participants) to support representative themes and patterns. Fourth, the participants considering education as a major were mostly female (83%) and had been in the program longer (83% from Cohort I). Thus, the findings may not be transferable to the perspectives of male students who are new in these types of programs. A last limitation, yet also strength, is that the

principal researcher worked as the program director of the Latino Educators of Tomorrow program for two years. To help address potential bias, interviewed participants also took part in member checks in which they reviewed their interview responses after they were transcribed and made any changes they felt necessary. In addition, findings from the survey and interview data were reviewed with other LET instructors for face validity.

One main delimitation defined this study, researchers delimited the sampling frame to a defined population of participants: High-school and new college-aged Latino students (15 to 19-year-olds) participating in the LET program and indicating an education major. Thus, only the perspective of current LET participants with a current interest in an education career were included in this study. Full and deep examination and analysis of why participants leave the program or change their intended majors was beyond the scope of this study.

### **Findings**

The intent of the LET program is to assist more Latino students to enter the career field of education. Although all 90 of the original LET participants entered the program with a career interest in education, not all participants remained interested in education. Important to this research is the finding that 56% ( $n = 24$ ) of those remaining in the program have decided to continue pursuing a career in education while 44% ( $n=19$ ) indicated that they did not plan to go into education as their career. The findings from this study represent the data from the 24 participants who are still actively involved in the LET program, and who indicated an education major.

The four emergent themes that surpassed the 75% case threshold are presented in Table 6, organized by the research questions. These themes included 1) mentors helped participants develop confidence, 2) migrant school field experiences increased participants understanding and

ability of becoming a mentor, 3) mentors influenced participants plans to become educators through the mentoring constructs of Crisp and Cruz (2009)—along with the new mentoring construct— cultural awareness and support, and 4), financial obstacles hindered participants perceptions of progressing towards a college degree.

Table 6

*Research Questions and Most Common Themes*

Research Questions	Total (%)
<b>Research Question 1: How Program Influences Participants' Education Trajectory</b>	
Mentors Helped Develop Confidence	24 (100%)
Migrant School Field Experiences Increased Understanding and Ability to Become a Mentor	24 (100%)
<b>Research Question 2: How Mentors Influence Participants' Plans to Become Educators</b>	
Psychological & Emotional Support	22 (92%)
Role Model & Support	23 (92%)
Academic Knowledge & Support	21 (88%)
Goal Setting & Career Support	21 (88%)
Cultural Awareness & Support	24 (100%)
<b>Research Question 3: Obstacles That Hinder Participants' Plans to Become Educators</b>	
Financing College Education	20 (83%)

**Influence of Program on Participants' Education Trajectory**

The first research question addressed what the LET participants themselves identified as being influential to their education career trajectory. Two themes emerged that addressed this question: 1) mentors helped developed participants confidence, and 2) migrant school field experiences helped increase participants understanding and ability to become mentors.

**Mentors help develop confidence.** LET students indicated two areas in which the LET mentors helped them develop confidence: 1) in their academic ability (75%); and 2) in navigating the college entrance requirements (83%). Students reported that before the LET program began they were unsure of their academic ability and felt that they were not “smart enough” for rigorous college-level work. Students described that the LET mentors assisted them in developing this confidence through: 1) providing a syllabus with clear expectations concerning assignments, testing, grading and attendance, 2) offering academic tutors throughout the program and, 3) giving frequent feedback to the students on their work. Students indicated they learned academic strategies and developed a sense of self-assurance as they did well in the college-level courses they completed. For example, Carla, a student from Cohort I in her first year of college described

I can do it! I was worried I wouldn't be able to do college-level work. I appreciated the clear expectations for the LET classes and extra help from the teachers. I did a lot of work, and when I did - I got good grades. This made me much more confident [at the University] this past year.

When students reported that mentors helped them develop confidence navigating college entrance requirements, they also reported that being involved on the campus was important to them. Students indicated they appreciated the time LET mentors spent explaining how to complete college applications, financial aid paperwork, and scholarship forms. LET students further indicated the “Student Success” course their mentors taught helped integrate them into college life. Daniela, a 12<sup>th</sup> grade female student from Cohort I described that: “College has always been expected of me. However, during LET, college [became] more of a reality for me...I feel like I understand how all of the applications and entrance processes work.”

Three patterns were evident in relation to LET students developing confidence. The first pattern shows that students in Cohort I reported confidence in academic ability (85%) and navigating the college entrance requirements (83%) more often than those in Cohort II (academic ability 25%: college entrance 50%). The second pattern was an increasing trend in the students' grade level, specifically those in college recognized mentors influence on their academic and college entrance confidence (100%) more than those in high school (academic ability 54%: college entrance 69%). The third pattern was that female students reported this influence on academic confidence (85%) and college entrance (90%) more often than their male peers (academic ability 25%: college entrance 50%). These combined patterns suggest that the students with the most confidence in their academic ability were in Cohort I (2<sup>nd</sup> year in LET program), in college, and were female. Older students had more time in the LET program, therefore more exposure to and time with mentors and were more likely to report mentor influence on their confidence in their academic ability to attend college (see Table 7).

Table 7

*Confidence by Cohort, Grade, and Gender*

Mentors Helped Me Develop Confidence In:	Grade Gender	High School		College		Total (%)
		M	F	M	F	
Academic Ability	Cohort I	0	6	0	11	17 (85%)
	Cohort II	1	0	0	0	1 (25%)
Total (%)		7 (54%)		11(100%)		18(75%)
Navigating College Entrance	Cohort I	0	7	0	11	18 (90%)
	Cohort II	0	2	0	0	2 (50%)
Total (%)		9 (69%)		11(100%)		20 (83%)

**Migrant school field experiences increase understanding and ability to become a mentor.** All of students indicated that as a result of the migrant school visit, they felt needed as a role model. A majority of the LET students (83%) indicated that their bilingual skills were needed and used in the classroom teaching experiences. Ana, a female student in Cohort I who was attending her first year of college described the field experience in the migrant school the following way:

Visiting [migrant] schools and working with those cute little kids influenced me into becoming a teacher because I saw how many Spanish-speaking students needed help. It reminded me of when I once needed help, and it made me feel like I could really make a change. Working with them also made me see how I would love to help out the kids and teach them and support them into being a good person.

Through their teaching field experiences in migrant schools, LET students assisted migrant school students by not only using their bilingual skills, but also through their cultural awareness (75%). LET students believed participating in teaching field experiences in the migrant schools helped them gain a greater understanding of their ability to mentor younger Latino students in their communities. Through these teaching field experiences, LET students realized the importance of their being able to assist others in their community by being an educational mentor through the use of their knowledge, bilingual skills, and their cultural awareness (see Table 8). Comments such as this one from Victoria, a 12<sup>th</sup> grade student in Cohort I, were common:

I can be a role model because I am bilingual which helps because I can communicate with more students in the classrooms. I can also understand two different cultures by

being a Latina...I think that there is a great need for caring Latino teachers in our schools with bilingual skills and passionate hearts for teaching these beautiful children.

Table 8

*Role of Migrant School Visits*

Migrant School Field Experiences Helped Me Increase My Understanding And Ability To Become A Mentor Through My:	Grade	High School		College		Total (%)
	Gender	M	F	M	F	
Bilingual Skills	Cohort I	0	8	0	10	18 (90%)
	Cohort II	2	0	0	0	2 (50%)
Total (%)		10 (77%)		10 (91%)		20 (83%)
Cultural Awareness	Cohort I	0	6	0	11	17 (85%)
	Cohort II	1	0	0	0	1 (25%)
Total (%)		7 (54%)		11 (100%)		18 (75%)

Patterns within this theme were evident in relation to the teaching field experiences during the migrant school visits. The first pattern shows that students in Cohort I reported confidence in being a role model in the classroom through the use of their bilingual skills (90%) and cultural awareness (85%) more often than those in Cohort II (bilingual skills 50%: cultural awareness 25%). The second pattern was an increasing trend related to the students' grade level, specifically those in college recognized that they were needed in the schools as they were able to use their bilingual skills (91%) and cultural awareness (100%) more than those in high school (bilingual skills 77%: cultural awareness 54%). The third pattern was that female students reported being an educational role model in the migrant school classroom through the use of their bilingual skills (90%) and cultural awareness (85%) more often than their male peers (bilingual skills 50%: cultural awareness 25%). These combined patterns again suggest that the

students with the most confidence in their ability to be a mentor in the migrant school classrooms were in Cohort I (2<sup>nd</sup> year in LET program), in college and were female. Older students who had more time in the LET program, therefore more exposure to teaching field experiences in the classroom were more likely to report that the migrant school field experiences helped them gain a greater understanding and ability to be a mentor themselves.

### **Mentors Influence on Participants' Plans to Become Educators**

The second research question addressed the influence of LET mentors on the education career choices of LET participants. This research question specifically asked LET students to identify how the LET mentors influenced their desires and plans to become educators. Even though one of the LET program's original goals was to provide Latino students with educational mentors, the program did not use a specific mentoring program as a pedagogical guide. However, the mentoring constructs from Crisp and Cruz proved to be a useful model for describing and explaining mentoring that occurred in the LET program. Table 9 clearly indicates that LET mentors functioned within the roles of Crisp and Cruz's (2009) core mentoring constructs. Each of the four major mentoring constructs from Crisp and Cruz's (2009) were mentioned often by the LET students. In addition to the mentoring constructs outlined by Crisp and Cruz (2009) an additional construct emerged that indicated a new potential aspect of successful mentoring of Latino students – cultural appreciation and support.

Table 9

*Roles of Mentoring*

Mentoring Construct	Total ( %)
Provided Psychological & Emotional Support	22 (92%)
Provided Role Model Support	23 (92%)
Provided Academic Knowledge & Support	21 (88%)
Provided Goal Setting & Career Support	21 (88%)
Provided Cultural Appreciation (NEW Addition To Theory)	24 (100%)

**Psychological and emotional support.** Psychological and emotional support is a mentoring construct identified by Crisp and Cruz (2009) and others (Higgins & Kram, 2001; Cohen, 2003; Miller, 2002; Roberts, 2000). Most LET students (92%) identified that they experienced their mentors as providing psychological support, demonstrated through both listening, and through helping them identify problems. Amanda, a student from Cohort I in her first year of college mentioned: “I felt that the LET instructors actually cared about the students. They listened to the experiences that everyone shared during the meetings and openly embraced all of us.” Hector, a student in the 11<sup>th</sup> grade, from Cohort II added, “They took time to listen to our problems—which for me happened to be money problems—and talked to me about finding financial help.”

Additionally, students indicated that emotional support came through providing moral support and encouragement, and establishing a supportive relationship. David, a 12<sup>th</sup> grade student in Cohort II, said: “The mentors encouraged me when I told them I didn’t feel like I was smart enough to succeed in college. They shared stories of how they worked really hard in their studies when they were in school. I felt like they gave me a lot of moral support.” Largely, LET

students felt that the LET mentors treated them with kindness and respect and felt that long term supportive relationships had been established.

**Role model support.** The role model construct of Crisp and Cruz's (2009) mentoring structure was also mentioned by 92% of the LET students. Role model support has been reported by mentoring theorists as handling conflict and balancing professional and personal demands (Nora & Crisp, 2007; Cohen, 2003; Higgins & Kram, 2001). LET students acknowledged role model support through the LET mentors serving as an example in the classroom as they were observing with others, and LET mentors providing guidance regarding education as a career. Maria, a 12<sup>th</sup> grade student in Cohort I, made this comment regarding mentors being role models in the classroom: "I am glad that they (LET mentors) are my real life role models... I liked watching them as they worked with all of the students in LET; the instructors always treated everyone with respect."

LET students frequently suggested that their mentors provided guidance regarding education as a future career. The general feeling of the LET students was that the mentors helped guide them in career and college choices regarding their educational goals. Alberto, a 12<sup>th</sup> grade student from Cohort II stated it this way: "I loved that they listened to me and that they talked to me about my goals for the future. They helped me see what a role model should be." Students said that they appreciated that the LET mentors took a lot of time with them guiding them into the area of education they were most interested in as a career (i.e., elementary, secondary, administration, counseling).

**Academic knowledge and support.** The construct of academic knowledge and support (Crisp & Cruz, 2009) was mentioned by 88% of the students. LET students indicated that they gained necessary skills and knowledge; were challenged in the classroom; used the skills they

learned; and established a teaching-learning process by taking what they had learned in the classroom into the schools where they had field experiences. These components of mentoring have also been identified in other research (Higgins & Kram, 2001; Nora & Crisp, 2007; Miller, 2002; Roberts, 2000). A comment made by Thalia, a 12<sup>th</sup> grade student in Cohort I, described the way LET mentors provided academic knowledge and support in the classroom:

I feel like the LET teachers supported and prepared me to get in to college and be familiar with the classes...The LET instructors really pushed me to work outside of where I was used to working. But, the LET instructors provided support during the entire program.

LET students identified that were able to apply the knowledge that they gained from their coursework outside of their classrooms in their teaching field experiences. Jade, a 12<sup>th</sup> grade student in Cohort I, stated; “When I worked with the kids in the 5<sup>th</sup> grade, I was able to use the LET class as a model for how to work with the students and keep their attention.” Many students said that the LET mentors were “amazing”, and the things they learned made them want to go into education more than ever.

**Goal setting and career support.** The construct of goal setting and career support from Crisp and Cruz’s (2009) mentoring structure was mentioned by 88% of the LET students. The goal setting and career support construct included: setting realistic goals, reflecting on the mentoring process, and having career choices challenged. The findings related to goal setting and career supports identified by the LET students have been supported by mentoring literature (Crisp & Cruz, 2009; Cohen, 2003; Roberts, 2000). The following comment made by Antonio, an 11<sup>th</sup> grade student in Cohort II, represents the general feeling regarding how LET mentors

helped students set realistic goals: “They [LET mentors] helped us map out a four-year plan to get our degrees and become teachers.”

Antonio further explained that besides just setting career goals, mentors “fully supported our decisions and helped us question if we wanted to go into teaching, and [helped us] reflect on the experiences we had had with the migrant schools we were able to visit.” Students, including Rosa, a 12<sup>th</sup> grade student in Cohort I, indicated; “With their [LET mentors] help, I was able to see myself in the future more clearly. I could see myself as being a role model for all Latinos.” Overall, students expressed appreciation for mentors taking time to talk to them as they reflected on the experiences they had while trying to decide if education was the right career choice for them.

**Cultural appreciation and support.** A fifth theme related to mentoring roles, emerged from the data that was not associated with the theoretical mentoring framework of Crisp and Cruz (2009). This new emergent theme reflected the importance of cultural appreciation and support. This theme represents the only mentoring role that all LET students (100%) mentioned. While the theme of cultural appreciation and support was not a construct in Crisp and Cruz (2009) this finding reflects previous research which suggests that minority educational mentors and role models are a critical factor in the success of minority students (Salinas, 2002; Santos & Reigadas, 2005; Campbell, 2007).

LET students described that mentors showed an appreciation of the students’ Latino culture and that becoming a Latino teacher could fill a need within their communities. A simple comment made by Sarah, a 12<sup>th</sup> grade student from Cohort I, described the general feeling of how students viewed LET mentors’ ability to provide cultural awareness and support: “The LET instructors provided support for our Latino culture. The values of family, home, success and

education are some of the most important elements of our culture and in LET.” Garcia (2007), Salinas (2002), Santos and Reigadas (2005) each support this finding indicating that ethnically similar mentors were found to have a positive effect on students as they could better understand the whole child.

Melissa, a 12<sup>th</sup> grade student from Cohort I, shared a comment that represented the common feeling among the LET students when she said

I think that my own culture will help me be a better teacher. If students see a multi-cultural teacher, then they will know that it’s okay. They will see with their own eyes that anyone can be a teacher, or a doctor, or anything they want to be. My culture will help me be a more effective teacher. Being of a different ethnicity, I will be able to help people of my culture and other peoples as well.

The feeling that becoming a Latino teacher would fill a need within their communities is also supported by Richard W. Riley (1998) a former U.S. Secretary of Education, who felt that Latino students “need role models, they need to see themselves in the faces of their teachers” (p. 19). Literature by Salinas (2002) also suggests that minority teachers are vital as “the recruitment of minority teachers is crucial to producing higher academic achievement among minority students” (Salinas, 2002, p. 606)

**Co-occurrence of mentoring constructs.** When two mentoring constructs were mentioned by an LET student and appeared together in the data, they were considered to be co-occurring. The analysis of construct co-occurrence identified two patterns with a threshold above 75%. The first pattern of co-occurrence was found (100%) between psychological and emotional support and academic knowledge and support. In other words, LET students felt they had supportive relationships with the LET mentors that also influenced their academic knowledge

and support. This co-occurrence of a supportive relationship and academic knowledge and support may indicate why the LET students identified mentors as helping them develop more confidence in their academic ability and navigating college entrance requirements.

The second pattern between the mentoring constructs is that there are no other co-occurrences between any of the other mentoring constructs, including the additional mentoring construct of cultural awareness and support. This was surprising as every student mentioned the significance of cultural awareness and support, yet the other constructs did not appear together in the data above the 75% threshold. Furthermore, LET students provided no explanations of how one mentoring construct might be related, lead to another or be affected by another. Rather, these patterns indicate that, for the most part, mentoring roles were likely seen as distinct interactions, generally unrelated and not co-occurring (see Table 10).

Table 10

*Patterns Between Mentoring Constructs*

<i>(n= 24)</i>	Role Model Support	Goal Setting & Career Support	Psychological & Emotional Support	Academic Knowledge & Support
Goal Setting & Career Support	7 (29%)			
Psychological & Emotional Support	11 (46%)	7 (29%)		
Academic Knowledge & Support	5 (21%)	4 (17%)	24 (100%)	
Cultural Awareness & Support	9 (38%)	3 (13%)	12 (50%)	5 (21%)

In summary, the findings for the second research question indicate that all of the students (100%) identified LET mentors as influential in their plan to major in education.

Overall, and not surprisingly, all four mentoring constructs of Crisp and Cruz (2009) were identified in the mentors' roles and were described as influential to the students' indicated desires and plans to become educators. The finding of a new mentoring construct—cultural awareness and support—was reported by 100% of the LET students suggesting this theme may be a critical construct in the mentoring of LET students.

### **Obstacle That Hinders Participants' Plans to Become Educators**

The third research question addressed the external obstacles LET students perceived might hinder their aspirations to become educators. LET students, in general, brought up a number of concerns that included losing motivation to complete a college degree, the need to help out their families, and their documentation (immigration) status. However, only one theme emerged above the 75% threshold—financing their college education.

When LET students described what obstacles they faced in becoming educators, the majority (83%) expressed concern about financing their college education (see Table 11). Comments such as this one made by Raquel, a 12<sup>th</sup> grade student in Cohort I, were very common: “I worry a little bit about being able to afford going to college. I don't know if my grades are good enough to get a scholarship, and I know that my family cannot help me because we have just enough money to get the things that we need.” While no single issue reached the threshold of 75%, students described how the economic downturn over the past few years had forced parents out of work and some out of their homes. LET students mentioned they were expected to be at home to tend younger brothers and sisters while their parents worked, or they themselves had to work to provide basic needs for their families, which affected the LET students' ability to study and to get good grades that would ultimately help them earn

scholarships to college. Nicole, a first year college student from Cohort I described her situation in the following way:

I am working two part time jobs right now. One job is to help my family and one job is to pay for college. I don't know if I can keep working as much as I am now and have time to study to get good grades for school. If I quit one job, it will hurt my family or my going to college.

Table 11

*Obstacle That Hinders College Education*

What might prevent you from attending college or becoming an educator?	Grade Gender	High School		College		Total (%)
		M	F	M	F	
Financing My Education	Cohort I	0	8	0	9	17 (85%)
	Cohort II	2	0	0	0	2 (50%)
Total (%)		10 (77%)		9 (82%)		19 (79%)

The pattern that occurred with the finding of not being able to finance a college education was that female students in Cohort I (85%) were more concerned about this obstacle compared to male students (50%) in Cohort II. This pattern suggests that female students in Cohort I who have been involved longer in the LET program and are already enrolled or close to entering college may be more aware of this critical obstacle that may hinder their aspirations to become educators.

**Discussion**

The findings of this study can now be summarized and presented in order to answer the research questions. With this in mind, this study seeks to contribute to the existing base of literature regarding promising programmatic interventions intended to increase Latino

educational attainment. This study may also develop practical implications transferrable to other Latino education models and provide future recommendations for the Latino Educators of Tomorrow program.

### **Summary of Findings**

In order to answer the first research question, the findings from this study reflect that the LET mentors were influential to the education career trajectory of these Latino students. These findings are similar to those reported by Salinas (2002), as well as Santos and Reigadas (2005) who indicated that mentors are encouraging to Latino youth, given that these mentors help build confidence in Latino students' abilities to attend college. LET students identified that mentors were influential to their education careers, given that they gained confidence not only in their academic abilities, but in navigating the college entrance requirements as well. LET students also indicated mentors were motivational to them, given that they helped them understand that they could be an example to others in their communities through teaching field experiences.

LET mentors helped the LET students increase their understanding of their own potential to become a mentor through migrant school field experiences. LET students were also able to apply their newly gained academic knowledge from the LET classroom, combined with their bilingual skills and cultural awareness, to be role models and mentor themselves, and were greatly touched by the experiences they had in the migrant schools. These findings corroborate the importance of ethnic similarity and appreciation between students and mentors which has been found to have had a positive effect on students (Salinas, 2002; Santos & Reigadas, 2005).

