ASKING LATINO STUDENTS: STRATEGIES TO IMPROVE DUAL CREDIT HIGH SCHOOL – COMMUNITY COLLEGE BRIDGE PROGRAMS

Ana L. King
National-Louis University

Follow this and additional works at: https://digitalcommons.nl.edu/diss

Recommended Citation
King, Ana L., "ASKING LATINO STUDENTS: STRATEGIES TO IMPROVE DUAL CREDIT HIGH SCHOOL – COMMUNITY COLLEGE BRIDGE PROGRAMS" (2012). Dissertations. 64.
https://digitalcommons.nl.edu/diss/64

This Dissertation - Public Access is brought to you for free and open access by Digital Commons@NLU. It has been accepted for inclusion in Dissertations by an authorized administrator of Digital Commons@NLU. For more information, please contact digitalcommons@nl.edu.
ASKING LATINO STUDENTS: STRATEGIES TO IMPROVE DUAL CREDIT HIGH SCHOOL – COMMUNITY COLLEGE BRIDGE PROGRAMS

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE
DOCTOR OF EDUCATION
IN
COMMUNITY COLLEGE LEADERSHIP

ANA L. KING
CHICAGO, ILLINOIS
MAY 2012
Community College Leadership Doctoral Program

Dissertation Notification of Completion

Doctoral Candidate: Ana L. King

Title of Dissertation: Asking Latino Students: Strategies to Improve Dual Credit
High School – Community College Bridge Programs

Dissertation Chair Rebecca S. Lake, Ed.D.

Dissertation Committee
Dennis K. Haynes, Ph.D.
Angeleson Atsba, Ed.D.

Date of Final Approval Meeting May 30, 2012

We certify this dissertation, submitted by the above named candidate, is fully adequate in scope and quality to satisfactorily meet the dissertation requirement for attaining the Doctor of Education degree in the Community College Leadership Doctoral Program.

Signature

Rebecca S. Lake
Dennis K. Haynes
Angeleson Atsba

Date
May 30, 2012
May 30, 2012
May 30, 2012
ACKNOWLEDGEMENTS

A former professor in the National-Louis University doctoral program in Community College Leadership succinctly summed it up; Dr. Diane Oliver once said, “Possessing a doctoral degree simply means that one is able to begin to do research.” And here are the fruits of step one of my journey!

I am deeply grateful to Dr. Anghesom Atsbaha, esteemed colleague, educator, activist, researcher, member of my doctoral committee, and the one who got me into all of this in the first place! He awakened the researcher in me and followed me every step of the way, through every course and every keystroke of the dissertation, with his patient yet firm query: “When, Ana? WHEN?”

Enormous credit for the successful completion of my degree goes to Dr. Rebecca S. Lake, the primary faculty member on my dissertation committee and the one-woman architect of the entire Community College Leadership doctoral program at NLU. Dr. Lake is a scholar and a practitioner – one who could take us from epistemology to IPEDS in the same lecture. I thank Dr. Lake for deepening my understanding of and respect for the multiple mission of the community college.

Much thanks also go to Dr. Dennis K. Haynes, the second faculty member on my dissertation committee, and the professor whom I constantly cite when I educate my colleagues on the differences between politics, policy, procedure, and law!

A loving nod to my patient spouse, Silas W. King, for providing “silent” support and understanding my need for solitude as I toiled away at coursework and spent long nights tethered to my laptop, surrounded by stacks of books and papers.
But perhaps the greatest thanks go to the students whom I serve. As an English-as-a-second-language teacher by discipline, I am always in awe of the unwavering determination of these individuals -- whether they are immigrants themselves or the children of immigrants -- who retain the richness of their heritage, culture, and language and boldly set out on achieving their dreams in an adopted language, in a country that is constantly enriched by this diversity. I thank them for motivating me to think “beyond the classroom” and strive for better ways to serve them on an institutional level.
ABSTRACT

This study explores and identifies factors that contribute to Latino students’ enrollment and persistence in the first two years of a 2+2+2 program (high school – community college – university). As community college leaders attempt to reach the fastest growing, youngest minority group in the United States (Passel, Cohn, & Lopez, 2011), questions emerge on how to create and implement an effective high school to college bridge program. The research focused on discovering insights and gaining understanding from the perspectives of Latino students participating in the high school years of a 2+2+2 bridge program. This qualitative inquiry situated in the interpretive paradigm used a case study approach to identify effective factors appropriate for this type of bridge program.