The findings from the LET students support findings from Santos and Reigadas (2005) and Campbell (2007) who found that longer lengths of time spent with educational mentors and role models helped to establish a positive outcome for students. The findings also suggest those

who were in college, and thus were involved in the LET program longer, more often expressed confidence in their academic ability, a sense of self-assurance in navigating the college entrance requirements, and their potential ability to be a mentor to others.

LET students, in addressing the second research question concerning how LET mentors influence participants' desires and plans to become educators, recognized each of the mentoring constructs of Crisp and Cruz (2009). While the findings closely relate to previous research on mentoring (Crisp & Cruz, 2009), they also add depth to current understanding about the mentoring of Latino students. Additionally, findings suggest that all students (100%) reported psychological and emotional support from mentors to co-occur with academic support. This finding may explain why LET students reported mentor influence on their confidence in academic success and the navigation of college entrance requirements.

Crisp and Cruz's (2009) mentoring construct of psychological and emotional support was mentioned by Latino students repeatedly as they indicated how appreciative they were that their LET mentors took time to listen, encourage, and provide moral support as they developed long-term supportive relationships. Latino students thrived when they connected with an adult who was able to take time to really listen and share culturally similar stories. These mentoring interactions appear to have created an emotional and cultural bond between the mentors and students.

The mentoring construct of role model support presented by Crisp and Cruz (2009) was supported by LET students. LET students' established strong emotional ties in their mentoring relationships and saw their mentors as role models and examples they wanted to imitate. These findings, combined with additional literature on mentoring Latino students (Erlach, 2000), suggest that Latino role models and mentors are needed in higher education because they have

the ability to motivate Latino student success. LET mentors served as educational role models for students as they shared insights and provided guidance about education as a career. LET students took with them an understanding of the need for more Latino educators to serve as role models to others in their communities.

Garcia (2001) noted that having Latino teachers who serve as educational role models may result in more Latinos completing high school and attend college. LET mentors put into practice Crisp and Cruz's (2009) mentoring construct of goal setting and career support as they helped students plan and set goals to complete high school and college to become educators. LET students indicated that the time the mentors took assisting them to map out high school and college courses leading to graduation was valuable and helped them as they set goals to become educators.

LET students also found the program's coursework challenging, but rewarding, as indicated through the mentoring construct of academic knowledge (Crisp & Cruz, 2009). LET students appreciated being able to establish a teaching-learning process by taking what they had learned and using it in classrooms where they felt valued and needed as Latino mentors themselves.

Addressing the third research question, LET students overwhelmingly indicated that financing college is an obstacle that may hinder their opportunities for college attendance despite their desires to attend college all 24 major in education to become role models to Latino youth. A report by UNICEF (2004) names education as "perhaps a child's strongest barrier against poverty" (p. 83). Educating Latino students and their families about how to financially prepare to attend college may lead to more students attending college, and eventually, higher graduation rates. With an earned degree, LET students could then improve their own financial circumstance

and assist in making a greater contribution to their communities and to the U.S. economy as a whole.

**Contributions of Findings to the Literature**

The findings suggest the addition of a new mentoring construct—cultural awareness and support—to the mentoring constructs of Crisp and Cruz (2009). Figure 3 presents the additional construct of cultural awareness and support that may provide an enhanced theoretical framework for mentoring Latino students. Although this additional construct may seem very simple, every LET student emphasized that they felt their culture was appreciated and supported by their experience in the LET program with their mentors.

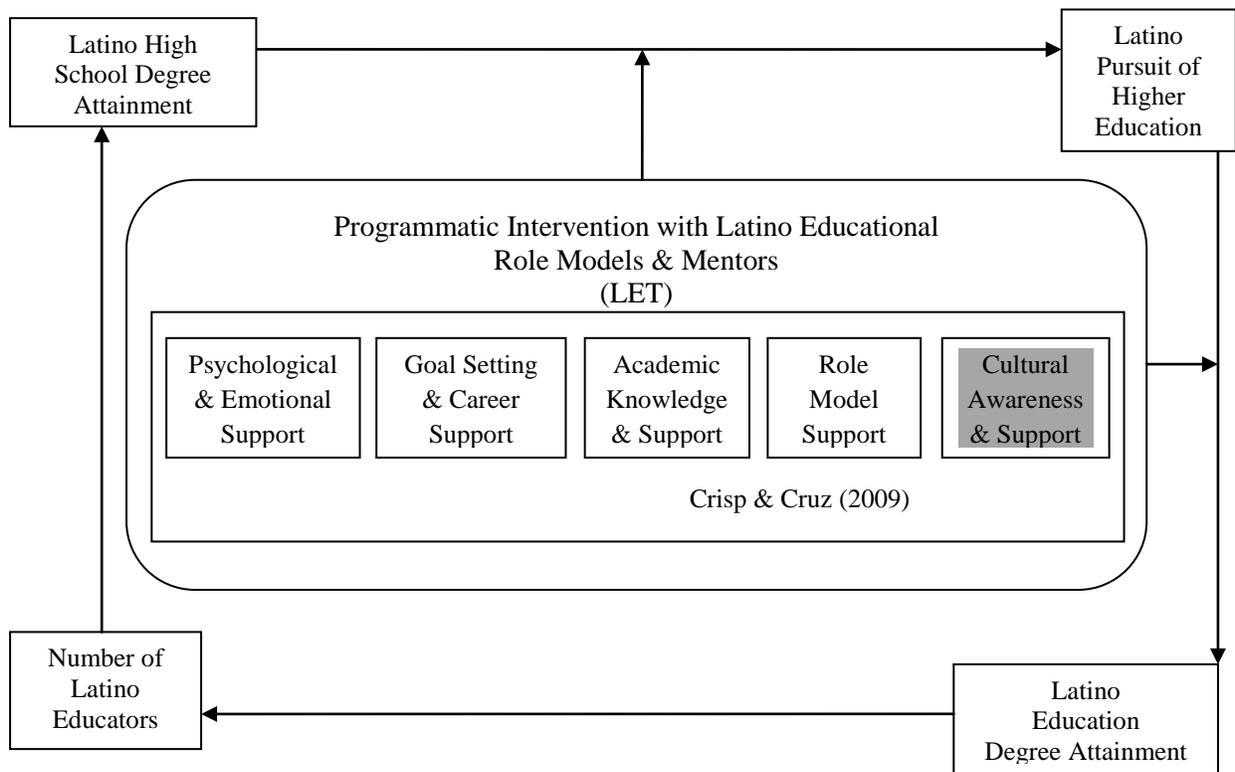


Figure 3: Revised theoretical framework of role of LETs programmatic intervention.

**Future Research Recommendations**

Future research should examine the LET program over time to determine if those who participated in the LET program maintain relationships with their mentors throughout completion of their college degree in education. Future research may also consider examining the specific characteristics of mentor relationships to determine if cultural similarity, or perhaps cultural appreciation shared between mentors and their mentees determines successful mentoring connections.

Future research should further examine educational outcomes, in terms of completing high school or college degrees, for students involved in the LET program who have decided to continue in the program to become educators, and also for those who have chosen another career path. Future investigation should also include other Latino and ethnically diverse groups, involved in educational mentoring programs. Such programs should be studied with the mentoring constructs of Crisp and Cruz (2009) along with the added construct of cultural awareness and support to further solidify the value of incorporating it to existing mentoring research. This should be done in order to add to the call of previous researchers (Wallace, Able & Ropers-Huilman, 2000; Bordes & Arredondo, 2005; Mortenson, 2006; Strayhorn & Terrell, 2007; Zalaquett & Lopez, 2006; Crisp & Cruz, 2009) in order to build our theoretical understanding of the ways in which mentoring is personally experienced and constructed by diverse students.

Other Latino, and diverse ethnic educational groups, who have intervention programs involving mentoring, should also be considered in future research. These groups should be studied with the added construct of cultural awareness and support to validate the value of adding it to the mentoring constructs of Crisp and Cruz (2009).

Future research should include survey items asking about documentation status in order to understand relationship of documentation to higher education barriers and the magnitude of the issue for Latino students seeking an education career. Future inquiry should also examine the extent to which documentation status affects the choice not to enter education due to required background checks. Additionally, the LET program should consider expanding their program to include college majors that allow students, regardless of their documentation, to use their bilingual skills and cultural awareness to better their communities through other college majors, e.g. business, medicine, and hospitality.

### **Practical Implications**

Programmatic interventions such as the Latino Educators of Tomorrow have the potential to increase the number of Latino educational role models needed in our schools today. The findings of this study focus on one Latino educational program and are grounded in the data from LET students. Other educational leaders may find value in these findings for their contexts and situations. This study suggests four practical implications.

**Use mentors in the transition to college.** First, the longer a student participates in an educational interventional program that allows students to be involved with mentors, the greater the benefits for helping students gain confidence in their academic abilities and navigating the college entrance requirements. In order to assist in the transition to college, mentors can help to build the Latino students' confidence in their academic ability and in navigating the college entrance process. As stated in the findings, before the LET program began, students indicated they were not sure of their academic ability and felt that they were not smart enough for the rigors of college-level studies. Through their own hard work and the support they received from their mentors, they succeeded in their coursework and developed a new sense of pride and self-

confidence. Offering high-achieving Latino students the opportunity to enroll in rigorous coursework early in their educational experience will prepare them for higher education expectations.

LET students appreciated the time mentors spent explaining how to complete college applications, financial aid paperwork, and scholarship forms. LET students expressed a newly developed confidence as they learned about the college entrance requirements and where to go on the college campus to ask for assistance when needed. If mentors allow for additional time to help students understand the college entrance requirements and where students can go on campus to seek additional help, it seems that students show a gained confidence and understanding of how to find their way through complicated and intimidating college entrance requirements.

**Provide experiences to be mentors.** Second, mentoring should include culturally sensitive mentors throughout the Latino students' education experience. LET students reported that helping younger Latino students in the migrant schools was influential on their decision to become an educator. LET students indicated that because they were able to use their bilingual skills and cultural awareness as they mentored younger students during the field experiences, they developed a greater understanding of their ability to become a mentor themselves.

The teaching field experiences in the migrant school proved to be motivational to the students as they saw the need for Latino teachers in the classrooms and were able to serve as role models to younger Latino students. Providing field experiences in the migrant schools increased the students' sense of understanding in their own ability to become a mentor to the migrant school students through the use of their bilingual and cultural awareness skills therefore increasing their desire to continue with their goals to become an educator.

**Use a mentoring program through high school into higher education.** Third, participating in experiences where students are allowed to use bilingual and cultural awareness skills as an educational mentor to younger students in their community was valuable to the LET students' understanding of what it takes to become an educator. Connecting high school and higher education may be more successful with the help of a mentoring program. The cultural awareness and support shown to students by their mentors was also critical to the students as they participated in the LET program and helped students become more aware of the strengths they had to offer in the classroom with their bilingual skills and cultural similarity.

Mentoring programs implemented in high school that continue to work with students throughout the students' college experience can provide additional support for students in their attainment of a degree. Programs that provide cultural awareness and support to Latino students in addition to the mentoring constructs identified by Crisp and Cruz (2009) may even further assist in Latino students in their educational goals.

**Educate students and parents about financial opportunities.** Fourth, given that students have financial obstacles, intervention programs should assist students and their parents in understanding how to prepare and save for college expenses. Not being able to finance a college education was the greatest obstacle that LET students identified. Ideally, enabling our Latino youth access to higher education opportunities can lead to higher income potential, more stable home and family conditions, and a better economic future for the country (NCES, 2006) as well as provide more Latino educators in tomorrow's classrooms. Education intervention programs should take time to inform Latino students and their parents how to enroll in classes during high school that also generate college credit (Advanced Placement and Concurrent

Enrollment) and how to finance their college education in order to increase the possibility of their attending higher education in order to pursue a degree in higher education.

A related obstacle to the LET students' being able to finance their college education is that of documentation (immigration) status. Although the documentation status of students was not asked directly, some (33% of the total survey participants) brought up this issue on their own as an additional concern. While documentation did not surpass the threshold for a theme, this is a critical issue for the mentoring of Latino students toward education careers. Undocumented students may have the academic capability to pursue a postsecondary degree, but being undocumented may further hinder ability to go on to college for financial reasons.

Undocumented students are not able to receive federal financial aid for their education, which bars them from receiving Pell Grants or government backed student loans and from participating in federally funded work-study programs. Furthermore, undocumented students are not able to legally work in the U.S. (Massey, 2007) even where there is a need for employees, including in the field of education. A student's documentation status may be linked to the financial barriers that students indicate as an obstacle to their obtaining a college education and becoming an educator.

Another unintended consequence of the lack of documentation on the pursuit of education careers is that background checks cannot be performed if a student wishes to participate in the student teaching experience required of pre-service teachers (American Association of Colleges for Teacher, 1995). Surprisingly, this detail was not considered by the LET coordinators when the program began, and may have been unsettling to some students who wanted to enter education as a career, but now are having to choose a different career path because of their lack of documentation.

In order to address the issue of immigration status, if students lack the documentation required for background checks in education, other career fields that do not have this condition should be made accessible. Expanding Latino career programs to include college majors in occupations that do not require background checks may lead to more Latino students pursuing a degree in higher education and eventual degree attainment.

### **Conclusion**

The population of Latino students is growing faster than any other ethnic group in U.S. public schools today; however, the number of Latino teachers throughout the nation has remained low. Participation in an educational program designed to increase the number of Latino students entering teaching as a profession such as the Latino Educators of Tomorrow (LET), may increase the number of Latino educators in our schools. This study identified underlying themes regarding the LET programs' influence on the students' trajectory towards becoming an educator, specifically: mentors and mentoring experiences. Practical implications focus on combining cultural appreciation with existing mentoring theory to assist Latino students in their educational goals.

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## APPENDIX A: REVIEW OF THE LITERATURE

**Background**

From 2000 to 2015, the Latino resident population in the United States is projected to grow 55%; this growth will also be reflected by an increase in Latino students in our public school enrollment (National Center for Educational Statistics, 2010). Currently, there are approximately 11 million Latino students in the nation's public schools, grades K-12; they make up about one in five public school students in the United States (Fry & Gonzalez, 2008). Latino students are quickly becoming a larger segment in the U.S. public schools and in the general population. The U.S. Census Bureau projects that by the year 2050, one in every three U.S. residents will be Latino (Pew Hispanic Center, 2007). The Latino population of school-aged students (ages 5 to 17) will increase a staggering 155%, to 28 million in 2050, compared to the Caucasian population increasing by 12%, and the African American population increasing 51% (U.S. Census, 2009).

With great respect for the various groups of people who come from diverse Latino “home” countries, for the purposes of this research, the term “Latino” will be used for all of these groups to keep the language of this study consistent—Nieto (2005) reports that Latino is a generally more acceptable “label” than Hispanic. According to the 2000 U.S. Census, approximately 13% of the total U.S. population, or 35.3 million, people self-identify as Latino and now represent the largest underrepresented racial/ethnic group in the United States. Table 1 shows data reported by the Pew Hispanic Center American Community Survey (2007) that present a statistical portrait of the Latino population, with the individual Latino populations listed in descending order of population size.

Table 1

*Detailed Latino Origin in the United States: 2007*

Origin	Number	Percent of total Latinos in the U.S.
Mexican	29,189,334	64.3
Puerto Rican	4,114,701	9.1
All Other Spanish/Hispanic/Latino	2,880,536	6.3
Cuban	1,608,835	3.5
Salvadoran	1,473,482	3.2
Dominican	1,198,849	2.6
Guatemalan	859,815	1.9
Colombian	797,195	1.8
Honduran	527,154	1.2
Ecuadorian	523,108	1.2
Peruvian	470,519	1.0
Spaniard	353,008	0.8
Nicaraguan	306,438	0.7
Argentinean	194,511	0.4
Venezuelan	174,976	0.4
Panamanian	138,230	0.3
Costa Rican	115,980	0.3
Other Central American	111,513	0.2
Chilean	111,461	0.2
Bolivian	82,434	0.2
Other South American	77,898	0.2
Uruguayan	48,234	0.1
Paraguayan	20,423	0.0
Total	45,376,596	100.0

With the Latino student population growing faster than any other group in today's U.S. public schools, the State of Utah has also experienced an attendant growth trend in the number of Latino students. However, the demographic description of teachers sharply contrasts with the demographics of today's student population. The majority of practicing teachers and teacher candidates in the United States continue to come from Caucasian, middle class, English speaking, Christian backgrounds (Slater, 2008; Ladson-Billings, 2005). According to the National Center for Educational Statistics (2008) nearly 17% of students in grades K-12 were of Latino ethnicity; however, only 6% of teachers were of the same origin.

A current challenge for Latino students is the lack of educational role models. The underachievement of Latino students, in terms of academic potential, may be linked in part to the fact that there are few role Latino models in education. The intended consequence of having more Latino educators in our classrooms is to increase the number of educational mentors and role models for the rapidly growing number of Latino students. Why are there so few Latino teachers? How can more Latino students be motivated to enroll in teacher preparation programs? What can be done do to purposefully increase the pool of potential Latino teachers? These are not simple questions to answer as the gap between the percentage of Latino students and the percentage of Latino educators continues to increase.

This appendix presents the theoretical framework, grounded in motivational and mentoring theory, to address this research problem. In order to investigate how to increase the proportion of Latino educators to Latino students, it is important to understand the following issues: first, the benefits that Latino teachers who serve as role models can have on motivating Latino students; second, the increasing need for Latino teachers, including statistics regarding projected demographic shifts that are occurring in the United States and Utah; third, how to

decrease obstacles that Latino students face in successful higher education degree attainment; fourth, the components of successful Latino college preparation and university programs; and finally, how to increase higher education recruitment and retention rates.

**Mentoring**

The theoretical framework that will be used for this research is grounded in mentoring theory. Crisp and Cruz (2009) have identified four major mentoring constructs, Figure 2 is a model of these constructs which will serve as the foundation for the theoretical framework for this research. The four major mentoring constructs are 1) psychological and emotional support, 2) support for goal setting and choosing a career path, 3) academic subject knowledge and support aimed at advancing a student’s knowledge relevant to their chosen field, and 4) specification of a role model.

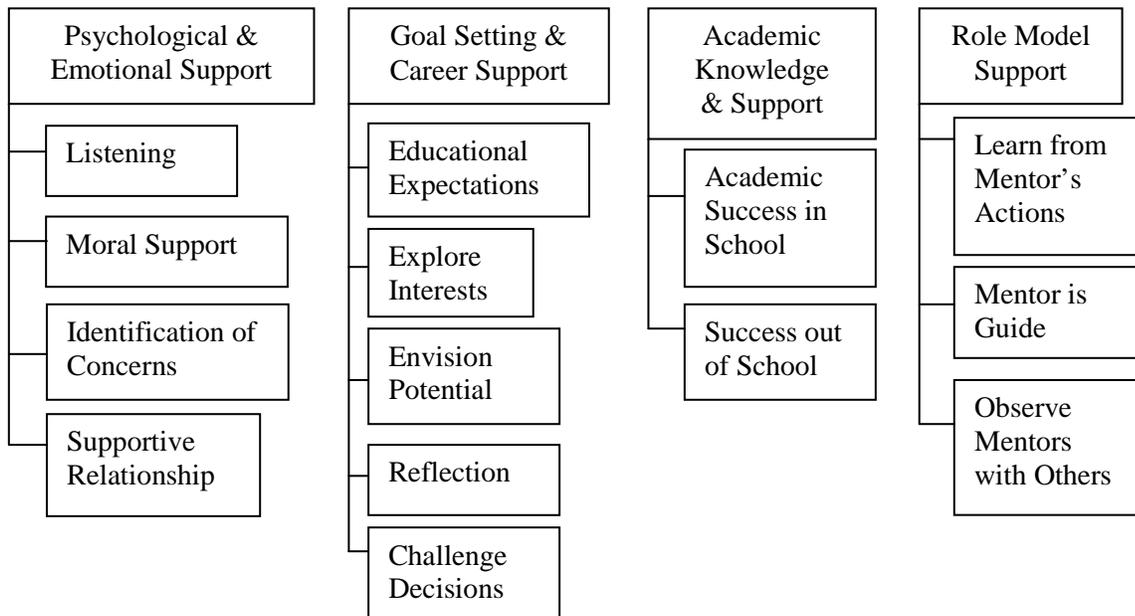


Figure 1: Crisp and Cruz’s (2009) mentoring constructs.

Psychological and emotional support is the first construct in mentoring which draws from the theoretical perspectives of Cohen (2003), Miller (2002), and Roberts (2000). This first

dimension of mentoring includes active, empathetic listening and a genuine understanding and acceptance of the mentee's feelings (Cohen, 2003; Miller, 2002), a strong and supportive relationship (Roberts, 2000, Miller, 2002), and development of a positive regard conveyed by another (Higgins & Kram, 2001). Miller (2002) included identification of problems as part of a mentoring experience that comprises aspects of psychological and emotional support. Nora and Crisp (2008) also added to the perspective that mentoring involves a discussion of fears and uncertainties and emphasizes building a mentee's self-confidence. The psychological and emotional support construct involves listening, providing moral support and encouragement, identifying problems, and establishing a supportive relationship.

The second construct is that of goal setting and career path support. For Latino students still in high school, high school graduation is an important goal in order to continue with career path choices. Five areas of focus in this construct include first, assessment of the students' strengths, weaknesses and abilities with setting realistic academic and career goals (Crisp & Cruz, 2009); second, in-depth review and exploration of interests, abilities, ideas, and beliefs (Cohen, 2003); third, envisioning the future and developing personal and professional potential; fourth, taking time to reflect on the mentoring process (Roberts, 2000), which includes requesting information and offering suggestions to mentees concerning plans for progress achievement, educational and career goals (Cohen, 2003); and fifth, challenging the explanations for decisions or avoidance of decisions by the mentees (Cohen, 2003).

The third construct is that of academic subject knowledge support, this construct focuses on enlarging students' academic knowledge for school and also for their chosen career field. The first component of this construct is the idea that a mentoring experience involves providing students with someone who supports their academic success inside the classroom. Classroom

mentors employ such strategies as 1) helping the mentee to gain necessary skills and knowledge (Higgins & Kram, 2001), 2) educating, evaluating, and challenging the mentee academically (Nora & Crisp, 2007, 2009), 3) employing tutoring skills and focusing on subject at hand (Miller, 2002), and 4) establishing a teaching-learning process (Roberts, 2000).

A student's academic success outside the classroom is the second component of academic knowledge and support. Support outside of the classroom may include support in field experiences or the work environment. Higgins and Kram (2001) suggested that this may include nominating the mentee for promotions, intervening for the mentee when necessary, and taking appropriate credit and blame while the mentor serves as a supporter toward the realization of the mentee's dream.

The fourth construct is role model support, which includes the mentee's learning from a mentor's actions. Emphasis is placed on the mentor sharing life experiences and feelings to personalize and enrich the relationship with the mentee (Cohen, 2003; Higgins & Kram, 2001). The perspective that the mentor serves as an example and a guide, is another component of this construct. Finally, the opportunity to watch the mentor with others, handling conflict and balancing professional and personal demands (Crisp & Cruz, 2009), is a component of role model support. Crisp and Cruz's (2009) mentoring constructs provide a useful model for describing and explaining mentoring in general as well as mentoring in an educational context.

Traditionally, researchers have looked at mentoring from a business or education point of view; however, there are other ways that mentoring meets the needs of students on their pathway to personal success. For example, mentoring may also be a motivational tool as teachers act as role models. Hanushek (2001) stated that "motivation of students themselves is critical to the educational process" (p. 321). Martin and Dowson (2009) suggest that the concept of mentoring

and role model relationships provides a framework for considering theories, issues, and practices relevant to achievement motivation. Figure 2 shows literature related to mentoring that will be reviewed including the topics of mentoring in business, mentoring in education, and mentoring Latino students. The literature on mentoring will include components of motivation in order to propose a framework that will guide this study in order to inform others who are mentors or role models to youth, especially Latino students.

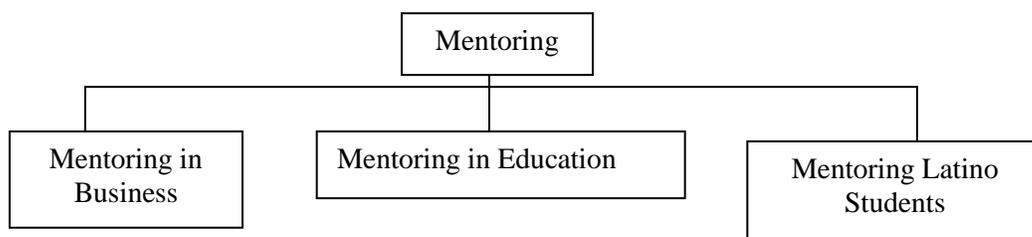


Figure 2: Literature related to mentoring.

### Literature on Mentoring

The word *mentor* stems from the ancient Greek tale, *The Odyssey*. In this story, while Odysseus prepares to fight in the Trojan War, he entrusts his friend, Mentor, to guide the development of his son Telemachus. According to Miller, “Mentor was responsible, as a wise and trusted advisor, for guiding all aspects of the boy’s development” (2002, p. 26). Despite the long history surrounding mentoring relationships, there is a shortage of theory to explain mentoring experiences and how they are perceived by adolescents and beginning college students (Crisp, 2008, 2009; Nora & Crisp, 2007; Philip & Hendry, 2000).

Mentoring has traditionally been seen as a relationship in which a senior or more experienced person, called a mentor, provides support and assistance to a junior or less experienced colleague, often referred to as a mentee. Although mutually beneficial, mentoring in

the workplace typically is focused on enhancing the professional development of the mentee (Hezlett & Gibson, 2005; Noe, Greenberger, & Wang, 2002). Wanberg, Welsh, & Hezlett call mentoring “the most intense and powerful one-on-one developmental relationship, entailing the most influence, identification, and emotional involvement” (2003, p. 41). Mentoring has a great impact on changing the behavior and increasing the success of the mentee in the work force. Hezlett and Gibson (2007) believe that “a core premise of mentoring models and theories of social capital is that social relationships yield positive outcomes” (p. 395). The purpose of a noteworthy mentoring model is that individuals, particularly mentees, gain substantial career-related rewards from participating in mentoring relationships. These rewards are intended to lead to long-term leadership and strength that in turn helps the business become more successful.

In the literature on mentoring, this type of connection between mentors and mentees found three distinct contexts: workplace mentoring, youth mentoring, and academic mentoring. Workplace mentoring occurs in an organizational setting with the purpose being the personal and professional growth of the mentee (Higgins & Kram, 2001). The mentor may be a supervisor, someone else within the organization but outside the mentee’s chain of command, or an individual in another organization (Baranik, Roling & Eby, 2009). Youth mentoring involves a relationship between a caring, supportive adult and a child or adolescent (Rhodes, 2002). Youth mentoring assumes that supportive relationships with adults are important for personal, emotional, cognitive, and psychological growth (Rhodes, 2002). Academic mentoring typifies the apprentice model of education, where a faculty member imparts knowledge, provides support, and offers guidance to a student mentee on academic (e.g., classroom performance) issues. This type of mentoring may facilitate psychological adjustment and foster a sense of professional identity (Austin, 2002).

**Mentoring in business.** Mentoring in business occurs as the mentee maintains a relationship with mentors who are interested in and help to advance the mentee's career by providing assistance (Baranik, Roling & Eby, 2009). The relationships that are developed focus on the main goal of the individual's career and professional interests. Roberts (2000) defined mentoring from a business stance as "a formalized process whereby a more knowledgeable and experienced person actuates a supportive role of overseeing and encouraging reflection and learning within a less experienced and knowledgeable person, so as to facilitate that person's career and personal development" (p. 162).

Campbell (2007) has similar thoughts, considering mentoring as behaviors that experienced, more seasoned members of an organization provide. Providing experienced mentors may be motivational to new members of a business as motivation results from the symbiotic relationship of dynamics involving both individual and situational variables, which may include mentoring relationships. Mentoring is seen as a giving direction and support to employees with less experience in order to increase the chances of new employees becoming thriving members of the business.

Within business, *developmental networks* are classified as relationships that work concurrently with multiple mentors and are developmental in nature (Higgins & Kram, 2001). These social relationships may be initiated as the individual perceives and constructs dyadic ties (Hite, 2003), with a prospective mentor. Developmental networks may or may not include a primary mentor; however, the mentees in developmental networks often name a mentor who has had a positive influence on their career development (Bozionelos, 2003). Development networks are discussed in mentoring literature, as well as in the literature of career communities, and are considered instrumental networking. Development networks can have many people involved,

and more than one kind of relationship between the people involved in the exchanges of the network is possible (Higgins & Kram, 2001). The simplest form of a network lies in the one-on-one, dyadic interactions between two people in the network and is generally only a small piece of the overall cluster of connections.

Within business literature, Higgins & Kram's (2001) research has provided a thorough and methodical theoretical framework on mentoring. Kram developed a theoretical framework from both her prior work and investigations that involved mentoring in business. Kram finds mentoring relationships in business to be comprised of two major functions: career and psychosocial. Career functions focused on sharing in-depth understanding of the business operations and were dependent on the position and political power of the mentor within the work organization. Psychosocial functions focused on the quality of the relationship between mentor and the mentee. These types of psychosocial functions of mentoring are also often identified in research on mentoring in the field of education.

**Mentoring in education.** Crisp and Cruz (2009) view mentoring as supporting the psychosocial development of an individual through another person who provides moral and emotional support. Within the context of higher education, the conceptualization of mentoring students has been studied by Aagaard and Hauer (2003); Cohen (2003); and Miller (2002). These studies have mainly been empirical investigations that have centered on mentoring undergraduate students (e.g., Carlson & Single, 2000; Rodger & Tremblay, 2003; Strayhorn & Terrell, 2007). In the higher education environment, a broad use of the term mentoring has been used (Miller, 2002). Murray (2001) offer the definition of mentoring as a one-on-one relationship involving a skilled and less skilled person in order to learn or develop specific knowledge.

Mentoring research on at-risk adolescence conducted by Eby, Allen, Evans, Ng, and DuBois (2008) have identified three ways researchers see eye to eye in education about mentoring. First, mentoring relationships focus on the development and achievement of individuals through structured assistance (Crisp, 2008; Ehrich, Hansford & Tennent, 2004). Second, mentoring experiences may also consist of expansive support that includes help with career development (Campbell, 2007; Davidson & Foster-Johnson, 2001; Higgins & Kram, 2001) role modeling, and psychological support (Davidson & Foster-Johnson, 2001; Nora & Crisp, 2007). In the case of students, this mentoring assistance should include planned activities with faculty members (e.g., Bernier, Larose, & Soucy, 2005; Campbell & Campbell, 1997; Collier & Morgan, 2006; Ishiyama, 2007; Kahveci, Southerland & Gilmer, 2006; Salinitri, 2005). Third, mentoring relationships are personal and reciprocal (Davidson & Foster-Johnson, 2001).

In the academic arena, relationships with teachers who serve as an educational mentors or role model have the potential to lead a student to internalize some of the mentor or role model's beliefs and values about school and schoolwork (Martin & Dowson, 2009). These internalized beliefs and values have the potential to not only help a student learn how to behave in a particular academic setting but also how to be a successful student in all academic situations (Ryan & Deci, 2000).

Teachers as educational leaders in the classroom can be mentors and role models to students. Riley, who served as U.S. Secretary of Education, felt that students "need role models, they need to see themselves in the faces of their teachers" (1998, p. 19). Educational researchers Martin and Dowson (2009) have proposed that mentoring and role model relationships affect student motivation by directly influencing a student's beliefs and emotions. Literature on

motivation consistently outlines the function that positive relationships, including those of mentoring and role models, have in a student's success in school (e.g., Culp, Hubbs-Tait, Culp & Starost, 2000; Field, Diego & Sanders, 2002; Martin, Marsh, McInerney, Green & Dowson, 2007).

Educators who serve as role models are seen as contributing to interpersonal relationships that are important for social and emotional development (Abbott & Ryan, 2001). During adolescence, role models promote key aspects of development that rely heavily on positive relationships, these educational role model relationships, especially in which teachers act as mentors, are critical in a students' motivation in school (Keating, Tomishima, Foster, & Alessandri, 2002).

Within the literature on academic mentoring, the role of mentors is not limited to faculty members and teachers. Mentoring has also been shown to be provided by school staff, senior or graduate students, peers, friends, religious leaders, and family (Zalaquett & Lopez, 2006). Philip and Hendry (2000) identified natural mentoring relationships that adolescents and young adults may experience that include traditional mentoring (one-on-one association with an experienced adult and a younger person, comparable to an intern), individual to peer group (a group looks to an individual or a small number of individuals for guidance), and friend to friend (a known friend is sought for advice).

Academic mentoring relationships can be formal or informal, short or long term, planned or unplanned (Eby, Durley, Evans & Ragins, 2006). Informal mentoring relationships are not structured, directed, or formally acknowledged by the institution (Rhodes, Grossman & Resch, 2000). Informal mentoring relationships in general develop "naturally," as the mentor and mentee seek each other out, and typically focus on long-term goals (Campbell, 2007). Formal

mentoring relationships, in contrast, are managed and authorized by an institution (Rhodes et al., 2000). These types of formal mentoring relationships usually include a third party who connects the mentor with the mentee. The length of time that informal and formal mentoring relationships occur varies significantly. Some mentoring relationships have been shown to be as short as a one-time meeting, and some last six months to a year, and some mentoring relationships expand over years of time (Eby et.al, 2006).

Sanchez, Esparza, and Colon (2008) in their research found that adolescent participants who had mentors were more likely to complete high school and attend college compared to participants without mentors. They also found that the presence of a mentor was associated with fewer absences, higher expectations for education, greater expectations for success and sense of school belonging.

Lau, Dandy and Hoffman (2007) advocated that mentoring new scholars is a way for mentors to share with their mentee the successes, disappointments, and lessons learned in order to motivate students toward degree attainment. The concept of motivation stands at the very center of education. Terrel Bell, former Secretary of Education, emphatically stated: "There are three things to remember about education. The first is motivation. The second one is motivation. The third one is motivation" (Maehr & Meyer, 1997, p. 372). In education, teachers and mentors provide the motivation to achieve the desirable outcome of degree attainment (Campbell 2007; Davidson & Foster-Johnson, 2001; Rhodes et al., 2000). Teachers who act as mentors and role models may motivate students with their goals as they assist students in their education-related aspirations.

Wallace, Abel and Ropers-Huilman (2000) believe that it is critical for researchers to continue to add to the theoretical understanding of mentoring by continuing to discover ways in

which mentoring is personally experienced and constructed by students, including students with different perspectives and backgrounds, such as African Americans, Latinos, and international students, is necessary in order to expand mentoring theories (Bordes & Arredondo, 2005; Humble, Solomon, Allen & Blaisur, 2006; Strayhorn & Terrell, 2007; Rayle et al., 2006; Rose, 2003; Zalaquett & Lopez, 2006).

**Mentoring Latino students.** Recently, research has examined the impact of mentoring on diverse groups of students including minorities, first generation college students, women, and those deemed “at risk” (e.g., Bernier et al., 2005; Bordes & Arredondo, 2005; Campbell, 2007; Ishiyama, 2007; Kador & Lewis, 2007; Morgan & Collier, 2006; Quinn, Muldoon, & Hollingworth, 2002; Santos & Reigadas, 2005; Zalaquett & Lopez, 2006). Literature in mentoring is also increasing its examination of student populations that are specific to areas such as science and engineering (e.g., Gonzalez, 2001), medicine and nursing fields (Aagaard & Hauer, 2003; Hauer, Teherani, Dechet, & Aagaard, 2005; Lloyd & Bristol, 2006; Melrose, 2006), and athletics (Pitney & Ehlers, 2004), as well as students taking online courses (Edwards & Gordon, 2006; Melrose, 2006).

For minority students, literature reviewed by Salinas (2002) suggests that minority teachers are vital as mentors. As Latinos are part of the minority population, demographics of minority teachers also include the demographics of Latino teachers. Additionally, minority teachers may also serve as mentors and role models for members of the majority student population as they help to break down negative stereotypes. Salinas notes the widely held belief that, “the recruitment of minority teachers is crucial to producing higher academic achievement among minority students” (Salinas, 2002, p. 606) and suggests that minority educators may serve

as “cultural brokers” for minority students, assisting in their adjustment to the educational system and assimilation into American society (see also Erlach, 2000).

The work of Santos and Reigadas (2005) compared the ethnic similarity of at-risk students and their mentors. The results of their research indicated a positive relationship between ethnic similarity of students and mentors. Santos and Reigadas also concluded that student–mentor ethnic similarity had positive influence on what students perceived as support received from their mentors, their adjustment to college, academic performance, and overall satisfaction of the mentoring program.

Campbell (2007) in a mentoring study using quantitative methods, used an experimental design in order to investigate the consequences of mentoring on minority students’ academic success. This study examined the minority students’ grade point averages (GPA) and their rates of school attendance. In this study, minority students who attended a large metropolitan university were assigned to two groups randomly; one group of students received faculty mentoring and the other group did not. A *t*-test found that minority students receiving mentoring had significantly higher grade point averages and were twice as likely as non-mentored minority students to continue with college. The regularity and length of time that faculty and students were involved in mentoring was also analyzed with student outcomes in mind. The findings suggest that students who had more contact with their faculty member were more academically successful.

The research by Salinas (2002), Santos and Reigadas (2005), and Campbell (2007) suggest that minority educational mentors and role models are a critical factor in the success of minority students. Ethnic similarity between students and mentors or role models was found to have had a positive effect on students (Salinas, 2002; Santos & Reigadas; 2005). Additionally,

time spent with educational mentors and role models established a positive outcome for students (Santos & Reigadas, 2005; Campbell, 2007).

In terms of Latino students, Erlach (2000) stated that Latino role models and mentors are needed in higher education because they have the ability to motivate Latino student success. Latino college students and professionals are valuable as mentors as they share information about what college is like. The success stories of these students and professionals elicit a consistent response: “If they can do it, I can too!” Latino teachers may also help students navigate their school, their environment, and their culture, and increase the involvement of their families and communities.

Latino teachers are likely to provide positive role models to Latino children (Zeichner, 2003), empower children of color to succeed in schools (Cummins, 2001), and build bridges and a cultural connection between the students’ homes and the schools (Garcia, 2001). Garcia (2007) also indicated that Latino teachers could be positive motivational mentors as they better understand the whole child, counsel, and encourage children to perform better. Hill (2003) explained the importance of having figures of authority that are not Caucasian:

Teachers tend to be the one person and authority figure outside of the home that have a lot of influence on children. When they see only Caucasian people as teachers, that can reinforce the negative stereotype - in white students and students of color - that people of color are not capable of holding positions of authority. To students of color, it is even more damaging because it sends a message they shouldn’t even bother. (p. 4)

In a similar way, Riley (1998) insisted that white and minority students benefit from diversity among teaching staff—particularly because of the message that such diversity sends:

Diversity in teaching helps send a very powerful message—that a good education can be the road to success for everyone. But let me make clear that all students benefit from a diverse teaching force. As important as it is for students of color to see themselves in their teachers, it is equally important for all students of any race to learn from teachers of many different backgrounds. (p. 20)

Both business and educational mentoring contexts are relevant to the participation of Latino students in programs designed to help them prepare to become educators. In workplace mentoring, Latino students may participate in field experiences at local schools where they mentor younger students. In academic mentoring, Latino high school participants receive academic instruction and guidance from mentors and role models as they advance in a college level program. Thus, mentoring theories are relevant to the context of Latino students' preparation. The goal of having Latino mentors and role models, particularly in education, is also relevant for Latino students' motivation for academic achievement.

Relative to the research problem of how to improve Latino mentoring programs to better support attainment of higher education, student motivation relevant to the desire to complete high school, transition to college, graduate with a degree, and become an educator, mentor, and role model to others is well connected to goal achievement motivation. Academic motivation associates itself with the reasons that students attend and put forth effort toward achievement in school and explains the involvement of students in learning activities and their attending to instruction (Beck, 2004). Fundamentally, much of a student's academic motivation emerges from the self-perceptions that a student brings to school, and some results from interactions with teachers and others in school (Hardre, 2003).

Mentoring theories are important to explaining Latino students' academic preparation. The impact of providing Latino teachers and mentors who act as role models may be particularly significant in terms of Latino students' motivation for academic achievement. Mentoring can provide motivation which is one of the most powerful determinants of student's success or failure in school (Hidi & Harachiewicz, 2000).

**Limitations of mentoring studies.** Critics of mentoring theory believe that mentoring theories are not a sound, hard science, driven by research; they note a lack of theory-driven research (Bozeman & Feeney, 2007). Bozeman & Feeney further make the point that over 500 articles on mentoring were published in management and education literatures before 1997 and claim that in the large number of publications, mentoring theory findings are filled with problems that impede the mentoring studies' ability to provide compelling explanations. Eby, McManus, Simon and Russell (2000) add that mentoring research can also produce negative effects on the protégé. Furthermore, critics argue that the benefits of mentoring and the impacts of mentoring on women and minorities are overlooked in the rush to report findings (Bozeman & Feeney, 2007).

Even though there are limitations to mentoring studies, general findings of mentoring have been encouraging and indicate a positive relationship between mentoring and students' motivation towards reaching academic goals (Campbell, 2007; Kahveci, Southerland & Gilmer, 2006; Mangold, Bean, Adams, Schwab & Lynch, 2003; Pagan & Edwards-Wilson, 2003; Salinitri, 2005; Sorrentino, 2007; Wallace, Abel & Ropers-Huilman, 2000). Mentoring research has contributed to the understanding of the effects of mentoring for student success and the attributes involved in a positive mentoring experience (Crisp, 2008, 2009; Martin & Dowson, 2009; Noble & Bradford, 2000). Interpersonal connectedness has been suggested as a critical

element of mentoring that contributes directly to engagement, achievement gains, and academic gains (Karcher et al., 2002; Wigfield & Tonks, 2002).

When teachers serve as mentors or role models and offer supportive communications to students, these serve as powerful motivators towards students' academic success (Keating, Tomishima, Foster, & Alessandri, 2002). Because there is still much to be studied on the effects of mentoring in education, this study examines only one aspect of many: how mentors and role models may contribute to the motivation of Latino students in their pursuit of higher education goals to become future educators. Through the use of the literature on mentoring applied as a means of motivating students, a conceptual model and theoretical framework will now be outlined for this study.

### **Conceptual Model and Theoretical Framework**

This study will examine how the Latino students' experience can add to the theoretical framework of Crisp and Cruz (2009). The basic conceptual model of the research for this study is presented in Figure 3. In order to break the negative cycle in the shortage of Latinos attaining high school degrees, which leads to a lack of Latinos pursuing higher education creating an insufficient number of Latino students attaining a higher education degree, which then leads to a scarcity of Latino educators, a Latino student (and his or her future mentees) may benefit from the intervention of participating in a Latino educational program designed with Latino role models and mentors.