Seven high school participants were selected through a process of purposeful sampling, based on their completion of the high school years in a 2+2+2 bridge program. Parental consent was obtained. The principal instruments for data collection included face-to-face semi-structured interviews, a research journal, and field notes. Analysis of the data and information involved categorizing, coding, memoing, and theming triangulated from the multiple data sources.

The findings from study participants revealed that six integral elements are needed for a successful program that supports high school to community college persistence for Latino students enrolled in a 2+2+2 bridge program. These six elements are: 1) keep the cost negligible or nothing for students and parents; 2) decide what courses to teach in the program and align these specific high school curricula with the community college credit courses; 3) start the student involvement with the program from the post-freshman summer, to establish student
engagement with college and involve their parents from the beginning of the experience; 4) identify a high school teacher as a “champion” for the students and the program; 5) have community college faculty teach all the program courses; and 6) hold classes on the community college campus. The King 2+2 bridge model to support high school to community college persistence for Latino Students is presented to assist community college and high school leaders in developing and implementing a successful dual credit bridge program for this student population.
# TABLE OF CONTENTS

LIST OF TABLES ........................................................................................................... xvii

LIST OF FIGURES ......................................................................................................... xviii

CHAPTER 1: INTRODUCTION ......................................................................................... 1

Background and Context of Issue .............................................................................. 1

Purpose of the Study ...................................................................................................... 6

Research Guiding Questions ...................................................................................... 6

Significance of the Study ............................................................................................. 7

Brief Literature Review ............................................................................................... 8

History of Dual Credit Programs in Illinois ................................................................. 8

Goals for the Bridges to Baccalaureate in the Research Sciences (BBRS) 2+2+2 Model .................................................................................................................. 10

Brief History of the Bridges to Baccalaureate in the Research Sciences (BBRS) 2+2+2 Program ........................................................................................................ 11

Study Conceptual Framework ..................................................................................... 13

Study Methodology - Qualitative Interpretive Paradigm ........................................... 16

Case Study ................................................................................................................... 18

Site Selection ............................................................................................................... 18

Participant Selection ................................................................................................... 19

Data Collection .......................................................................................................... 19

Data Analysis .............................................................................................................. 20

Definition of Terms .................................................................................................... 21

Organization of the Dissertation ............................................................................... 21
CHAPTER 2: LITERATURE REVIEW

Persistence Theories for Higher Education Students ........................................ 26
Persistence Theories Pertinent to Latino Students in Higher Education ................. 28
Rendon’s Validation Theory ............................................................................. 30
Concepts of Community Cultural Wealth and Cultural Capital Development for Diverse College Students ............................................................. 33
Summary ........................................................................................................... 37

CHAPTER 3: METHODOLOGY ............................................................................. 39
Research Design ............................................................................................... 40
Qualitative Research ......................................................................................... 40
  Interpretive Paradigm ................................................................................. 42
  Case Study .................................................................................................. 43
Role of the Researcher ...................................................................................... 46
Case and Participant Selection ....................................................................... 47
Data Collection Methods .............................................................................. 49
  Semi-structured Face-to-Face Interviews ................................................. 49
  Field Notes ................................................................................................ 52
  Researcher’s Journal .................................................................................. 53
Data Analysis Techniques ............................................................................. 54
  Reading and Memoing ............................................................................. 55
  Coding ....................................................................................................... 55
  Discovery of Emergent Themes ............................................................... 57
Trustworthiness of the Study ......................................................................... 58
  Triangulation of Data ............................................................................... 59
Rich, Thick Descriptive Data ......................................................... 60
Audit Trail .................................................................................. 60
Reflexivity .................................................................................. 62
Ethical Considerations ............................................................... 63
Limitations ................................................................................ 65
Researcher Bias ......................................................................... 66
Honesty in Participants’ Responses ............................................. 67
Researcher as the Instrument ...................................................... 68
Summary .................................................................................... 73