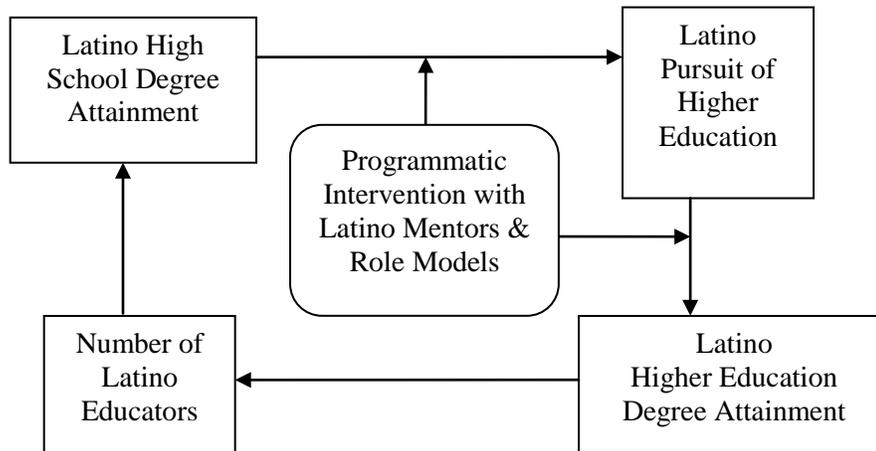


Figure 3: Basic conceptual model of research problem.

With the intervention of a Latino educational program, a positive cycle could then occur; beginning with the Latino student's obtaining a high school degree as he or she is motivated by a Latino role model to pursue the goal of higher education. This may lead to a larger number of Latino students entering and earning a degree in higher education, which may lead to more Latino educators. Latino educators can then become role models to motivate more Latino students to begin their journey along this positive cycle. Our current challenge, however, is that the percentage of Latino educators is low, which perpetuates the negative cycle.

The basic conceptual model of the research problem (Figure 3) includes a program that moderates the role of high school degree attainment on pursuit of higher education. The intervention program could include Latino educational role models who serve as role models and mentors who might motivate Latino students using the constructs of mentoring in education by Crisp and Cruz (2009) (Figure 2) which serves as the theoretical framework for this research. The conceptual model in Figure 3 will be further delineated based on the theoretical framework of Crisp and Cruz's (2009) mentoring constructs (see Figure 2). This expanded theoretical model

(Figure 4) suggests that an effective programmatic intervention program for Latino students which includes Crisp and Cruz’s mentoring constructs may increase the likelihood that Latino students will enroll in college, obtain a college degree, and thus increase the number of Latino educational role models.

Using this theoretical framework as a model for Latino programs may increase the number Latino role models who can serve as mentors to motivate additional Latino students to graduate from high school and excel in their educational goals. This study will examine how the experience of Latino students involved in a mentoring program informs the theoretical framework presented in Figure 4.

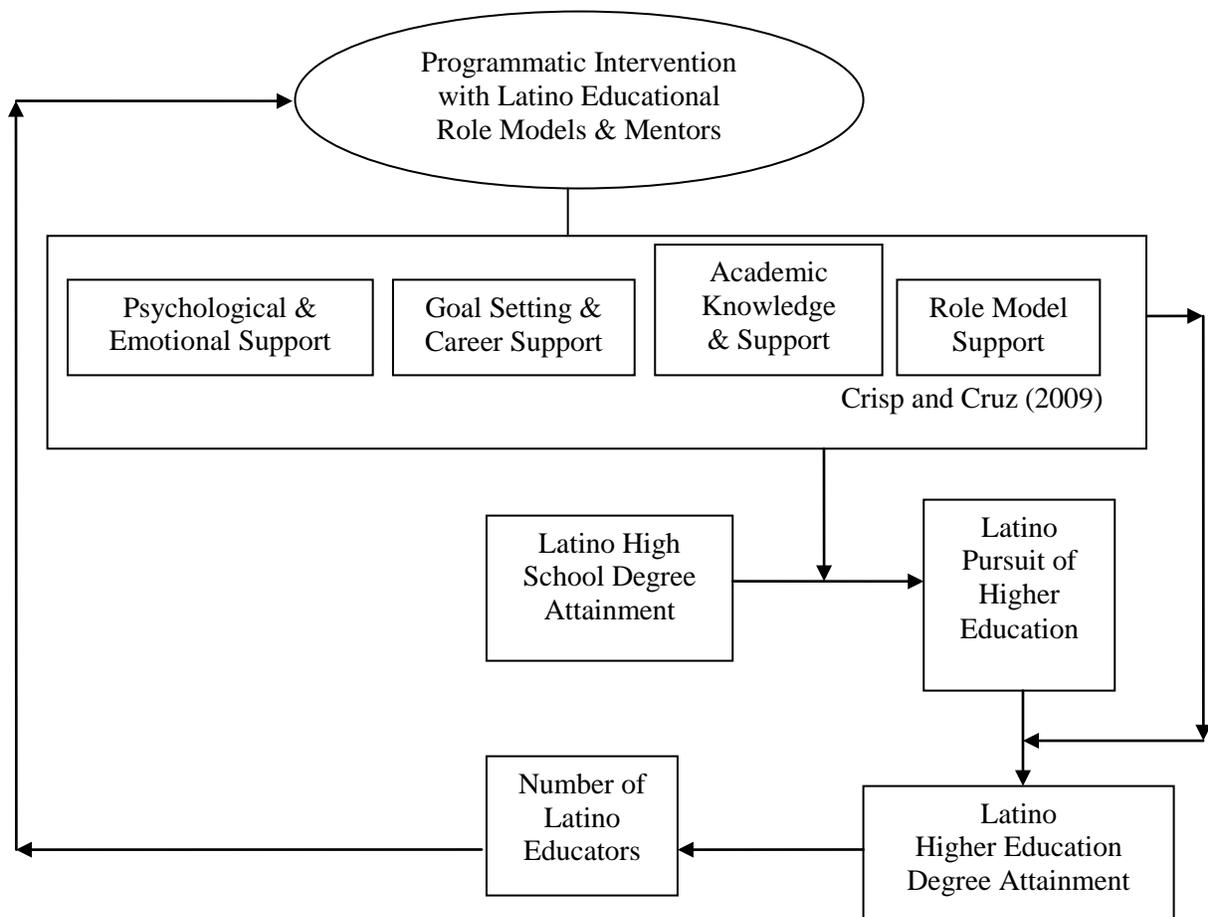


Figure 4: Theoretical framework.

### Demographic Changes in the U.S. and Utah

Currently there is a shortage of Latino teachers to act as role models. The U.S. Department of Education (2008) reports that more than 40% of our nations' public schools do not have a single person of Latino ethnicity on their faculty, while fully a third of America's students are members of minority groups. And, "that gap is only growing worse" (Riley, 1998, p. 21). Table 2 shows that the projected Latino population of school-aged students (ages 5 to 17) will increase nearly 10%, from slightly over 53 million in 2005 to over 58 million in 2020, as reported by the Pew Hispanic Center (2007).

Table 2

*Projected U.S. School-Age Population, 2005 and 2020, by Generation*

Year	Total	Foreign born	U.S. born of foreign parents	U.S. born of native-parents
2005	53,038,520	2,911,394 (5%)	9,431,423 (18%)	40,695,703 (77%)
2020	58,474,685	3,965,640 (7%)	13,905,491 (24%)	40,603,553 (69%)
Increase	5,436,164	1,054,246 (19%)	4,474,068 (82%)	92,150 (2%)

During the next decade, many of the growing numbers of students who will be attending our schools will be children of ethnic diversity, with the Latino population representing the majority of the minority population (U.S. Bureau of the Census, 2009). The U.S. Census Bureau projects that by the year 2050, one in every three U.S. residents will be Latino. Latino students make up approximately 11 million of the students who are enrolled in the public K-12 system in the United States. Those classified now as "minorities" (Latinos included) will collectively become the national majority (U.S. Bureau of the Census, 2009).

The majority of Latino students attending public elementary and secondary schools are currently enrolled in schools where minority students comprise the majority of the student

population (NCES, 2003). In 2000, the schools that reported 90% or more of their student body as minority were 38% made up of Latino students. Schools where minorities made up 50% or more of the population reported 77% of their population as Latino. Furthermore, National Center for Educational Statistics (2010) reported less than one-quarter of the Latino public school students attended schools in which Latino enrollment was less than 25%.

A recent data report collected by the Pew Hispanic Center (2007) showed that the increase of the Latino population saw a total share change of over 50% between the years 2000 and 2007 (see Table 3). A closer look at the Latino population, documented and undocumented, reveals a great deal about the future of Latino youth and their potential social, political, and economic influence.

Table 3

*Population Change in the U.S., by Race and Ethnicity*

	2007 population	2000 population	Population change 2000 to 2007	Percent change, 2000 2007	Share, or total % change
Hispanic	45,378,596	35,204,480	10,174,116	28.9	50.4
Native born	27,328,758	21,072,230	6,256,528	29.7	31.0
Foreign born	18,049,838	14,132,250	3,917,588	27.7	19.4
Caucasian	198,594,527	194,527,123	4,067,404	2.1	20.1
African American	36,624,935	33,706,554	2,918,381	8.7	14.4
Asian	13,100,861	10,088,521	3,012,340	29.9	14.9
Other, not Hispanic	7,922,240	7,895,228	27,012	0.3	0.1
Total	301,621,159	284,421,906	20,199,253	6.2	100.0

From April 2000 to July 2007, Latinos have accounted for more than half (50.4%) of the overall population growth in the U.S., with an increase of 10.2 million and a growth of nearly

29%. While the expansion of the Hispanic population was due primarily to immigration in the 1980s and 1990s, births are now outpacing immigration and will increasingly become the most important component of Latino population growth. According to the U.S. Census Bureau, about 60% of the increase is due to births and 40% is due to net international migration. These numbers shed important light on the future of our communities, schools, and workforce.

Within the United States, Utah itself is becoming a more diverse state; the demographic change that is occurring is a result of people moving from different countries and from other states (Perlich, 2008). Figure 5 illustrates the Bureau of Economic and Business Research, and the University of Utah analysis of U.S. Bureau of the Census data (Perlich, 2008), regarding minority growth projections. Between 2010 and 2050 the increase of the Latino population in the United States will continue to rise at comparable rates to that of Utah and Salt Lake County.

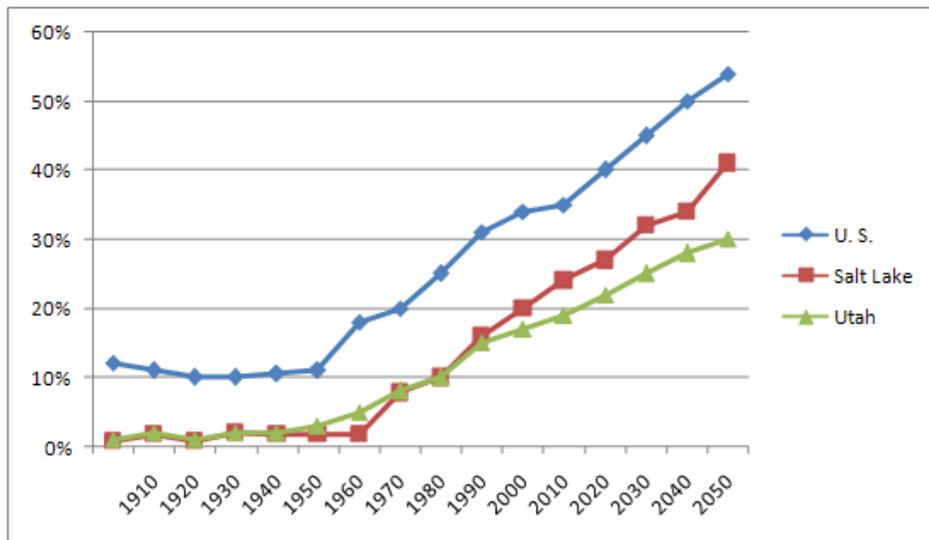


Figure 5: Comparison of Latino population growth and growth projection between the United States, the State of Utah, and Salt Lake County.

In the State of Utah, diversity in schools has also seen a significant increase. This increase has occurred particularly among the Latino community over the past 10 years (Perlich,

2004), with the growth of the Latino population increasing in 29 school districts since 1980. Table 4 illustrates the percentage of Latino students in the Utah districts with the largest percentage of Latino students enrolled (Escalante, Burnham & Eastmond, 2005). The Latino population in Utah schools is growing rapidly, with anticipated increases ranging from a low 11% in Morgan School District to a dramatic 2166% increase in the Salt Lake City School District between 1990 and 2050 (Perlich, 2004). Yet, the growth in the number of Latino educators is not keeping pace with the growth of the Latino population. The current challenge is how to increase the number of Latino educators.

Table 4

*Percentage of Latino Students in Utah School Districts*

District	Latino student enrollment Fall 2004 district percentage
Ogden	41.69
Salt Lake	34.74
Provo	21.15
Granite	20.51
Logan	18.38

**Obstacles to Latino Success**

Educators have the opportunity to affect and change the lives of those they teach, not just in the Latino population, but throughout entire communities. There are, however, significant obstacles that must be overcome in order for Latino students to be successful in their attainment of a college degree and to become educators. Academic disparity, low income, immigration issues, and English proficiency are just a few of the obstacles that Latino students face every day

in their educational settings. In order to assist the Latino population to increase their educational attainment, it is vital, in the words of Nieto, to “understand school achievement as a combination of personal, cultural, familial, interactive, political, and societal issues, and this means understanding the sociopolitical context in which education takes place” (2004, p. 246). Elizondo (2005) further stated;

The achievement gap among our student subgroups is very real and challenging for most of our nation’s school districts. This is especially true in districts serving the nation’s fastest-growing population: Latino school-age youngsters. The key to serving these students well is twofold: More bilingual teachers and administrators and a more inclusive and challenging curriculum. These two basic strategies can positively affect the teaching and learning of Latino children in addressing the linguistic diversity and competencies of English language learners. (p.1)

If a student is to achieve in a postsecondary educational environment, educational success needs to begin early in his or her school experience. Low school performance among Latino students may result in the steady decline of high school and college attainment. This follows the poor foundational school experience during elementary and middle school. Thus, success in public schools should have a direct correlation with the success of students in the university setting. United States educational policy emphasizes that “in America, no child should be left behind. Every child should be educated to his or her full potential” (NCLB, 2009, p. 3). Yet, academic disparity, low income, immigration issues, and English proficiency are only some of the obstacles that Latino students face every day in America.

### Academic Disparity

One of the four principles upon which the No Child Left Behind (NCLB) policy rests is that of “improving the academic performance and increasing the accountability” for disadvantaged or minority students (Hess & Petrelli, 2007, p. 17). In order to account for student achievement, is through academic assessment is often used. In Table 8 a gap between Latino and Caucasian students is evident when comparing Criterion Reference Test (CRT) scores. CRTs are given to assess the number of students proficient in the areas of language arts, math, and science (Utah State Office of Education, 2009).

Table 8

*2005 Language Arts, Mathematics, and Science CRT Percent Proficient, All Grades*

Student group	Lang. arts % proficient	Math % proficient	Science % proficient
African American	58.54	50.85	38.1
American Indian	51.79	48.68	30.3
Asian	78.44	77.63	63.5
Latino	50.97	50.18	31.3
Pacific Islander	62.53	59.61	35.5
Caucasian	81.45	76.06	67.9

The Utah Basic Skills Competency Test (UBSCT) is another assessment given to all students during their 10<sup>th</sup> grade year. The UBSCT was developed by the Utah State Office of Education (USOE) to measure basic skills needed after high school graduation. To be eligible for a “high school diploma designated with UBSCT completion” all three areas of the UBSCT must be passed successfully (USOE/ UBSCT, 2008–2009). These subtests are in the three content

areas of reading, writing, and mathematics. Students have two opportunities annually to take any subtest they have not passed. In Utah, the graduating class of 2010 has currently had five possible attempts to pass the sections of the UBSCT test, with one more chance remaining. Table 9 identifies the proficient percentage rates of corresponding subtests passed by the graduating class of 2010 thus far.

Table 9

*Utah Class of 2010 UBSCT Demographic Breakdown*

Population	% proficient in Math	% proficient in Reading	% proficient in Writing	% UBSCT Complete
All students	82.42	92.29	85.32	77.61
Caucasian	86.88	95.14	89.63	83.08
Latino	59.13	77.93	63.29	49.28

Statistics reported from the Utah State Office of Education (2009) indicate a 33.8 percentage-point disparity between Latino and Caucasian students, and a 28.33 percent-point disparity among Latinos and all student populations in UBSCT proficiency rates. The Demographic Breakdown table below demonstrates the performance of population groups for each subtest. The Utah Basic Skill and Competencies Tests (UBSCT) is a “high-stakes” test as a student must pass all three subject levels in order to graduate with a traditional diploma from high school.

For the class of 2008, “there were significant gaps between pass rates of Caucasian and Latino students with a 38 % gap in reading, 33% gap in writing, and a 35% gap in mathematics” (Alemán & Rorrer, 2006, p.26). Table 10 provides information on the collective passing rates on UBSCT for Latino students is lower than that of most of their peers for the class of 2008. “There was a 12% gap in passing rates between Latino students and their Caucasian peers in reading,

20% gap in writing, and a 23% gap in mathematics for the class of 2006” (USOE, 2009). The UBSCT is not the only test in which Latino students in Utah are behind their peers. In the Utah State Office of Education annual report (2008) the superintendent notes that “the gap between the state average and ethnically diverse and poverty-stricken groups in college admissions test performance is still unacceptably large” (p. 1-2).

Table 10

*UBSCT Results for Graduating Class of 2008*

	Math		Reading		Writing	
Pass	84.28%		92.08%		88.17%	
Did NOT pass	15.72%		7.92%		11.83%	
Subtest by subgroup						
	Math pass (%)	Math did NOT pass (%)	Reading pass (%)	Reading did NOT pass (%)	Writing pass (%)	Writing did NOT pass (%)
American Indian	64	35	84	16	75	25
Asian	89	11	92	8	88	12
African American	57	43	76	34	70	30
Caucasian	87	13	94	6	91	9
Latino	64	36	82	18	71	29
Pacific Islander	75	25	86	14	83	17

The educational achievement gap that currently exists in the State of Utah must be eliminated for Latino students to create an educational system that ensures access and opportunity for a K-16 education and in order for the State of Utah to honor its responsibility and accountability to provide an equal education for all children. In an educational report, academic researchers Alleman and Rorrer (2006) warned that failure to close such achievement gaps will present severe consequences:

Continued failure to recognize the need for a changed educational system will result in the inability of the states' economic engine to sustain itself. It is when we consistently apply the tenets of the so-called "American dream" that will begin to see real change, increases in the performance of all students and the closing of educational achievement gaps for Latina/o and other students of color. (p. 45)

Providing an educational system that will help to close the achievement gap between Latino students and their Caucasian peers will allow the State of Utah to benefit from the human and cultural capital held by its diverse population.

The annual report issued from the USOE (2008) presents several promises from the superintendent to the parents and students of the State of Utah. These include;

1) improving the college-readiness of all students through the implementation of policy that includes using financial leverage to close the achievement gap, 2) identifying and promoting research-based ELL strategies, 3) bringing all current ESL training programs up to agency ESL endorsement standards, and 4) ensuring quality teaching staff and administrators by implementing the educator quality initiative, with emphasis on anticipating teacher shortages and on hiring qualified ethnic minority educators. (p. 29)

In order to be considered a qualified educator, one must hold a college degree; this requires not only academic preparation, but also the financial means to pay for the college education received. For Latino students, low income can be a significant obstacle.

### **Low Income**

Low income generates financial obstacles and represents another critical factor that reduces the college attendance rates of low-income young people in general. Utah is one of nine states that allow undocumented students to pay in-state tuition at state colleges and universities

(Robinson, 2006), although debates of the Utah legislature have threatened this provision several times since its passage in 2002. The average yearly Utah university tuition is \$10,000 for documented students in the state. If a student is not a resident the cost is close to three times that amount. This may be an obstacle that some Latino families are not able to overcome as the expense of tuition, fees, and books may be prohibitive to students with limited financial means - particularly when families cannot be legally employed in the U.S.

In addition, 40 states require undocumented students to pay a much higher non-resident tuition. The average cost of in-state tuition in the U.S. ranges from \$22,440 to nearly double that for a 4-year degree (Lederman, 2009). Consequently, too many Latino students are cut off from any chance of lifting themselves out of poverty.

The Pew Hispanic Center (2009) reports that in the year 2007 the median household income for Latinos was \$40,476 per year compared to that of the Caucasians at \$54,744, a difference of \$14,000 per year. The poverty by age, race and ethnicity in 2007 is shown in Table 11 (Pew Hispanic Center, 2009). When looking at the poverty rate by percentage a striking difference is evident in that more than twice the numbers of Latinos than Caucasians live in poverty. Twenty percent of the Latino population lives in poverty compared to 8% of the Caucasian population. Of course, these data were collected prior to the 2008 mortgage and financial crisis, with its staggering effect on many sectors that employ Latinos, meaning that the current condition of Latino families may be worse than these data reflect.

Table 11

*Poverty by Age, Race and Ethnicity: 2007*

	% Persons living in poverty			
	Younger than 18	15 to 64	65 +	Total
Latino	27.0	16.3	17.9	20.0
Native born	26.2	14.5	16.0	20.5
Foreign born	34.1	17.8	19.6	19.4
Caucasian	10.5	8.2	7.0	8.5
African American	33.5	19.1	19.8	23.4
Asian	10.9	8.8	11.2	9.5
Other, not Latino	20.9	16.3	14.9	18.1
Total	17.6	10.8	9.0	12.3

The continuing failure of Latino student populations in college degree attainment does not allow them to overcome the obstacle of financial hardship. Besides closing achievement gaps for economic growth and stability, there are also the more important ethical issues of “equity, social justice, and human rights...[along with] quality of life issues at stake” (Aleman & Rorrer, 2006, p. 11). Gonzalez (2009) argued for, “ensuring that the investment already made in the K-12 education of these students is realized and that the county benefits from the rich potential of productive, educated and U.S. trained workers” (pg. 13).

When a degree is earned, the earning potential is greatly increased. The annual average income for persons age 25 and over based on full-time wages and employment rate of workers by the level of their educational attainment (Bureau of Labor Statistics, 2008) is shown in Figure 6.

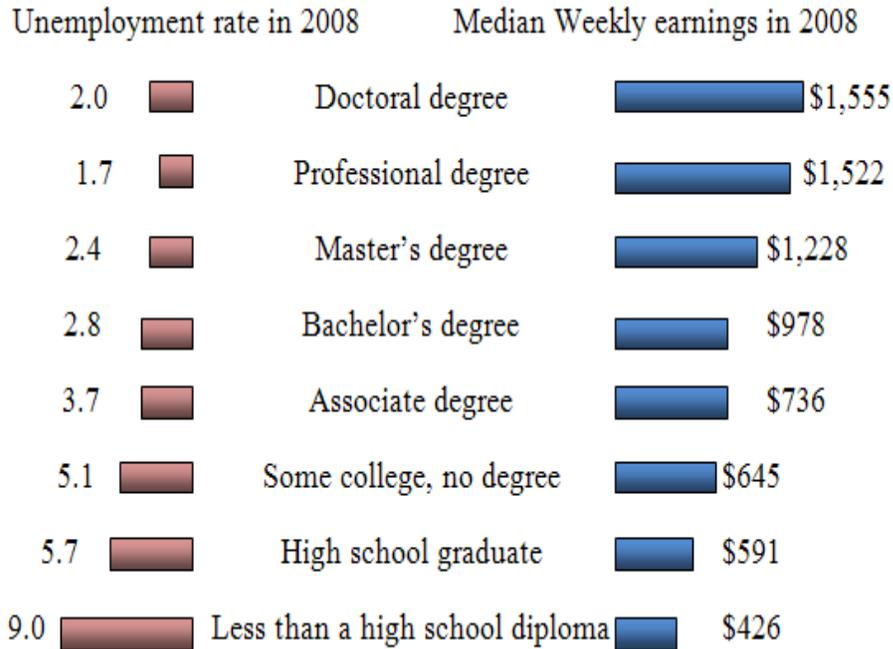


Figure 6: Unemployment and weekly median income based on educational attainment.

If the Latino population had the opportunity to receive additional education and training, they would be more able to move into better paying jobs, which would give them assets to spend and invest. A UNICEF (2004) study concludes, “Education is perhaps a child’s strongest barrier against poverty” (p. 83). Educating more Latino students in college would help them improve their own circumstances and make greater contributions to the U.S. economy. Beyond salaries, college graduates are more likely than others to enjoy better health and employment-related benefits, such as employer-provided health insurance and pension benefits (Gonzalez, 2009). As a result, society in general enjoys great financial and social returns on investments in higher education. Workers with higher levels of education are more productive, and their higher earnings generate higher tax payments at state and federal levels. When combined, the benefits of a college education to society are substantial. However, additional obstacles currently extend

beyond that of being academically successful and financially stable. Another critical obstacle for Latino students may be the lack of documentation.

### **Immigration Status**

Education is the “Camino Real” for human development, a powerful path to wellness and possibly the best way to counter the inequality that threatens the social health of the nation (Summers, 2008). Levy and Murnane (2007) agree that an education generates powerful waves of social good. However, even if students are able to overcome financial obstacles and finish a college degree, many will still not be employable in the United States because of their legal status. If students are not able to work legally, many will not be motivated to attend college, obtain a degree, and contribute to the growth of the U.S. community in which they live. For many reasons, the U.S. leads the world in in-migration, much of it unauthorized. Suarez-Orozco remarked on the country’s dysfunctional approach to illegal immigrants:

Nowhere is the dysfunction of U.S. Immigration more evident than in the area of unauthorized immigration. Unauthorized immigration is the elephant in the room. It dwarfs all other immigration concerns. This is especially troublesome because the United States is in the midst of the largest migratory wave in history: Since the 1990s more than 1 million new immigrants have arrived each year. A total of approximately 38 million immigrants live in the U.S.—about three times the number of transnational immigrants in the world’s second-largest country of immigration, the Russian Federation. (qtd. in Gonzalez, 2009, p.2)

The problem of unauthorized immigration is a persistent challenge. Currently, children account for 1.8 million, or 15%, of the undocumented immigrants now living in the U.S. The current political debate over undocumented immigrants needs to address the predicament of

undocumented children. Even though these children were not born in the U.S., many of them may have grown up in the United States and received much of their primary and secondary education here.

Many undocumented students have the academic preparation to pursue a postsecondary degree, but they are unable to go on to college. As discussed previously, out-of-state tuition costs at public colleges and universities (at more than 140% of resident tuition) are one obstacle Latino students face (Gonzalez, 2009). More problematic for Utah students, undocumented students cannot receive federal financial aid for their education, which bars them from receiving Pell Grants, or government backed student loans and from participating in federally funded work-study programs. Furthermore, undocumented students are not able to legally work in the U.S., even where there is a need for employees, including in the field of education (The Immigration Reform and Control Act, 1986). The inability to meet the expense of a higher education degree generates both economic and emotional costs on undocumented students and on the entire U.S. society.

Utah is one of 10 states since 2001 that has passed laws allowing undocumented students who graduate from in-state high schools to qualify for in-state college tuition (Utah House Bill 144). However, given Utah Senate Bill 81, these undocumented students are not allowed to apply for financial aid, scholarships, or work to earn tuition money. Within states that have allowed for in-state tuition, including Utah, there has not been a large influx of new immigrant students who have displaced native-born students or added financial burdens on their education system. In fact, what seems to be the trend is that there has been an increase in school revenues by bringing in tuition from students who otherwise would not be in college (Sharron, 2007).

If the U.S. continues to make it increasingly difficult for Latino students to access higher education, then the risk is that generations of Latino students without higher education degrees will persist. Assisting more Latino students with access and attainment in terms of higher education will benefit not only the Latino community, but our society as a whole. With the large Latino population growth throughout our nation and in the State of Utah, many Latinos bring with them another skill that is important in many professional fields—the use of their native language. For some Latinos, knowing and using their native language also presents another obstacle in their education - learning a new language.

### **English Language Learners**

The English Language Learner (ELL) student population is expected to grow rapidly across the nation in the next decade. The projected number of school-aged children of immigrants will increase from 12.3 million in 2005 to 17.9 million in 2020, accounting for all the projected growth in the school-age population. More than 10% of the pre-K to 12<sup>th</sup> grade students in Utah are reported as English Language Learners according to the National Clearinghouse for English Language Acquisition report (2008). Given that one in five school-age children of immigrants have limited English-speaking abilities, compared with one-in-100 native-born children of native-born parents (Federal Interagency Forum on Child and Family Statistics, 2005), the number of enrolled children with limited English-speaking abilities will likely continue to increase.

Language acquisition is the study of the processes through which learners acquire language. By itself, language acquisition refers to first language acquisition (that is, infants' acquisition of their native language), whereas second language acquisition deals with acquisition

of additional languages in both children and adults (Ellis, 2008). Gass and Selinker (2008) expounded on the many faces of the study of second-language acquisition:

It is the study of how learners create a new language system with only limited exposure to a second language. It is the study of what is learned of a second language and what is not learned; it is the study of why most second language learners do not achieve the same degree of proficiency in a second language as they do not learned; it is the study of why most second language learners do not achieve the same degree of proficiency in a second language as they do in their native language. (p. 1)

Ellis (2008) studied language acquisition extensively and determined three major factors in learning a second language. One of those is the status of the learner; “Learners do not usually participate in communicative events as equals—at least when their interlocutors are native speakers. One reason for the lack of equality may be the learner’s overall social status in the native-speaker community” (2008, p. 197). Ellis noted that many times a second language learner does not feel an affinity with the new language community. In these instances learners create both psychological distance and social distance from speakers of the second language community, which could result in a diminished amount of input.

Garcia, Jensen and Scribner (2007, 2009) found several factors that influence achievement of English language learners, one being language used in the home. Latino students whose families spoke primarily Spanish lagged farther behind non-Latino Caucasian children than Latino students whose families spoke primarily English in the home. It is important to note that for many immigrant families, and for their children, preserving family members’ knowledge of the native language and speaking it in the home fulfills both a social and cultural needs. Lagging behind in English acquisition may be one consequence of this language preservation;

but so, too, may be the positive consequence of students' growing up with the skills to become much-needed bilingual professionals.

English language learners also bring some strength to school. For example, children of immigrants are more likely than children in native-born families to live with two parents and with siblings who may serve as an asset to their educational success (Hernandez, Denton & Macartney, 2008).

Recent results from national and state assessments indicate that ELL students are among the groups least likely to meet state proficiency standards (Fry, 2008). Fry reported that one of the fastest-growing groups of students is also one of the lowest-achieving student groups in both math and reading, and that ELL test-takers were farther behind other racial/ethnic groups in their achievement measurements in elementary school. Researchers have also identified practices that enhance the academic engagement and learning of ELLs (Ellis, 2008; Hernandez et al., 2008; August & Shanahan, 2006; Slavin & Cheung, 2005). For example, culturally knowledgeable teachers who are adept in English and the language learners' native language are a great asset, and the addition of the student's native language in classroom instruction can increase overall language and academic learning (August & Shanahan, 2006; Slavin & Cheung, 2005).

If Latino students are able to make it through to a higher education degree, they often have difficulties with the literacy portions of teacher testing that is required in some states (National Research Council, 2000). Even when the teacher candidates do know the content material, significant performance gaps exist between African Americans, Latinos, and Caucasians on teacher examinations. The Praxis I test, a test of basic teaching skills, showed passing results from 1994 to 1997 for African Americans at 53%, 77% for Latino students, and 87% of Caucasian students. The Praxis II test, which focuses testing on content and pedagogical

knowledge, had 65% of African Americans, 46% of Latinos, and 92% of Caucasians pass during the 3-year period (National Research Council, 2000).

### **Promising Latino Student Programs**

In the research literature, many programs are cited as being successful in assisting Latino students in their pursuit of high school and university degrees. One such program was the “Programa: Latinos Adelantarán de Nuevo” (Program: Latinos Shall Rise Again, or PLAN). PLAN has a vision to 1) create a vision of the future, 2) redefine Latino’s image of self, and 3) build a supportive community. The PLAN vision for the future is implemented through mentoring programs, guest speakers who have been PLAN participants, and future-oriented classroom talk. Part of the PLAN agenda is to provide models and mentors who are physical proof that attending college is a valid choice. PLAN graduates who are now paraprofessionals and Hispanic college students make presentations to seniors in high school and let them know what college is like. The stories of the PLAN graduates elicit a consistent response that those involved in the PLAN program are positive role models (Abi-Naber, 1990).

Another program at Indiana University is the Transformation Educational Achievement Model (TEAM). TEAM is an instructional initiative for those who wish to enter a teacher education program, complete their baccalaureate degree, and obtain teaching licensure in Indiana. Bennett (2002) pointed to TEAM’s strengths;

Longitudinal research since 1996 has identified four main themes that help explain the Project TEAM experience: (a) creating community among students of color to mediate an alienating campus climate at a predominantly White university, (b) strengthening ethnic identity and an understanding of and ability to deal with racism, (c) working for social

justice through multicultural education, and (d) professional development and commitment to teaching as a profession. (p. 21)

TEAM differs from most other programs by beginning their recruitment into the program during the student's freshman year in college instead of in public schools. TEAM has students participate in a three-credit multicultural education course and also participate in an honors seminar that is held each semester. The seminar is limited to students of color in order to encourage students to talk and create a supportive academic community on campus. The seminars are held in the hopes they will encourage TEAM pre-service teachers to develop greater multicultural competence through an understanding of their own ethnic identity, as well as an understanding of other multiple cultural perspectives.

Another nationwide program, Pathways to Teaching Careers, received the following description by Hill (2003). The program is set up to;

work with districts and university partners across the country to develop high-quality routes to certification for several populations, including paraprofessionals and career changers and other noncertified individuals. The programs vary from district to district. Some models are alternative routes to certification while others are nontraditional preparation programs. (p. 13)

The Puente Program has also been designed to assist students as they prepare to graduate from high school and enroll in college (Grubb, Lara, & Valdez, 2002). This is a California community college program that has a focus on welcoming students of color, primarily Latinos, into the organization by "affirming who they are and what they bring with them as valuable cultural assets that provide a foundation and a framework for their learning experiences" (Grubb et.al., p. 59). "Puente" in Spanish means "bridge." The core Puente student program is made up

of three main areas 1) an academically rigorous 9th and 10th grade college preparatory English class that incorporates Latino students, 2) a four-year academic counseling program for students, and 3) activities that provide mentoring, community leadership, and service (Grubb et.al, 2002). Puente is an exemplary program model that addresses the needs of first-generation Latino college students to form a diverse cultural context.

Future Teachers of Chicago Illinois (FTCI) was created as a recruitment program in response to the shortage of minority teachers in Chicago schools (Hill, 2003). This high school program holds monthly extracurricular activities that include counseling, mentoring, tutoring, summer internships, seminars and workshops, fieldtrips, college/university tours, scholarship exploration and professional networking. At the high school level, Ayalon (2004) reports that recruitment programs such as FTCI usually consist of “teacher cadet” programs that include future educators clubs, introductory education college-credit courses, mentoring, and summer programs that offer students rigorous learning experiences accompanied by academic support.

Another program targeted at increasing Latino teachers in schools is that of Project Synergy. Zasueta (2002) describes the curriculum used for this project as a collaborative effort that involves the Sweetwater Union High School district, Southwestern Community College district, and San Diego State University. The collaboration begins with the 9<sup>th</sup> grade students and culminates with those students earning a bachelor’s degree or beyond. The project was created as a direct response to the need for meeting the needs of the fastest growing population in the state of California: Latinos.

Project Graduation Really Achieves Dreams (GRAD) is yet another nonprofit education program committed to supporting comprehensive, cost-effective, sustainable and systemic change that challenges students and community partners to embrace learning and actively

encourages the pursuit of higher education (MDRC, 2009). GRAD utilizes a four-prong strategy to increase high school graduation and college access: 1) college awareness, access and scholarships, 2) academic support and enrichment, 3) parent engagement, and 4) school, district, and community relationships.

In Utah, Latinos in Action (LIA) is a program that has been in existence in the Provo School District since 2000. High school students are chosen to serve as para-educators and are trained to mentor elementary and junior high students. As mentors they provide peer tutoring and serve as role models for academic success. The student para-educators increase and progress in social skills, academic attainment, and linguistic proficiency. An important goal of the program is to increase the commitment to school among these high school Latino students, along with preparing them for college and career-related opportunities. One of the long-term goals of the LIA program is to transition these Latino students from para-educators to educators. LIA was designed to reduce the dropout rates among Latino high school students while helping to serve younger Latino students (Enriques, 2009).

Brigham Young University (located in Provo, Utah) and the Provo School District have recently begun to sponsor the Paso a Paso program, which builds relationships that specifically focus on Latino students in the K-16 pathway. This program is in its infancy; however, the focus is to coordinate the K-16 pathway players together to help with transition issues and share resources (Cutri, 2009).

### **White House Initiative Report Findings on Latino Education Programs**

There are several other ambitious programs designed to increase the number of Latino students entering higher education programs. Other successful mentoring programs mentioned in the White House Initiative Report (2009) for high school Latino students include the AHORA

program, AVID, Chicano Latino youth leadership project, Coca-Cola valued youth program, Communities in Schools, Upward bound programs, Community association of progressive Dominicans, Congressional Hispanic Caucus Institute, EAOP, East Harlem tutorial program, MESA program, Passport to college, STEM institute, Student learning and guidance center, TexPREP, Youth leadership conference, Engineering Vanguard program, and Learning to Lead. The White House initiative on educational excellence for Hispanic Americans (2009) suggested several characteristics of successful programs for Latino youth, including having professional Latino staff to mentor Latino youth. All of the programs reviewed above involve tutoring and mentoring, motivational support, counseling, and a range of educational services; and all of these programs involve assisting the Latino community reach higher education goals. The past success and the future potential of the above listed programs, Hill insisted, “will be of great benefit not only to all students, but also to parents, communities, and our society as a whole” (2003, p. 14). All of these programs offer the promise that greater diversity will be introduced into the teaching field.

In all of the above mentioned programs, one construct that stands out is that of the help of mentors, counselors, or academic advisors at in high schools and local colleges to assist with the articulation and transition into the college of their choice. These programs, although promising, have not been designed with the specific goal of assisting high school aged students through a university program with the intent of increasing the number of Latino students who want to become educators that act as role models for the Latino community. The Latino Educators of Tomorrow is a program specifically designed to do just that, and therefore is being presented as a case study for this research.

**Latino Educators of Tomorrow**

The Latino Educators of Tomorrow (LET) is an innovative educational mentoring program designed through a partnership between Utah Valley University (UVU) in Orem, Utah and the Provo School District located in Provo, Utah. This partnership was formed in 2008 to address the challenge of increasing the number of Latino students who choose to make education their future career. Given the large number of Latino students in Provo School District (see Table 3) and the low number of Latino educators, the LET program will be used for this case study. The Latino Educators of Tomorrow was designed to not only assist in higher education degree attainment, but also to produce quality Latino educators. UVU's College of Education, along with the Provo School District, has recognized that as the Latino population in Utah County continues to grow, so does the need for Latino educators. Ayalon (2004) suggested that stronger school–university partnerships are one way to increase the number of Latino teachers. Accordingly, the Latino Educators of Tomorrow program allows UVU and Provo School District to work together to seek the Latino student's point of view and encourage Latino high school students to envision their potential as future educators and mentors for future generations of Latino students.

The Latino Educators of Tomorrow program has three main areas of focus: first, preparation for academic rigor; second, educational mentors and motivational experiences; and third, university advisement combined with cultural support. These three areas of focus were chosen because of the connection between motivating and mentoring for academic achievement. With these three areas of focus, the LET program may be able to reverse some of the current trends in Latino student achievement, provide access to higher education, and produce more Latino educators. As there is such a high risk for dropout or failure among Latino youth, it is

critical to provide as many connections for the successful outcome of Latino higher degree attainment as possible. The LET program aims to create a bridge between the high school and university settings that will become what Sanchez, Esparza, and Colon (2008) refer to as an “imperative link” for Latino youth (p. 479).

### **The Educational Pipeline**

The “educational pipeline,” the system of education from kindergarten into graduate school, is lacking substantially for Latino students (Solórzano, Villalpando & Oseguera, 2005). The transitions from junior high school to high school and from high school to college are particularly troublesome and lead to large numbers of Latino students leaving school early (Hernandez & Lopez, 2005). The Kellogg Foundation (2003) found that students who do manage to go to college often face the challenge of navigating through the entrance process along with that of facing severe financial hardship, and some may face an unsupportive university environment.

According to the Latino Eligibility Study, the single most important barrier to college access for Latino students in California is lack of instrumental knowledge of the steps needed to go to college (Gandara, 2002). Cantu (2004) wrote that the “key to improving Latino participation in higher education is to...effectively address the problems that Latinos typically encounter on campus: financial aid, assessment, articulation, and campus climate” (p. 4). When colleges hire new faculty and staff, it may behoove them to look into racially diverse educators for this reason alone. Educational departments and program may also want to consider other ways to build communities that support all Latino students on campus, especially in disciplines of high need, such as in the field of education.

**Recruitment of Teachers**

To enhance the recruitment of Latino teachers, Quioco and Rios (2000) recommend the development of public school and higher education partnerships. Another suggestion made by Quioco and Rios was that upon completion of teacher preparation programs, public schools could offer jobs to more minority candidates. In order to tackle the low numbers of students entering the teacher preparation programs, collaboration between higher education and K-12 partners might consider efforts that focus on counseling Latino students about financing college; academic work; and dealing with other issues in order for higher education to become a reality for minority students.

Bracey and Molnar (2003) developed a summary of how schools and colleges of education may be able to assist with the issue of teacher recruitment through three areas: 1) advocating for adequate teacher salaries, 2) developing collaborative programs with high schools to recruit new teachers, and 3) introducing teaching careers to middle and high schools students—encouraging students to enter a teacher preparation program. As students enter the teacher preparation program, Bracey and Molnar also suggest that these programs 1) reflect the complexity and concepts of teacher quality, 2) help in the transition from the university setting to that of the classroom teaching setting, 3) include a mentoring program for beginning teacher induction by matching new teachers with experienced teachers, and 4) develop initiatives to improve the retention of existing teachers, which would reduce teacher turnover. If these practices were in place along with academic counseling for Latino students, more Latino students might be motivated to enter the field of education.

Gordon (2000) recommended that in order to increase the recruitment of teachers of color, one must improve the quality of the K-12 schooling experience of our students. Preparing

to be a teacher typically requires the attainment of a bachelor's degree. This means that the K-12 achievement must be adequate for students to be able to succeed in higher education. The building and sustaining of clear educational goals throughout the process, with effective communication and collaboration through K-16 program development is highly recommended by several researchers (Gederman, 2001; Ng, 2003). Recruitment models along the K-16 educational pipeline may also want to consider the individual and the career of teaching in order to avoid what is called the cooling down effect.