CHAPTER 4: DATA PRESENTATION AND ANALYSIS .................. 74
Structure of Bridges to Baccalaureate in Research Sciences (BBRS) Program ........................................ 74
Partners in the BBRS Program ..................................................... 77
  Harry S. Truman College, City Colleges of Chicago .................. 77
  Foster High School, Chicago Public Schools (pseudonym) ........ 77
Participant Demographics ............................................................ 78
  Ethnicity .................................................................................... 79
  First-Generation College Student ............................................. 79
  Junior Reserve Officer Training Corps (ROTC) ....................... 79
  Employed While Fulltime High School Student ...................... 80
Concepts Used for Coding of the Interviews ............................... 80
  Community Cultural Wealth and Cultural Capital for
  Diverse College Students ........................................................ 80
  Validation Theory .................................................................... 82
Two Emergent Themes Arising From the Data .................................................. 83
Data Collection Methods ............................................................................. 84
Presentation of Data: The Interviews .............................................................. 85
Analysis of Participant Interviews ................................................................ 88
  Participant #1: Pamela (pseudonym) ......................................................... 88
Analysis by A Priori Concepts of Community Cultural Wealth and Cultural Capital ................................................................. 89
  Aspirational Capital .................................................................................. 89
  Linguistic Capital ....................................................................................... 89
  Familial Capital ........................................................................................ 90
  Social Capital ............................................................................................ 90
  Navigational Capital ................................................................................ 91
  Resistant Capital ...................................................................................... 91
  Citizenship Capital ................................................................................... 92
Analysis by A Priori Components of Validation Theory ............................... 93
  In-class Academic Validation ...................................................................... 93
  Out-of-class Academic Validation .............................................................. 94
Emergent Theme #1: Having College Faculty as Teachers .......................... 94
Emergent Theme #2: Attending Classes on a College Campus .................... 95
Participant #2: Julian (pseudonym) ............................................................... 95
Analysis by A Priori Concepts of Community Cultural Wealth and Cultural Capital ................................................................. 96
  Aspirational Capital .................................................................................. 96
  Linguistic Capital ....................................................................................... 97
Emergent Theme #2: Attending Classes on a College Campus ..................105

Participant #4: Sylvia (pseudonym) ..................................................105

Analysis by A Priori Concepts of Community Cultural Wealth and Cultural Capital ........................................................................106
Aspirational Capital ...........................................................................106
Linguistic Capital ............................................................................106
Familial Capital ..............................................................................106
Social Capital ................................................................................106
Navigational Capital ......................................................................107
Resistant Capital ...........................................................................107
Citizenship Capital .........................................................................107

Analysis by A Priori Components of Validation Theory ......................107
In-class Academic Validation ..........................................................107
Out-of-class Academic Validation ...................................................108

Emergent Theme #1: Having College Faculty as Teachers ................108

Emergent Theme #2: Attending Classes on a College Campus ..........108

Participant #5: Araceli (pseudonym) ...............................................109

Analysis by A Priori Concepts of Community Cultural Wealth and Cultural Capital .................................................................109
Aspirational Capital ........................................................................109
Linguistic Capital ...........................................................................109
Familial Capital ................................................................................110
Social Capital ..................................................................................110
Navigational Capital ......................................................................110
Resistant Capital .................................................................110
Citizenship Capital ................................................................111

Analysis by A Priori Components of Validation Theory ...............111
In-class Academic Validation ..................................................111
Out-of-class Academic Validation ...........................................112
Emergent Theme #1: Having College Faculty as Teachers ..........112
Emergent Theme #2: Attending Classes on a College Campus ......113

Participant #6: Dario (pseudonym) ........................................113

Analysis by A Priori Concepts of Community Cultural Wealth and
Cultural Capital ..................................................................113
Aspirational Capital ................................................................113
Resistant Capital ....................................................................114

Other A Priori Concepts of Community Cultural Wealth
Cultural Capital ....................................................................114

Analysis by A Priori Components of Validation Theory ...............114
In-class Academic Validation ..................................................114
Out-of-class Academic Validation ...........................................115
Emergent Theme #1: Having College Faculty as Teachers ..........115
Emergent Theme #2: Attending Classes on a College Campus ......116

Participant #7: Marisol (pseudonym) ........................................116

Analysis by A Priori Concepts of Community Cultural Wealth and
Cultural Capital ..................................................................116
Aspirational Capital ................................................................116
Linguistic Capital ...................................................................117
Navigational Capital ................................................................118
Other A Priori Concepts of Community Cultural Wealth and Cultural Capital...............................................................118

Analysis by A Priori Components of Validation Theory.................................................118

In-class Academic Validation ......................................................................................118

Out-of-class Academic Validation ................................................................................119

Emergent Theme #1: Having College Faculty as Teachers ........................................119

Emergent Theme #2: Attending Classes on a College Campus ..............................120

Summary .....................................................................................................................120

CHAPTER 5: FINDINGS, CONCLUSIONS, AND IMPLICATIONS ...........................122

Brief Summary of Chapters 1-4 ...............................................................................122

Findings, Conclusions, and Implications ................................................................124

Purpose of the Study .................................................................................................124

Research Driving Question 1 ......................................................................................124