### **Cooling Down Effect**

The "cooling down" effect is most prevalent among students of color in college settings, refers to the phenomenon of junior colleges serving not as a springboard into a four-year institution but rather as a sort of academic holding pen (Karl, Robert & Doris, 2008). As a result, students of color, feeling more and more trapped because of multiculturally unresponsive curricula and limited student services, experience a reduction and finally elimination of their larger academic aspirations - a "cooling down" of their once high academic aspirations (Trevino & Mayes, 2006).

As mentioned earlier, promising Latino education programs are working to counter this cooling down effect as they are designed to help K-16 students navigate their way through the schooling system. These types of promising programs have been implemented in order help students be successful in their elementary and secondary education, as well as to prepare Latino students to enter the world of college. Research done by the Urban Teachers Pipeline (2009) found that recruitment efforts postponed until after secondary education is complete are too late. This process needs to begin much earlier. Duncan-Andrade (2008) found that creating a partnership between high school, the university, and the community can assist in narrowing the

gaps that sometimes exist between these entities. Another way to reach Latino students in recruitment efforts is to appeal to not only to the students' intellect, but to assist them in giving back to their community (Bauza et al., 2009), and asking them to be role models to others of their cultural background.

### **Summary of Literature**

With the large growth of the Latino population that has occurred and that is expected to continue in Utah and throughout the nation, attention must be paid to the questions: Why are there not enough Latino teachers? How can more Latino students be motivated to enter college programs that will prepare them to become educational role models? Motivating youth to prepare for college is a challenge, especially when students lack mentors and role models who have completed high school or obtained a degree in higher education.

In order to attain a degree in higher education, Latino students have several obstacles to overcome on the road that leads to a college diploma: Academic disparity, low income, immigration issues, and English proficiency are among those obstacles. At any time, just one of these obstacles alone would be enough to impede a student's progress towards earning a degree. This literature review presented the theoretical framework that will guide this study. Based on Crisp and Cruz's (2009) work, mentoring may play several roles to help Latino students towards a successful education: 1) psychological and emotional support, 2) goal setting and career path support, 3) academic subject knowledge support, and 4) role model support. These four constructs may help explain how Latino educators who act as role models may be able to influence student motivation to seek and earn higher education degrees, thereby increasing the number of teaching degrees and the number of Latino educational role models. By so doing,

more Latino mentors and role models will be available to motivate Latino students to excel in their educational goals.

What is not known or well researched is what specific program components are identified by program participants as having a positive or negative impact on their trajectory towards becoming an educator. In terms of the mentoring components, Salinas insisted that “it is important for students of color to have role models that they can look up to, role models who look like them, who have come from similar backgrounds, and who are important and influential in their lives” (2002, p. 613). The problem for Latino students is the number of Latino educators that serve as mentors and role models is not keeping pace with the rapidly growing number of Latino students. Because of the lack of Latino role models in education, Latino students may not be motivated to pursue higher education opportunities, which can lead to fewer job opportunities, lower lifetime income potential, and less stable home and family conditions (Bureau of Labor Statistics, 2008). Understanding the experiences of the targeted future educators will help improve their experiences and the program’s outcomes, and will provide ongoing information for the program itself and for decision makers and policy leaders at state and other levels wishing to serve similar populations through similar programs.

This will be done by describing and explaining the experiences, successes, and obstacles inherent in the program and its goals, as the participants, themselves, identify them during data collection. This research is guided by the following questions:

1. What participants in the LET program identify as influential in their trajectory towards becoming an educator, and why?
2. How LET instructors, acting in the role of mentors, influence participants’ desires and plans to become educators, and why?

3. What external obstacles hinder the participants' aspirations to become educators, and why?

With these questions in mind, this research seeks to contribute to the existing base of literature regarding promising programmatic interventions intended to increase Latino educational attainment. This research may also develop insights transferrable to other Latino education models and programmatic interventions and their students.

## APPENDIX B: METHODOLOGY

This appendix presents the problem statement, methodological orientation, and design of the qualitative research. This study incorporates a research methodology that will ground theory in the data, including a preliminary quantitative inquiry that progresses into a qualitative investigation (Corbin & Strauss, 2008; Denzin & Lincoln, 2005).

### **Statement of the Problem**

The Latino population makes up the largest and fastest growing minority group in the country. Nearly 67 million Latinos will be added to the nation's population between 2000 and 2050. Their numbers are projected to grow from 35.6 million to 102.6 million, an increase of 188 percent (U.S. Census Bureau, 2009). The rapid growth in the Latino population brings to U.S. schools an attendant growth in Latino students, with their unique needs and strengths. However, the number of Latino educators available to serve as mentors and role models for such students is not keeping pace with the Latino population growth.

Research almost universally implies that the lack of Latino role models in education may negatively affect Latino students' educational outcomes in many ways (Allen, 2000; Campbell, 2007; Erlach, 2000; Salinas, 2002; Sanchez, 2008; Santos & Reigadas, 2005). In particular, Latino youth often lack a role model to consider or emulate as they develop their own educational goals. This may discourage Latino students from obtaining a high school diploma or a degree in higher education. Among many factors, lack of Latino educators may contribute to Latinos' overrepresentation as dropouts from high school and gross underrepresentation in admission to higher education.

Underachievement in a student's K-12 education may lead to fewer higher education opportunities, limited professional job choices, lower lifetime income potential, less stable home

and family conditions, and other undesirable outcomes. As noted earlier, almost all experts in the educational attainment of Latino students claim that the most promising response to the needs of Latino students is to provide more Latino educators to serve as role models and as proficient and knowledgeable teachers who are familiar with cultural and language issues faced by these students. Given this call for more Latino educators, the major challenge becomes how to increase the number of Latinos who are prepared to enter education as a career.

Obviously, programs that can successfully induct Latinos into higher education generally, and teaching as a career specifically, are needed. The purpose of this study is to help investigate a promising and ambitious program designed to influence Latino high school students to persist in their educational careers, to enter higher education, and to adopt education as a career—resulting in more Latino teachers who may act as mentors and role models to Latino students. This Latino education program is studied because it is a relatively new program that is arguably the most ambitious intervention in its state of Utah, and probably in its region, the Intermountain West. There may be unintended obstacles or surprising successes within the program. Understanding the experiences of the targeted future educators will help improve their experiences and the program's outcomes, and will provide ongoing information for the program itself and for decision makers and policy leaders at state and other levels wishing to serve similar populations through similar programs.

### **Research Questions**

The purpose of this study is to describe and explain the role of a Latino educational program designed to serve Latino high school and college students in their pursuit of higher education degrees and teaching careers. This research will explain the experiences, successes, and obstacles inherent in the program and its goals, as identified by the participants themselves. This research is guided by the following questions:

1. What participants in the LET program identify as influential in their trajectory towards becoming an educator, and why?
2. How LET instructors, acting in the role of mentors, influence participants' desires and plans to become educators, and why?
3. What external obstacles hinder the participants' aspirations to become educators, and why?

This study is expected to contribute to the existing base of literature regarding the role of a promising programmatic interventions intended to increase Latino educational attainment. This research may also develop insights that may benefit other Latino education models and programmatic interventions, and their students.

### **Methodological Orientation**

#### **Post-positivism**

Patton (2002) has suggested that “post-positivism...informs much contemporary social science research, including...qualitative inquiry” (p. 92). For this research a post-positivist view was chosen as Littlejohn (2007) states to reflect the idea that “human knowledge is not based on unchallenged, solidified foundations; it is conjectural. There are grounds, or warrants, for asserting these beliefs, although these warrants can be modified or withdrawn in the light of further investigation” (p.5).

With this idea in mind, the focus of this research is on a specific program designed to serve and encourage Latino pre-service educators, in order to add to existent mentoring theory and knowledge regarding interventions for Latino students. The focus of this research will be on the experiences of the participants themselves, as the participants inform the research using their own lived experience, and thus expertise, regarding the potential outcomes and the ongoing

experience of participants in the program. It is probable that the research subjects may provide a different perspective and understanding of the program than the described areas of program focus that are outlined later in this chapter.

These multiple perspectives are in keeping with Phillips and Burbules' (2000) description of post-positivism as a "non-foundational approach to human knowledge that rejects the view that knowledge is erected on absolutely secure foundations—for there are not such things; post-positivists accept fallibilism as an unavoidable fact of life" (p. 29). In general the social sciences, including education, lend themselves well to a post-positivist perspective as they assume modified experimental, manipulative methodologies that can include both qualitative and quantitative practices (Denzin & Lincoln, 2003).

This research will focus on qualitative methods to derive its main sources of data, through open-ended surveys and interviews to describe and explain insights and perspective from the participants' lived experiences. Simple quantitative descriptive data regarding participants will also inform data analysis.

The research will seek to learn, through the ontological questions of this study, the stated and intended outcomes of the program studied for future Latino educators; know the structures and mentoring objectives, practices, and personnel put into place within the program; and know whether the participants themselves believe the program is on track to achieve its purposes, in light of their own experiences and projections. By looking at a Latino mentoring program through inquiry techniques of post-positivism, in conjunction with the use of grounded theory, findings may inform mentoring practices with the hope of improving the likelihood of more Latino students becoming educators.

### **Grounded Theory**

Grounded theory is described as a research method in which the theory is developed from the data (Corbin & Strauss 2008). Grounded theory is based on three elements: concepts, categories, and propositions. Concepts are, however, the key elements of analysis, since theory is developed from the conceptualization of data, rather than the actual data. The emphasis on the emergence of theory from the data is what sets grounded theory apart from other approaches. Corbin and Strauss (2008) have referred to the grounded theory approach as a qualitative research method that systematically uses a set of events to build a conclusion grounded in the data about a phenomenon. With this study, the events, reported experiences and meaning-making of the participants, Latino students in a teacher preparation program, will be used as data to ground theory development and to refine theory and inquiry as the research progresses. Pilot interviews were first conducted, and now must be analyzed before full interviews will be given, to inform what questions might need to be added and explored in later open-ended survey and interviews.

The primary purpose of grounded theory is to expand upon the details of a phenomenon by identifying the key elements of that phenomenon, and then categorizing the relationship between those elements. In other words, the goal is to contribute to existing theory by developing specific theoretical propositions that explain the data and the research subjects, without losing sight of what makes the topics of a study unique (Corbin & Strauss, 2008). Grounded theory and the use of qualitative research involve natural inquiry in which emic and etic viewpoints can be used (Ryan & Bernard, 2000).

Both an emic and etic perspective will be used during this study. An etic perspective will be used as the researcher interprets and analyzes data gathered from the LET participants

concerning experiences with their mentors while using the mentoring framework of Crisp and Cruz (2009) as a framework. An etic viewpoint attempts to provide neutral outsiders viewpoint of the LET program. As the researcher is also interested in emerging data that may enhance the mentoring methods and program structure, an emic perspective will also be sought. This will be done through semi-structured interviews, to encourage participants to freely express themselves and to increase the likelihood that new insights or theories will surface from what things mean to the LET members. Focusing on methods and research practices guided by an emic view is intended to allow theory to develop in order to explain relationships between constructs that provide meaning, as the researcher pursues the research subjects' views and theories and as the researcher seeks links and connections with other subjects' constructs and experiences.

When using qualitative questioning, Whetton (1989) emphasizes an emic viewpoint should lead the researcher to focus on the who, what, when, where, and how; and should assess under what conditions, and to what extent, each of these factors relate to each other and to the research subjects' attempts to draw conclusions and understanding during interviews and open-ended survey responses. This type of purposive qualitative research, according to Corbin and Strauss (2008) is used in order to discover concepts and relationships in raw data and then organize these pieces of data into a "theoretical explanatory scheme" (p. 11) or grounded theory. Qualitative research attempts to describe participant's own perceptions, describe the environment in which the questions are asked, and then interpret or explain the meanings connected to the participants' situation (Miles & Huberman, 2002). This research on a Latino education program examines participants' perceptions of what mentors, program features and structures, and role models motivate them towards attaining a degree in higher education and to remain in education as a career.

This research seeks to provide insight to theories of mentoring as well as add insight on how Latinos experience mentoring and role models during an intervention program. This research will also examine the program's structures and features and how they influence the participants and their own assessment of their likelihood to remain in higher education and in teaching as their career (Humble et al., 2006; Rayle, Bordes, Zapata, Arredondo, Rutter & Howard, 2006; Rose, 2003).

Grounded theory is well suited for this study and will be used to develop further theory that is based on the data; in this case, the Latino participants' perceptions of a specific mentoring program will be used to further develop established mentoring theory. In the words of Strauss and Corbin (2001), "Grounded theories, because they are drawn from data, are likely to offer insight, enhance understanding and provide a meaningful guide to action" (p. 12). Thus grounded theory is appropriate for this study in order to develop explanations regarding influences on Latino students' becoming educators. The Latino students' insights will provide the basis for explaining what elements of the mentoring program motivate their decisions to become educators; and what influence, if any, mentors have on these program participants.

The purpose of this study is to develop theoretical explanations regarding how Latino educators who act as role models influence Latino students in the pursuit of higher education degree attainment and a teaching career. Current research, in general, has asked the who, what, when, where, and how questions regarding mentoring (Bernier et al., 2005; Bordes & Arredondo, 2005; Campbell, 2007; Ishiyama, 2007; Kador & Lewis, 2007; Morgan & Collier, 2006; Quinn et al., 2002; Santos & Reigadas, 2005; Zalaquett & Lopez, 2006). What is lacking are the Latino students' perspectives as to in what conditions and how mentors and role models meet the needs of Latino students who are considering careers in education.

In order to add to the theoretical understanding of mentoring, Wallace et al. (2000) believed that researchers must continue to discover ways in which mentoring is personally experienced and constructed by students. They believe that researchers also must understand how programs designed to mentor Latino students and to provide future role models and mentors may or may not be leading to success with their educational goals. Latino students perspectives should be considered as they are a rapidly growing population that may offer a different perspective to that which we already know concerning mentors and role models; thus their perspectives are extremely valuable and relevant to research on mentoring (Bordes & Arredondo, 2005; Strayhorn & Terrell, 2007; Zalaquett & Lopez, 2006). The Latino participants' personal perspectives will add insight concerning how mentoring is personally experienced by this rapidly growing population.

This section has presented the methodology that will be used in this study. Post-positivism and grounded theory will be used to further develop theory related to mentoring and role models. The next section will present the research design for this study.

### **Research Design**

A detailed description of the research design will be presented in this section, including research sampling, data collection, and data analysis. This case study is set within the context of a program called the Latino Educators of Tomorrow (LET). The informants for this research are LET participants. This research began with a pilot study, conducted under an IRB approval, that consisted of two surveys and a set of pilot interviews. The first survey was strictly quantitative, while the second survey was quantitative with qualitative open-ended response questions. The semi-structured pilot interviews were conducted with six LET participants. This pilot study was intended to provide a better understanding of the program context and to refine the research

problem. These pilot surveys and interviews have been coded and analyzed as their express purpose is to inform the development of more extensive interviews and open-ended survey.

In this current research, the entire population of 90 LET participants will be invited to participate in a survey with open-ended questions. The open-ended questions will include those developed from the analysis of the pilot interviews and will be informed by the theoretical framework of Crisp and Cruz (2009) (See Figure 2). These open-ended questions will provide for participant voices and observations that can be analyzed in conjunction with further interview data from LET participants. Twelve to sixteen in-depth interviews, utilizing questions informed by the pilot study will be conducted with current LET participants to support the further development and refinement of the theoretical explanations regarding mentoring and role models in this Latino mentoring program.

The following list provides a quick summary of procedures employed in this research. More detail for each procedure is provided in a later section.

### **Pilot Surveys**

- A pilot survey was distributed to and collected from all Cohort I participants in June 2009 (n = 35).
- An analysis of the pilot survey was conducted in order to develop open-ended questions for an additional pilot survey.
- A second pilot survey employing the additional qualitative open-ended questions developed in the prior pilot was distributed to and collected from all Cohort II participants in June 2009 (n = 55).

**Pilot Interviews**

- The second pilot survey was analyzed and utilized to develop the initial pilot interview questions.
- A pilot qualitative interview was conducted with three participants from Cohort I and three participants from Cohort II in July 2009.
- Responses from the six pilot interviews were transcribed, and analyzed. Building from the pilot interview data, and a literature review, further semi-structured interview questions were developed to act as a guide for the final qualitative interviews to be conducted.

**Current Open-Ended Surveys**

- All pilot surveys and interviews were coded and analyzed to develop a final open-ended survey that includes open-ended questions. This open-ended survey will be distributed to the entire population of Cohort I and Cohort II (n = 90).
- The data from this open-ended survey will be reviewed, coded and fully analyzed. This will include brief quantitative descriptive statistics along with detailed coding and analyzing of open-ended qualitative questions.

**Current Interviews**

- Twelve to sixteen semi-structured, in-depth interviews approximately one hour in length will be conducted with students from Cohort I (n = 6) and Cohort II (n = 6).
- The interviews will be transcribed and a member check will be made by the researcher. Detailed coding and analysis of interview data will then be conducted.

## **The Case: Latino Educators of Tomorrow Program**

### **Background**

Provo School District has one of the largest and fastest growing Latino populations in the state of Utah. The rapid increase in the Latino student population necessitates the search for more Latino educators in the Provo School District. For this reason, the Latino Educators of Tomorrow program was designed as a partnership between Utah Valley University and Provo School District with the specific aim of providing a motivational intervention for 9<sup>th</sup> through 12<sup>th</sup> grade public high school Latino students who are considering education as a career. The Latino Educators of Tomorrow program was developed with three main areas of focus: first, to prepare students for the academic rigor of a college program; second, to provide educational role models to mentor and motivate Latino students through their college experiences while encouraging students to continue into education as a career until their higher education goals are complete; and third, to advise college-bound students who are choosing education as a career path while providing cultural support.

Because of the high risk for dropout or failure among Latino youth, providing connections between high schools and university programs is critical. The LET program strives to develop a collaborative effort between counselors and administrators in the Provo School District, and academic advisors and administrators associated with Utah Valley University. This school and university collaboration seeks to develop a prepared, long-lasting pool of qualified Latino teachers who will act as mentors and role models to Latino youth. The LET program aims to create a link between the high school and university settings that is crucial for Latino youth in their pursuit of higher education degree attainment.

When the Latino Educators of Tomorrow program began in the summer of 2008, only 13% of Utah's Latino college-age students attended college, compared to 39% of Utah's Caucasian residents (Perlich, 2008). Utah Valley University developed the "Latino Initiative" in order to recruit more Latino college-age students. At the same time, UVU also was expanding their College of Education teacher preparation program. Recruiting Latino high school students who were interested in attending UVU in order to become educators was a perfect combination of the two programs and the first of its kind in the state of Utah. This program was based on research and literature that was available at the time describing interventions needed for addressing the needs of the rapidly growing Latino population of Utah by providing culturally relevant supports, programmatic structures, resources, and mentors.

### **Three Areas of Program Focus**

**Academic preparation.** The first area of focus in the Latino Educators of Tomorrow was to assist Latino students to begin UVU academically prepared. The dean of UVU's College of Education emphasized the need for high school graduates to begin university study equipped to succeed in the academic rigor of university coursework. One way to prepare for this transition may be enrolling in advanced courses where college credits are earned concurrently. Many general education students from the Provo School District have enrolled in UVU bringing 15–60 credits of college completed through concurrent enrollment, distance learning, and advanced placement courses. Because students cannot be admitted to the UVU education majors until their junior year, the more credits completed upon high school graduation, the quicker the students are allowed into the School of Education.

In order to expedite the process for high-achieving Latino students, concurrent enrollment courses specifically aimed toward a teaching career are offered through the Latino Educators of

Tomorrow program. Concurrent enrollment courses allow high school-aged students to take college level courses that simultaneously offer credit towards high school graduation and a college degree. The courses that were offered to the LET participants for concurrent enrollment credits are pre-requisites for the teacher preparation program at UVU. These courses were Introduction to Education (EDEL1010), Student Success (CLSS 1000), Human Development (PSY1100), and Public Speaking (COMM1020). By offering these courses to LET participants the program is able to 1) recruit students to enter the field of education as a career, and 2) advance students towards their degree in education.

During the LET summer program, sections of these courses were set aside specifically for LET cohorts; students not involved in the LET program had other sections of the courses from which to select. Plans to expand course offerings in the future are being considered and include Introduction to Writing (ENGL 1010) and Introduction to Art (ART 1010). The courses offered during the program are each worth two to three college credits and fulfill a requirement towards UVU graduation. Students are held to the academic standards of the university and are graded according to their level of proficiency and completion. The letter grade that appears on the university transcript also appears on the student's high school report card and is weighted equally with high school coursework in terms of high school GPA—an important consideration for students and a second motivation to work hard in these courses.

**Educational role models and mentoring opportunities.** The second area of focus in the Latino Educators of Tomorrow program consists of providing educational role models to mentor and motivate Latino students through their college experiences while encouraging students to continue into education as a career until their higher education goal is complete. Latino professors are invited to teach the courses offered to LET participants. At least weekly, guests

from the educational community are asked to speak to the LET participants about the value they see in having more Latino teachers in the schools to act as mentors and role models to future Latino youth. Latino educators from the local schools are also invited to tell about their educational experiences and goals on a weekly basis or as often as possible.