Having Community College Courses Taught by College Faculty ............................125

High School Teacher Serving as “Champion” of the Bridge Program .....................126

Attending Classes on the Community College Campus .........................................126

Implications of Findings for Community Colleges .....................................................127

Research Driving Question 2 ......................................................................................128

Perception of Readiness for College but Concern about Cost .................................129

Satisfaction with College Faculty and the College Environment ...........................130

Empowering Effect of Early Contact with College Faculty
On Students’ College Choices .......................................................................................131

Implications of Findings for Community Colleges .....................................................132

Research Driving Question 3 ......................................................................................133
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of Content Knowledge</td>
<td>134</td>
</tr>
<tr>
<td>Abandonment of Negative Stereotypes and Creation of Confidence</td>
<td>134</td>
</tr>
<tr>
<td>Learning What the College System Is Like</td>
<td>136</td>
</tr>
<tr>
<td>Implications for Community Colleges</td>
<td>137</td>
</tr>
<tr>
<td>Align Curriculum between High School and Community College</td>
<td>138</td>
</tr>
<tr>
<td>Appeal to Learning Styles of Latino Students</td>
<td>138</td>
</tr>
<tr>
<td>Create Multiple Ways of Instilling Confidence</td>
<td>139</td>
</tr>
<tr>
<td>Provide Navigational Capital to Students and Their Families in a Culturally Sensitive Way</td>
<td>141</td>
</tr>
<tr>
<td>Research Driving Question 4</td>
<td>143</td>
</tr>
<tr>
<td>Implications for Community Colleges</td>
<td>143</td>
</tr>
<tr>
<td>Have College Faculty Deliver Instruction</td>
<td>144</td>
</tr>
<tr>
<td>Hold Classes on the College Campus</td>
<td>144</td>
</tr>
<tr>
<td>Identify a High School Teacher as Champion</td>
<td>144</td>
</tr>
<tr>
<td>Assure Students and / or Their Families Do Not Pay for Any Portion of the Cost</td>
<td>145</td>
</tr>
<tr>
<td>Conclusion</td>
<td>145</td>
</tr>
<tr>
<td>The King 2 + 2 Bridge Model to Support High School to Community College Persistence for Latino Students</td>
<td>146</td>
</tr>
<tr>
<td>King Model Element 1: Explore Financial Avenues</td>
<td>150</td>
</tr>
<tr>
<td>King Model Element 2: Align High School Curriculum and College Credits</td>
<td>150</td>
</tr>
<tr>
<td>King Model Element 3: Establish Student Engagement and Parental Involvement</td>
<td>152</td>
</tr>
<tr>
<td>King Model Element 4: Identify High School Liaison</td>
<td>153</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table 1. Elements of Rendon’s Validation Theory .........................................................14

Table 2. Aragon and Kose’s Components of Cultural Capital Development ...............15

Table 3. Seven Forms of Capital Related to Community Cultural Wealth and Cultural Capital for Diverse College Students ................................................35

Table 4. Sequence of the BBRS Program for High School Students ............................75

Table 5. Study Participants’ Demographics ................................................................78

Table 6. Seven Concepts of Capital, Related to Conceptual Frameworks of Community Cultural Wealth and Cultural Capital .................................81

Table 7. Validation Theory: Concepts and Descriptions Use for Data Analysis.............83

Table 8. Emergent Themes Discovered from the Data ..................................................84

Table 9. Participants’ Responses Analyzed by Seven A Priori Components of Community Wealth and Cultural Capital ......................................................86

Table 10. Participants’ Responses Analyzed by the Two A Priori Components of Validation .............................................................................................87

Table 11. Two Emergent Themes from Participants’ Responses .................................88

Table 12. Combination of Classroom Suggestions Pertinent to Latino Students in the First “2” of 2+2+2 Programs .........................................................140
LIST OF FIGURES

Figure 1. ..........................................................................................................................10

Figure 2. ..........................................................................................................................149
CHAPTER 1: INTRODUCTION