LET professors are available not only in the classrooms as they teach, they also take time each day to eat lunch with participants. These professors participate in team building activities and hold individual interviews with LET participants as often as possible. LET educators are also accessible to students through e-mail, phone, and extended office hours. Some of the LET participants requested that their parents be able to talk to the professors after business hours or on Saturdays when the parents did not have to work. LET professors extended their hours or met on the weekend to accommodate the LET student and their parents. LET educators also hold monthly after-school activities during the regular school year in order to keep the strong connections that they have built.

The LET program continues to be monitored and adjusted while it is being implemented, as shown by the process of LET instructors meeting with parents during extended hours. Being responsive to the needs of the LET participants through this constant assessment and adaptation will continue throughout the program in order to help LET be more successful.

Besides the opportunity of associating with educational role models, LET participants are also given the opportunity to be role models themselves. During the summer portion of LET, participants were able to be mentors and role models at local area elementary schools. Participants were invited to attend a traditional year-round-school program and a summer migrant school program. These field experiences provided experiences in which LET

participants were able to serve as role models to younger Latino students in an educational setting.

As LET participants progress through the LET program, they form a cohort of participants. LET has been in existence for two years, and therefore two cohorts exist. New cohorts of Latino students will be added each year. As new Latino participants enter the LET program, these new cohorts can look to previous cohorts of LET participants and those in the UVU teacher education program for motivation and mentoring helps.

**Academic and cultural support.** The third area of focus in the LET program provides cultural and academic support to college-bound students who are choosing education as a career path. Students come to the university with many academic needs that must be addressed in order for them to succeed. One of the needs seems to be that of navigating through the various stages of entering a university program, including entrance requirements, entrance applications, financial aid, and registration for classes. In order to support more minorities in their transition to college, positive experiences with Latino academic advisors, Latino peer mentors, and Latino professors on the university campus are purposefully designed with the LET participants in mind.

With these three areas of focus in mind the LET program may be able to reverse some of the current trends in Latino student achievement, provide access to higher education, and produce more Latino educators. One of the purposes of this study is to inform educator preparation programs in the recruitment of Latino teachers and to develop theoretical explanations that may be helpful in the development of these programs. As Ayalon pointed out, “In order to increase the number of teachers of color it is necessary to increase the pool of students of color who enroll in teacher preparation programs” (2004, p.8).

### **Pilot Study**

An initial pilot study was conducted with all LET participants in June 2009. There were two cohorts of students who participated in this study. Cohort I consisted of 35 participants who had previously participated in the first LET program, beginning in June 2008. Cohort I had been through an entire summer educational experience of the LET program and had been invited to attend monthly activities during the 2008–2009 school-year. Participants in Cohort I were continuing the program for a second year. The second cohort of 55 Latino participants who participated in this study began the LET program for the first time in June of 2009, with no prior connection to the LET program.

Both of the LET cohorts were invited to attend a banquet at the beginning of the summer 2009 program. This opening banquet was held for the participants and their parents with the purpose of explaining the vision and mission of the LET program. During this banquet, parents and LET participants were invited to sign an IRB consent form if they were willing to participate in the study. All of the participants and parents signed. The general purpose of the pilot study and IRB consent form were explained to the participants and their parents in both Spanish and English (see Appendix E and Appendix F). The IRB consent form explained confidentiality for the participants in the pilot study and provided instructions for them to follow if they had further concerns regarding the study.

#### **Stage I: Pilot Survey**

In order to collect information on the LET participants' expectations of the program, a survey was made up of 30 questions that were developed with the intent of eliciting the following information from students: their expectations about college; their perceptions of Latino influence in the classroom; and their desire to become an educator. An online tool called

Qualtrics was used in the creation and distribution of the electronic pilot survey used in this study.

**Sampling.** The quantitative pilot survey (see Appendix B) was given to the first LET cohort, which was identified as Cohort I. Cohort I was made up of a group of 35 participants from the Provo School District who had attended the LET program for the 2008–2009 school year and chose to continue with the program for a second year. LET participants were in the 9<sup>th</sup> through 12<sup>th</sup> grades. A census sample of all 35 LET participants was used. LET surveys were collected from each and every member of Cohort I. As this group was small in number, the insight of every participant was considered valuable.

This sample of students included 9<sup>th</sup> through 12<sup>th</sup> grade students who attended the Provo School District. All of the participants were of Latino background and all of the participants were bilingual. The participants were screened by their high school counselors in three areas; 1) students needed to be academically capable of performing on a college level, 2) students had to be able to attend the LET program everyday it was held during the summer, and 3) students showed an interest in becoming an educator.

**Data collection.** Respondent data was anonymous as names, gender, school codes, etc. were not requested (only 2 male students participated in Cohort I). This data collection procedure helped secure the anonymity of the pilot survey participants. Responses gathered from the first pilot survey were strictly quantitative in nature. The survey contained 30 questions developed to gather information from participants about: their expectations about college; their perceptions of Latino influence in the classroom; and their desire to become an educator. Ten questions were asked under each of these three main headings. Participants selected answers on a 5-point Likert-

type scale, which allowed the respondents to express a degree of agreement or disagreement and also to choose the middle ground if their feelings were neutral or if they had no opinion.

LET participants were asked to complete the survey online using Qualtrics during their Student Success (CLSS 1000) course on the first day of class. The survey was given during class time in order to assure that all participants had access to a computer along with access to the Internet. This method of survey also allowed for a census of participants' opinions to be collected that would be used to apprise the LET program of participants' insights, and to inform future research of the program.

**Data analysis.** The online tool Qualtrics used for this survey is a computer program that conveniently collated participant responses from the survey into spreadsheet format. The spreadsheet allowed the mean and standard deviation of each question to be viewed immediately upon completion of the survey. With a quantitative survey, data is expressed numerically as a form of measurement. The standard deviation is the average difference of the scores from the mean of distribution, or how far they are away from the mean (Dodge, 2003). The mean describes the central location of the data. A low standard deviation indicates that the data points tend to be very close to the mean, whereas high standard deviation indicates that the data are spread out over a large range of values.

In the pilot survey, the answers with a lower standard deviation indicate that the LET participants were aligned closely as a group opinion. This finding is important as the research questions for this survey specifically call for the Latino perspective as a group of participants, not for individual participant opinions.

**Findings.** The findings from the pilot survey are presented in Table 12. Nine of the ten questions answered by Cohort I had a standard deviation of less than 1.0 standard deviation from

the mean. Impressively, 100% of Latino participants that were surveyed either marked that they *agree* or *strongly agree* (mean 4.58,  $SD = .50$ ) that they were confident that they would be able to go to college. Yet, the one survey item indicated a standard deviation greater than 1.0 indicated that Cohort I was not as closely united in opinion as a Latino group regarding whether they could pay for college. Only 70% of the participants marked that they *agree* or *strongly agree* that they were confident that they could afford college (mean 3.89,  $SD = 1.13$ ). As these two questions seem closely related - attending college and paying for college - the participants' responses needed further clarification.

After all of the surveys were collected, each question was carefully reviewed. The information collected from the survey was used to inform the stage two of the pilot study. This included collecting survey responses from Cohort II to add to the quantitative survey findings, and the addition of qualitative questions were added in order to clarify understanding of the participant's responses. This pilot survey was conducted in order to gather information for the following reasons: 1) to inform future research and study; 2) to formulate a report to be presented to Provo School District and the K-16 alliance; and 3) to provide initial findings to UVU's College of Education to help meet the program's goal to have more Latino students enter their program to become educators.

Table 12

*Results from Cohort I Pilot Survey (n = 35)*

Question	Mean (standard deviation)	% Strongly agree or agree	% No strong feelings	% Strongly disagree or disagree
I am confident I will be able to go to college.	4.58 (.50)	100	0	0
My current study habits are strong enough for college.	4.19 (.97)	84	5	11
I am confident that I can afford college.	3.89 (1.13)	70	11	19
I know the steps I need to take to prepare for college.	4.16 (.93)	81	11	8
I know the college admissions process.	4.00 (.97)	70	22	8
Latino students need to see more Latino educators.	4.38 (.64)	98	0	2
My Latino culture will help me be a better teacher.	4.42 (.55)	97	2	0
Speaking a second language will increase my effectiveness as a teacher.	4.43 (.50)	100	0	0
Having a Latino teacher is important to me.	4.27 (.73)	84	16	0
I am confident in my potential to be a role model to youth.	4.24 (.83)	87	8	5

After all of the surveys were collected, each question was carefully reviewed. The information collected from the survey was used to inform the stage two of the pilot study. This included collecting survey responses from Cohort II to add to the quantitative survey findings, and the addition of qualitative questions were added in order to clarify understanding of the

participant's responses. This pilot survey was conducted in order to gather information for the following reasons: 1) to inform future research and study, 2) to formulate a report to be presented to Provo School District and the K-16 alliance, and 3) to provide initial findings to UVU's College of Education to help meet the program's goal to have more Latino students enter their program to become educators.

### **Stage II: Pilot Survey with Open-Ended Questions**

After the initial pilot survey was conducted with Cohort I, the researcher conducted an additional pilot survey with a second, larger cohort of Latino participants who made up Cohort II to further clarify responses and gather additional information. The survey was made up of the original 30 quantitative questions from the first pilot survey, with the addition of six open-ended questions. The qualitative open-ended questions were created to provide insight as to what the LET participants' perspectives were and what additional information they might add to this stage of the research specifically regarding the findings discussed in the first pilot survey regarding being able to attend college and finance their college education.

**Sampling.** This second pilot survey (see Appendix B and C) was given to the second LET cohort, which is identified as Cohort II. Cohort II was made up of a group of 55 participants from the Provo School District who were attending the LET program for the first time. All of the LET participants were in the 9<sup>th</sup> through 12<sup>th</sup> grades. Cohort II participants were also all Latino and all of the participants (except one participant who spoke English) were bilingual. Cohort II participants were also screened by their high school counselors in the same three areas as Cohort I; 1) students needed to be academically capable of performing on a college level, 2) students had to be able to attend the LET program everyday it was held during the summer, and 3) students showed an interest in becoming an educator.

A census of all participants was again used as all of the LET participants' survey answers were collected from each and every member of Cohort II. The insight of every one of the 55 participants was considered valuable for this research.

**Data collection.** Once again, the anonymity of the respondents was protected as name, gender, school codes, etc. were not requested. Qualtrics was again used to create and distribute the survey for this stage of the study with participants selecting their answer to the question on a 5-point Likert-type scale. The six open-ended questions that were developed to solicit responses from the Latino student participants to add clarity to the quantitative questions previously asked.

These questions included the following: "What are your expectations of the LET program?" "What are your biggest fears or concerns in preparing for college?" "Do you feel academically prepared for college?" "Who has been a role model for you as you strive to become an educator?" "During our LET program who has influenced you to want to be an educator or not?" and "Is there anything about the LET program that you would you like to share with other Latino students who may be thinking about becoming educators?" These questions were chosen in order to provide additional insight as to what the participants' perspectives were and what anecdotes they might add that could give more depth to the next stage of the research.

Each of the participants in Cohort II took the survey during their Human Development (PSY 1100) course on the first day of class. Again, the rationale for giving the survey during class time was that all students had computer or internet access in their homes. By giving students time in class, open-response questions could also easily be answered through the use of the computerized survey, along with the guarantee of a census of student input.

**Data analysis.** The quantitative data gathered from Cohort II was analyzed from the results of the Qualtrics survey. Qualtrics collated participant responses for both the quantitative

questions and qualitative survey questions. For the quantitative data, a spreadsheet format was again used, which contained the mean and standard deviation of each of the quantitative questions immediately after completion of the survey. A standard deviation of less than 1.0 was used to determine which questions produced a tight fit.

The qualitative data gathered from the open-ended questions on the Qualtrics survey were imported into NVivo7 software (QSR, 2009). The qualitative open-ended survey answers were collated in the order that the questions were asked. All of the answers given to each open-ended question were grouped by the corresponding question. This allowed for all of the responses for each question to be easily viewed. The responses to the open-ended questions were analyzed by coding participant's responses into specific categories. Open-coding was used during a first pass through the collected data on the LET participant answers by categorizing text into categories using nodes.

Open-coding is the first and unrestrictive pass in coding qualitative data (Miles & Huberman, 2002). Open coding was the first step used in conceptualizing the information gathered from the open-ended survey data. This involved looking at each of the answers given by each of the participants, and coding the responses into nodes that emically emerged from the data. When possible, vocabulary used by LET participants (Richards, 2005), was used to name the nodes. This open-coding process was completed for each of the six open-ended questions that were answered by all of the Cohort II participants (n = 55).

**Findings of Quantitative Survey Question.** The analysis of the second pilot survey is presented in Table 13. Seven of the ten questions answered by Cohort II demonstrated a standard deviation of less than 1, indicating a unified group opinion. The responses of Cohort II that indicated a standard deviation of more than 1.0 represented the responses that were not as closely

aligned as a group response. These questions were: Are your current study habits were strong enough for college, are you confident you can afford college, do you know the steps to take to prepare for college, and do you know the college admissions process.

Table 13

*Results from Cohort II Pilot Survey (n = 55)*

Question	Mean (standard deviation)	% Strongly agree or agree	% No strong feelings	% Strongly disagree or disagree
I am confident I will be able to go to college.	4.69 (.47)	100	0	0
My current study habits are strong enough for college.	4.18 (1.19)	96	2	2
I am confident that I can afford college.	3.42 (1.56)	78	10	12
I know the steps I need to take to prepare for college.	4.18 (1.12)	92	6	2
I know the college admissions process.	3.83 (1.37)	78	8	14
Latino students need to see more Latino educators.	4.62 (.68)	98	2	0
My Latino culture will help me be a better teacher.	4.62 (.56)	98	2	0
Speaking a second language increases my effectiveness as a teacher.	4.69 (.47)	100	0	0
Having a Latino as a mentor (example) for me is important.	4.33 (.77)	94	6	0
I am confident in my potential to be a role model to youth.	4.42 (.85)	100	0	0

The responses that were similar among Cohort I and Cohort II include the beliefs that 1) LET participants are confident they can go to college, 2) Latino students need to see more Latino educators, 3) Latino culture will help them be better teachers, 4) having the skill of speaking Spanish will increase their effectiveness as a teacher, 5) having a Latino teacher is important, 6) participants are confident in their potential to be role models to youth, and 7) they did not know how they were going to finance their college education.

The responses that differ among Cohort I and Cohort II were; are your current study habits were strong enough for college, do you know the steps to take to prepare for college, and do you know the college admissions process. Cohort I was much more confident in these areas than Cohort II. this may have been due to the fact that Cohort I had already been in the LET program more than a year which may have provided Cohort I with the confidence they needed in understanding how to study, prepare and apply to college.

**Findings of Open-Ended Survey Questions.** Table 14 presents an analysis that contains the Cohort II participants' responses to each question (n = 55) on the open-ended survey questions. The response categories that emerged from the coding process is seen in the far right column, with the percent of responses made by LET participants being indicated in the middle column.

The findings from this open-ended survey informed the researcher that there were common concerns among Cohort II. For the next stage of the pilot study: six personal interviews were held, the researcher chose to keep the same questions used in the open-ended survey that was distributed to all LET Cohort II participants, in order to add more depth and clarity to the questions asked and to see if there was a commonality in the concerns.

Table 14

*Results from Open-Ended Questions: Cohort II Pilot Survey (n = 55)*

Question	% Responded	Response Category
What are your biggest fears or concerns in preparing for college?	87	Financing College
	65	Demands of College
	60	College Registration
	32	College Environment
Who has been a role model for you as you strive to be an educator?	91	Educator
	78	Family
During the LET program who has influenced you to want to be an educator or not?	87	LET Instructor
	13	Guest Speaker
Do you feel academically prepared for college? why or why not?	87	Yes, I have good grades
	13	No, my high school classes are not hard enough
What are you hoping to gain from this LET program experience?	80	College Experience
	32	Is teaching for me?
Is there anything about the LET program that you would like to share with other Latino students who may be thinking about becoming educators?	51	I can be a role model to other Latinos
	31	I can be an educator

**Stage III: Pilot Interviews**

At the conclusion of the two pilot surveys, the focus of the research turned exclusively to qualitative methods. The questions from the second pilot survey were used again during six individual interviews held with LET participants. The six pilot interviews were conducted, recordings of the interviews were transcribed, and transcripts of these interviews were imported into NVivo7 (QSR, 2009).

**Sampling.** The Stage III pilot interview sample included three LET participants from Cohort I and three LET participants from Cohort II (n = 6). A stratified random sample method was used to select three interview participants from each cohort by assigning a number to each of the participants in Cohort I and putting the numbers in a jar. Another jar was used for the participants in Cohort II, who had also been assigned a number. Three numbers were pulled out of each jar and matched with the names that corresponded to them. These participants were then asked if they would be willing to spend approximately 20 minutes in an interview with the researcher; all six participants agreed to be interviewed. These pilot interviews were held in a one-on-one setting.

The three participants who were randomly selected from Cohort I consisted of one male and two females. Two participants were juniors in high school and one was a senior. The participants who were selected from Cohort II also included one male and two females. One student was a senior, one a junior, and the other a sophomore in high school. Three of the six participants interviewed had lived in the U.S. their entire lives and had been involved in the U.S. education system for their entire education; the other three had moved here from Mexico during the later part of their elementary education. Two of the three participants who had moved here from Mexico had been involved in an ELL program and both were involved in the program for two years; the other participants were not involved in an ELL program at all.

**Data collection.** The six LET participants were asked questions during the pilot interview that were previously asked in the open-ended survey portion of the pilot survey (see Appendix C). Additional questions were also asked about the length of time they had been involved in a U.S. public school and if they had participated in an English Language Learners (ELL) program and for how long. Each of the pilot interviews lasted approximately 20 minutes and all six of the LET participants who participated agreed to be contacted in the future, if necessary.

The six pilot interviews were tape recorded. After the interview, the LET participant's comments were transcribed and stored in a Word document that was then imported into NVivo7(QSR, 2009). The interview tapes were then destroyed.

**Data analysis.** The data collected from the pilot interview were analyzed using NVivo7 software (QSR, 2009) to help identify core categories and patterns (Strauss, 1993). Each of the six questions was entered into NVivo7 creating a parent node. Each of the answers from the six participants interviewed was then open coded. During open coding nodes evolved based on the responses gathered from the respondents.

As there were only six interviews, and many of the participants had the same answers, the open-coding process of the interviews did not generate a large number of categories. Before the coding began, the researcher chose 50 % of the responses to be used as a threshold, however, because saturation was reached quickly with the high similarity of participants answers, all of the categories were identified.

**Findings.** Table 15 presents an analysis that contains the six interviews conducted with Cohort I and Cohort II participants' responses (n = 6). Interview responses from the six LET participants were very similar to the results of the open-ended survey given to all of Cohort II,

although not as many categories emerged. When asked what their biggest fear or concerns are in preparing for college, every student mentioned that financing their college education was a concern. Two participants mentioned that they were concerned that their documentation status would not allow them to legally work to earn the money needed to pay for college. When participants were asked who had been a role model for them as they looked at becoming an educator, every student interviewed mentioned an educator who was influential in his or her life. Every student mentioned that a LET instructor influenced them to want to be an educator. When asked what participants would like to share with other Latino participants about the LET program, every participant mentioned that they wanted to be a role model for the community and that there was a need for Latino educators.

There were only two questions that did not produce a response of census, they were: Do you feel academically prepared for college? Eighty seven percent of the participants said that they were, but 33% mentioned they were worried about their English skills being college ready; and, What are you hoping to gain from the LET experience? The answers were split with half of the participants responding that they wanted to see if a career in education was right for them, and the other half responding that they wanted to see if they were ready and able to handle the college experience (See Table 15).

Table 15

*Results from Interview Questions (n = 6)*

Question: Parent Node	% Responded	Response Categories
What are your biggest fears or concerns in preparing for college?	100	Financing College
	33	Documentation may hold me back
Who has been a role model for you as you strive to be an educator?	100	Educator
	83	Teacher
	16	Principal
During the LET program who has influenced you to want to be an educator or not?	100	LET Instructor
Do you feel academically prepared for college? why or why not?	87	Yes, I have good grades
	33	I am worried about my English skills.
What are you hoping to gain from this LET program experience?	50	If teaching is the career for me.
	50	The college experience
Is there anything about the LET program that you would you like to share with other Latino students who may be thinking about becoming educators?	100	Latinos can be role models in the community.
	100	There is a need for Latino teachers.

### Overall Pilot Findings

The findings of all of the pilot research will be presented in this section. Table 16 presents the pilot quantitative survey findings of both Cohort I and Cohort II.

Table 16

*Results from Cohort I and Cohort II Pilot Survey*

Question	Mean (standard deviation) of Cohort I	Mean (standard deviation) of Cohort II	Mean (standard deviation) of both Cohort I and Cohort II
I am confident I will be able to go to college.	4.58 (.50)	4.69 (.47)	4.65 (.48)
My current study habits are strong enough for college.	4.19 (.97)	4.18 (1.19)	4.18 (1.08)
I am confident that I can afford college.	3.89 (1.13)	3.42 (1.56)	3.65 (1.34)
I know the steps I need to take to prepare for college.	4.16 (.93)	4.18 (1.12)	4.17 (1.02)
I know the college admissions process.	4.00 (.97)	3.83 (1.37)	3.91 (1.17)
Latino students need to see more Latino educators.	4.38 (.64)	4.62 (.68)	4.50 (.66)
My Latino culture will help me be a better teacher.	4.42 (.55)	4.62 (.56)	4.52 (.55)
Speaking a second language increases my effectiveness as a teacher.	4.43 (.50)	4.69 (.47)	4.56 (.48)
Having a Latino as a mentor (example) for me is important.	4.27 (.73)	4.33 (.77)	4.30 (.75)
I am confident in my potential to be a role model to youth.	4.24 (.83)	4.42 (.85)	4.33 (.84)

As explained earlier, with a quantitative survey, data are expressed numerically as a form of measurement. The standard deviation is the average difference of the scores from the mean of distribution, or how far they are away from the mean (Dodge, 2003). The mean describes the

central location of the data. A low standard deviation indicates that the data points tend to be very close to the mean, whereas high standard deviation indicates that the data are spread out over a large range of values.

Using the pilot surveys, the quantitative answers from both Cohorts I and Cohorts II were compared; those with a lower standard deviation indicate that the LET participants in both cohorts were aligned closely as an entire LET group opinion. Questions that had a standard deviation of more than 1.0 indicate that there is a spread of opinion in the LET group as a whole. Those questions that had a larger standard deviation were: My current study habits are strong enough for college; I am confident that I can afford college; I know the steps I need to take to prepare for college; and I know the college admissions process.

These answers may indicate that there is a need for more information on these topics to be given to the LET participant. One area that the researcher found interesting was that LET participants as a whole feel confident they will go to college, yet all of the data presented above deal with study habits needed for college, preparation for college, admission process for college, and paying for college indicate that LET participants are not confident with these processes. A standard deviation of less than 1.0 was used in order to indicate which questions the LET participants as a whole had answers that were united. This is important as the research questions for this survey specifically call for the Latino perspective as a group of participants, not for individual participant opinions. The questions with united answers are: I am confident I will be able to go to college; Latino students need to see more Latino educators; My Latino culture will help me be a better teacher; Speaking a second language increases my effectiveness as a teacher; Having a Latino as a mentor (example) for me is important; and, I am confident in my potential to be a role model to youth.

Table 17 presents the pilot finding of the open-ended survey questions given to both Cohort II and the six interviews that were conducted. All of the categories are reported on Table 17, however, only those categories that Cohort II and those interviewed have in common will be used to inform current research.

Table 17

*Results from Open-Ended Questions: Cohort II (n=55) and Pilot Interviews (n=6)*

Question	Cohort II (n=55) % Responded	Interview (n=6) % Responded	Response Category
1. What are you biggest fears or concerns in preparing for college?	87	100	Financing College
	65	0	Demands of College
	60	0	College Registration
	32	0	College Environment
2. Who has been a role model for you as you strive to be an educator?	91	100	Educator
	78	0	Family
3. During the LET program who has influenced you to want to be an educator or not?	87	100	LET Instructor
	13	0	Guest Speaker
4. Do you feel academically prepared for college? why or why not?	87	87	Yes, I have good grades
	13	0	No, my high school classes are not hard enough
5. What are you hoping to gain from this LET program experience?	80	50	College Experience
	32	50	Is teaching the career for me?
6. Is there anything about the LET program that you would like to share with other Latino students who may be thinking about becoming educators?	51	100	I can be a role model to other Latinos
	31	0	There is a need for Latino teachers

Every open-ended question presented to the LET Cohorts II and the six participants interviewed presented one category that was over the 50% threshold indicating that all LET participants were closely related in their perspectives on the questions asked.

After coding the pilot interviews, the researcher learned that over 50 % of the LET participants joined LET to gain college experience. Eighty seven percent of the LET participants feel academically prepared for college; however, 87% are concerned about financing their college education. Also, educators are important role models to Latino students, and LET participants feel that they can also be a role model to other Latinos.

### **Use of Pilot Study Findings for Current Study**

The current research, informed by the pilot study, will first consist of an online qualitative open-ended survey distributed to all participants in Cohort I and Cohort II. This will be followed by 12 semi-structured interviews with LET program participants. The open-ended questions developed (see Table 18) will be used as a guide for the current research were informed by the pilot study findings and the theoretical model on mentoring described in Chapter 2. The intent of this current qualitative open-ended survey and the interviews is to add a greater level of understanding of the LET participants' experiences and develop theoretical explanations to address the research questions. This qualitative data aims to ground valuable insights in the personal meaning and perspectives of the LET participants. Table 18 includes the research questions presented in the far left column. The pilot survey question is presented in the middle column (the numbers next to each of these questions correspond with Table 18). The questions that were developed for current research are presented in the right column (identified with a letter or Roman numeral). The questions will be used in the Qualtrics survey that all 90 LET students will be invited to participate in on-line.

Table 18

*Questions Developed for Open-Ended Surveys.*

Research Question	Pilot Survey Questions	Questions for Open-Ended Survey
1. What components of a new and ambitious Latino education career program designed to increase the number of Latinos entering teaching as a profession do participants themselves identify as having an influence on their trajectory towards becoming an educator and why?	5. What are you hoping to gain for the LET experience?	a. Explain how the LET program has influenced your thinking on what you want to do after high school? i. What are your career plans?  b. What aspects of the program have had the greatest influence on you? why? i. Tell me about the Instructors ii. Tell me about the course work iii. Tell me about the guest speakers iv. Tell me about your experience in the schools you visited.
2. What is the influence of this program's mentors and its structure for mention on participants; desires and plans to become an educator?	2. Who has been a role model for you as you strive to become an educator?  3. During the LET program, who has influenced you to want to be an educator?	c. How do you think you can be a role model to other Latino youth? i. How can you be a role model in your community? ii. How can you be a role model in your school? iii. How can you be a role model in your family?  d. Some have suggested that Latino students need to see more Latino educators, please tell me what you think. i. How were LET instructors role models? ii. How did LET instructors provide goal setting and career path support? iii. How did LET instructors provide you with emotional support? iv. How did the LET instructors offer academic knowledge and support?
3. What external obstacles impact the participants' aspirations to become an educator and why?	1. What are your concerns in preparing for college?  4. Do you feel academically prepared for college?	e. What might prevent you from attending college or becoming an educator? i. How are you planning to pay for college? ii. What are you doing in high school to academically prepare for college? iii. How confident do you feel about your reading, speaking and writing skills in English? Spanish? iv. How do you think documentation status affects students in a program like this?
4. What do participants identify as key elements that will improve the program's goal of increasing the number of Latino educators and why?	6. Is there anything about the LET program you want to share with Latino students who want to become educators?	f. What would you tell educators at your school, district, USOE, or UVU about your LET experience?  g. Some have suggested that Latino students need to see more Latino educators, please tell me what you think.

Table 19 is similar to the previous table; however sub-questions (indicated with a Roman numeral) are not presented as the questions developed are intended to be a guide during the interview. The semi-structured questions that were developed for current research interviews are presented in the right column with a letter that corresponds to the lettered questions in Table 19.

Table 19

*Questions Developed for Semi-Structured Interviews.*

<b>Research Question</b>	<b>Pilot survey Questions</b>	<b>Questions for Interview</b>
1. What components of a new and ambitious Latino education career program designed to increase the number of Latinos entering teaching as a profession do participants themselves identify as having an influence on their trajectory towards becoming an educator and why?	5. What are you hoping to gain for the LET experience?	a. Explain how the LET program has influenced your thinking on what you want to do after high school?  b. What aspects of the program have had the greatest influence on you? why?
2. What is the influence of this program’s mentors and its structure for mention on participants; desires and plans to become an educator?	2. Who has been a role model for you as you strive to become an educator? 3. During the LET program, who has influenced you to want to be an educator?	c. How do you think you can be a role model to other Latino youth?  d. Some have suggested that Latino students need to see more Latino educators, please tell me what you think.
3. What external obstacles impact the participants’ aspirations to become an educator and why?	1. What are your concerns in preparing for college? 4. Do you feel academically prepared for college?	e. What might prevent you from attending college or becoming an educator?
4. What do participants identify as key elements that will improve the program’s goal of increasing the number of Latino educators and why?	6. Is there anything about the LET program you want to share with other Latino students who are thinking about becoming educators?	f. What would you tell educators at your school, district, USOE, or UVU about your LET experience?  g. Some have suggested that Latino students need to see more Latino educators, please tell me what you think.

## Sampling

**Open-Ended Survey.** Qualitative research is often collected through the use of an open-ended survey and is often used as this method can answer some questions more efficiently and effectively than quantitative approaches. A qualitative survey approach also has an advantage of allowing for more diversity of responses as well as the capacity to adapt to new developments or issues during the research process itself (Miles & Huberman, 2002). This occurs as responses are provided by a participant in their own language used to describe and explain an answer. This allows each participant to provide a unique and individual answer for each question asked which allows for more diversity in responses. For this reason, all 90 of the LET participants who were involved in Cohort I and Cohort II will be invited to participate in a current Qualtrics open-ended survey containing the open-ended qualitative questions as seen in Appendix D.

A qualitative survey has been chosen for this study as qualitative data gathered from this open-ended survey may point out successes or failures that may have occurred during the LET program, and put data on a personal level through participant's perceptions about how the program may have made a difference in an LET participant's life. Open-response questions in this survey also allow for individual stories and responses concerning the LET participants' experiences to occur, which may prove valuable in learning about which components of the program were successful and how the next LET cohort or future Latino high school mentoring programs can be improved.

**In-depth, semi-structured interviews.** While the entire LET population will be invited to participate in the open-ended survey, semi-structured interviews will be conducted with 12 LET participants. The sampling that has been chosen for this study is that of a purposive sampling method based on the stratification criteria of LET Cohorts I and II, gender, and grade

in high school. This purposive random sample method has been chosen for this study as it is assumed that the information gathered from each cohort may differ because the population from Cohort I has been in the LET group longer than those who are in Cohort II, gender may make a difference in the participants responses, and being in the 12<sup>th</sup> grade is the transition year between high school and the college experience. The participants of Cohort I and the participants in Cohort II who are in the 12<sup>th</sup> grade will be possible participants for the interviews. Twelve LET participants will be randomly chosen to participate in the semi-structured interview; six numbers will be selected from each of Cohort I and Cohort II.

A random number generator will be used to assign a number to each of the LET participants who meet the above criteria. After assigning a random number to each cohort member, the list of cohort participants will be sorted by this number. The top 6 numbers will be listed. If there are not enough members that meet the criteria of the 12<sup>th</sup> grade, students will be selected from grade 13 (freshmen in college), or one of the participants is unable to participate, or additional interviews are needed the researcher will then move to the next number on the list.

### **Data Collection**

**Open-Ended Survey.** Qualtrics will be used in the creation and distribution of a current online qualitative survey. LET participants will be invited take the online open-ended survey at home through an e-mail invitation. Although the researcher will not be able to link participants answers to a specific open-ended survey, the e-mail addresses that have taken the open-ended survey will be reported to the researcher. If participants do not respond to the online open-ended survey within a week, a phone call will be made to the participants inviting them to take the open-ended survey.

Participants will be permitted to type as much information in the comment boxes as they would like. If participants indicate that they do not have e-mail or internet access or do not respond to the e-mailed open-ended survey invitation or phone call within 10 days, a paper copy of the open-ended survey sent to their homes through traditional postal service in order to collect as many responses as possible.

The answers from the paper open-ended survey will then be typed into the Qualtrics program to store the data with the data from open-ended surveys completed online for easier data storage. The paper open-ended surveys that are completed will be tracked with a coded number in order to keep the online open-ended survey and the paper open-ended survey responses separate in case there are any differences that need to be identified.

**Interviews.** Each of the semi-structured interviews will last approximately one hour. Each interview will be tape recorded. After the interview, the LET participant's responses will be transcribed using a code for their name, which cohort they belonged to, and if the open-ended survey was returned online or on paper, and stored in a Word document. Once the interviews are stored in a Word document and properly backed up, the interview tapes will be destroyed.

The qualitative data from both the Qualtrics open-ended survey and the interviews will be imported into NVivo7 software (QSR, 2009) for data management and analysis. These computer programs do not replace the interpretive nature of coding but will be used as a tool to enhance the researcher's efficiency at data storage, retrieval, and applying codes to the data.

### **Data Analysis**

The perspective of LET participants will be carefully considered as they provide information through the open-ended survey and the semi-structured interview in order to gain information about their experiences in the LET program. The development of theoretical

explanations to describe and explain mentoring and motivation of Latino students will be grounded in the data from open-ended survey questions and the interviews.

Each set of data gathered from the open-ended surveys and the interviews will be coded and analyzed together using the NVivo7 program. Those participants involved in the open-ended survey will be named the “Survey project” and their answers will be coded with an “S” when they are reported. Those participants who are involved in the interview will be named the “Interview project” and have their answers coded with an “I”. By keeping the data in separately identified, this will make it easier to know which source the data came from. Qualitative analysis of the open-ended survey and semi-structured interview data will take place using the following coding strategies.

**Coding strategies.** To address the research questions for this study, the data from both the open-ended survey and the 12 semi-structured interviews will be analyzed using a concept-indicator model (Glaser, 1978). When using a concept-indicator model with qualitative data, words are used to capture information about an “incident”; in this case it may involve a person, a group, or an observation experienced in the LET program. The incident becomes a unit of analysis that can be coded creating themes. Themes are common trends or ideas that may appear repeatedly throughout the data. Themes will be identified as participants indicate similar ideas.

The incidents identified by the LET participants through the qualitative survey and semi-structured interviews will become indicators of a concepts or themes and the patterns they create. These explanations will support theoretical explanations about what LET participants identify as critical factors in assisting them in their pursuit of becoming educators; if and how mentors played a role in their desire to become and educators; and if there are outside obstacles that may prohibit the LET participants from becoming educators. As explanations emerge from the data,

the resulting theoretical model may inform the LET program's goal to assist more Latinos to become educators.

The initial type of coding for the current research will be open-coding. Open-coding is based on the concept of data being "cracked open" as a means of identifying relevant indicators and categories that can be further used in identifying themes and patterns (Corbin & Strauss, 2008). Written data from the qualitative surveys and interview transcripts will be categorized into emerging themes during this process. The researcher will use the open-coding process, which involves a vigilant look at the data from each qualitative survey and semi-structured interview answers on a word-by-word and line-by-line basis. In the beginning of the study, everything will be coded in order to understand participant perceptions have regarding the LET program. These coding processes will continually revisit the data enabling the emergence and development of a hierarchical structure of themes that will constantly be compared back to the data. This will be done in order to identify themes that fit and describe the data. A threshold, or the number of cases needed to identify a potential theme will initially be set at 50% will be used as a guide during this study. However if possible, a higher threshold will be used to determine emergent themes (Richards, 2005). Richards also warns that just because a threshold may not hit 50%, it may still inform the researcher to look at others that areas may influence the threshold.

After open coding the researcher will use axial-coding which seeks for relationships and patterns between the themes and attributes. Since axial-coding consists primarily of "relating categories of information to the central phenomenon category" (Creswell & Miller, 2000 p. 239), it will be used to find core patterns in the LET participants' perspectives and experiences. Selective coding is done after having found core themes and patterns. In order for the success of theory development to occur, it is critical to reduce and simplify the data (Glaser, 1998).

Selective coding for this study will focus on a few specific patterns relevant to the research questions in order to find deeper, richer findings. With the use of selective coding, the researcher will be able to narrow the scope of the analysis, refine explanations, and then compare statements about the relationships between themes, patterns and attributes.

**Trustworthiness plan.** Yin (2000) described trustworthiness as the criterion to test the quality of research design. To ensure the trustworthiness of qualitative research, four criteria should be in place: credibility, transferability, dependability, and confirmability (Shenton, 2004). Each of these four criteria supports the trustworthiness of this study.

During data analysis, steps will be taken to assure credibility is established. Credibility will be established through the use of triangulation, journaling, and prolonged engagement. This type of credibility in qualitative methodology provides information that “rings true” for participants (Sewell, 2007). The triangulation methods that will be used in this research will be member checks. This will take place at the end of each of the semi-structured interviews, and again when findings are presented to those interviewed. The researcher will summarize what was said and clarify with the LET participant if the summary is correct. This will allow the participants to check the findings and make any additional comments they feel are needed (Denzin & Lincoln, 2005).

Journaling will be used during this research as a second method for creating credibility. Journaling has been suggested by Strauss and Corbin (2001) in order to assist the researcher in keeping an accurate record throughout the research. Journaling will take place during the collection of open-ended survey questions in order for the researcher to record ideas, thoughts or questions that may arise. Even though the open-ended surveys will be submitted online through a Qualtrics open-ended survey, the researcher will be able to view the responses from LET

participants as soon as they are posted. Journaling after reading the LET participants insights may lead to further questions. Journaling will also take place after each of the interviews has been completed so that the interviewer can write any feelings or observations associated with the interview process. Journaling during qualitative analysis will also occur when links are discovered or themes arise during the coding process. Journals will be kept in the NVivo project (QSR, 2007).

Third, prolonged engagement and observation will facilitate credibility. Prolonged engagement occurred before and during the pilot as the researcher established a two-year relationship with many of the students involved in the Latino high school program. The researcher spent an extended amount of time with LET participants in classes, during lunch breaks, field experiences, monthly activities, and on the UVU campus. By being involved in the day-to-day routine of the LET students and creating relationships of trust with them, the researcher observed and gained an understanding of what actually took place during the program. This prolonged relationship of the researcher, which will continue during the current research may assist in data collection. When LET participants receive the survey with open-ended questions, the relationship established with the researcher may contribute to their completing and returning the open-ended survey. This prolonged engagement relationship that has been established may also help the informants of the semi-structured interviews to feel more comfortable than they may otherwise have felt.

Transferability, the second criteria of trustworthiness, refers to the extent to which the audience and other researchers can consider the findings and theoretical explanations to have meaning in other similarly-situated contexts with similar parameters, populations, and characteristics (Denzin & Lincoln, 2005). Shenton (2004) outlined some methods that can

facilitate transferability to take place. One of the suggested methods for transferability that has been used for this study is that of reflexive journaling, also suggested by Strauss and Corbin (2001). This is a journal that will be kept during the study in which the researcher will make regular entries during the interview process and throughout the qualitative analysis. The researcher will use the journal to reflect upon and add her feelings, personal observations, thoughts and ideas about the LET program and participants as the progress and evolution of the qualitative analyses takes place. The journal will be kept using NVivo7 software (QSR, 2009) in order to keep all of the information on the LET program in one organized place.

Dependability indicates that the research and findings are reliable and consistent, and that they would likely be stable over time and across researchers and methods. An audit trail is an important method in which to provide dependability. In this research, an audit trail will be kept so that others may follow the line of reasoning used (Strauss & Corbin, 2001). Denzin and Lincoln (2005) have included that in the audit trail, raw data, interactions, methodological notes are used in order to show dependability. The audit trail will build and support conclusions that are drawn as a result of the analysis, so that others might track, understand and potentially replicate the process. Throughout this study, an audit trail will be kept in order to help the researcher mark her own clear and purposive path taken in the collection of the data, its analysis, and its reporting. This will be done in order to help enhance the researcher's ability to standardize her methods and interactions so no one theme or finding stands out simply because of an aberrant or episodic collection and analysis of an individual data point.

Trustworthiness is also established through confirmability. In order to help ensure that the meaning-making in data analysis is discovered and not from the bias of the researcher, it is important to enhance confirmability. Confirmability as a term refers to the goal of having the

findings of a study be confirmed by the data themselves (Shenton, 2004). To enhance and seek confirmability the researcher will employ an audit trail and journaling. Careful notes will be kept through journaling and memo keeping, producing an audit trail, and the researcher will reflect back on the process to seek to understand whether findings of the research seem to be well developed by the data and research subjects' own responses. This process could include a peer review by other researchers and member checks performed after the interviews are transcribed in order to aid confirmability. These four criteria of credibility, transferability, dependability, and confirmability (Shenton, 2004), will be sought throughout the research to enhance the trustworthiness of the outcomes.

### **Summary of Methods**

In this appendix the research design and methods for this study have been outlined. This study integrated a research methodology that will ground theory development in the data. This research builds from a pilot inquiry, using both quantitative and qualitative data gathered from open-ended surveys and interviews, and will progress into a detailed investigation using both open-ended survey and interview methods (Corbin & Strauss, 2008; Denzin & Lincoln, 2005). Furthermore, this chapter presented the statement of the problem, theoretical research orientation, and design of the research, including sampling, data collection, and data analysis.

The current problem is the lack of Latino educators who serve as role models for our Latino youth to emulate. The low number of Latino educators may discourage Latino students from continuing with their higher education goals in general, and specific goals to make education their career choice. In order to research this problem, a theoretical research orientation based on post-positivism and grounded theory is used, with the intent of contributing to existing mentoring and motivational theory. A research design has been outlined that builds on a previous pilot study. The processes for sampling and data collection of open-ended surveys and 12

interviews have been presented. Data analysis procedures have been outlined as they relate to coding of the qualitative data gathered. The software that will be used to collect and store information has been identified, and a plan to ensure the trustworthiness of the research has been outlined.

### **Limitations and Delimitations of the Study**

The limitation of this study is that it is confined to the Latino Educators of Tomorrow program on Utah Valley University, Orem, Utah campus.

The delimitations placed on this study are first, this research delimited the sampling frame to a defined population of participants. High-school and new college-aged (15-19 years old), Latino students who are considering a career choice in education, and are participating in the LET program. This has implications for the analysis and interpretation of the findings such that there is the age group is not very large which may not allow for a greater diversity in answers due to life experiences that occur. Given this delimitation, future research should expand to represent a greater age difference to overcome it.

Second, only the perspectives of current students will be used for this study. This has implications for the analysis and interpretation of the findings such that the LET program is evolving and may incorporate changes that would be reported differently by additional participants that attend the program. Given this delimitation, future research should survey and interview additional LET members to overcome it. It should be noted that interviewing participant in other age ranges and who attend LET in future cohorts is beyond the scope of this research.

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