When comparing the ethnic portrait of those who hold a college degree to the demographics of population growth in the United States, it is clear that much still needs to be done for Hispanics, the fastest growing ethnic group in the nation. According to the 2010 Census, the Hispanic/Latino population accounted for most of the nation’s growth – 56% from 2000 to 2010 (Passel, Cohn, & Lopez, 2011), yet Hispanics still lagged behind other groups in terms of degree completion. A nationwide survey revealed that young Latinos, aged 16-25, were 89% more likely than all young people overall (84%) to cite a college degree as important for success in life (Lopez, 2009); only 13% of Latino, 25- to 29- year-olds, completed a bachelor’s degree. This percentage is appallingly low when compared to 53% of Asian young adults, 39% of white young adults, and 19% of African-American young adults holding bachelor’s degrees (Lopez, 2009). In Illinois, home to the fourth largest Hispanic population in the United States (Passel et al., 2011) the findings are similar with regards to higher education attainment and Latinos. High school and college leaders understand that the educational aspirations of individuals are key to their pursuit of a post-secondary degree. However, in Chicago it seems that Latino students also lag behind other groups in this regard. A recent study of the high school graduating class of the Chicago Public Schools found that Latino students ranked lowest of any ethnic group relative to those aspiring to attain a bachelor’s degree (60%), compared to their African-American (77%) and Caucasian (76%) classmates (Consortium on Chicago School Research at the University of Chicago, 2008).

Background and Context of Issue

It is vital that all those attending US high schools be provided the opportunity to obtain a higher education degree or certificate. For individuals and their families to prosper, some type
of post-secondary education is a necessity. It is well documented that 62% of all jobs today require a two- or four-year degree, or higher, and that this percentage will continue to rise in the near future (Carnevale, Smith & Strohl, 2010; Gordon, 2009). In his January, 2012, State of the Union Address, President Obama cited the tremendous potential of the science and technology sectors to fuel the economy and impelled the business and education communities, with an emphasis on community colleges, to work together to meet this growing demand (nytimes.com, 2012).

It is well documented that Latino students are lagging behind both African Americans and Caucasian students when it comes to advancing in higher education. The reasons for this difference can be explained, in part by certain factors which are specific to Hispanics and not experienced as dramatically by other ethnic groups. Research identifies four factors significant to this phenomenon: (1) the difference between native- versus foreign-born status; (2) the family’s economic situation; (3) teen pregnancy; and (4) gang affiliation.

First, in comparison to Caucasians and African-Americans, the issue of country of nativity plays a major role in the educational outcomes for the young Latino population. A 2009 study conducted by the Pew Hispanic Center found that those students born outside of the country and immigrating to the United States contribute to the lower percentage of younger Hispanics’ progress in secondary and postsecondary education.

A primary reason Latino youths trail other youths on enrollment measures is the relatively low rate of school enrollment among the foreign born. Nearly two-thirds (65.7%) of foreign-born Latino youths are not enrolled in either high school or college, compared with 41.6% of all youths. Native-born Latino youths (41.1%), meanwhile, are no more likely than all youths to not be enrolled in either high school or college (Pew Hispanic Center, 2009, p. 46).

Secondly, the pressure many of these youth face to help support their families is a significant factor affecting Hispanic college enrollment and degree attainment, for all young
Latinos, whether immigrants or born in the United States. Although the majority of Latino youths state their parents encourage them to continue their education beyond high school, many also cite the need to contribute to the family’s income as soon as they reach the age at which they can work (Ceja, 2004; Lopez, 2009; Nora & Crisp, 2006; Pew Hispanic Center, 2009). As a result, a significantly higher percentage of Latinos, who do go on to college, enroll part-time rather than full-time (some 22.8% of native-born and 27.0% of foreign-born Latino students) compared with 14.7% for all youths in college (Pew Hispanic Center, 2009).

Teen pregnancy and early motherhood are the third factor affecting this population at much higher rates than the general population. In 2005, approximately 129 in every 1000 Hispanic females ages 15 to 19, experienced a pregnancy, compared to just 71 in 1000 for the general population (Ventura, Abma, & Mosher, 2009). In 2009, a study by Ventura et al. also found 26% of 19-year-old Latinas were already mothers, compared to 22% of African-American and 11% of Caucasian young women of the same age. This fact is extremely relevant as research shows educational attainment for teen mothers, overall, is lower than for young women who do not have children and significantly lower for Hispanic teen mothers (Perper, Peterson & Manlove, 2010). A 2010 study found just 46% of young Latina mothers had completed their secondary-school credentials (high school diploma or GED) compared to 67% of African-American and 55% of Caucasian young women in this same category (Perper et al., 2010, p. 3).

The final significant factor affecting young adult Latinos and higher education attainment is gang affiliation. Research shows gang affiliation threatens this population at a much higher rate than other ethnic groups. According to the 2009 National Youth Gang Survey Analysis, 50% of gang members were Hispanic/Latino, compared to 32% of African-American, 10 percent Caucasian, and 8 percent of other race/ethnicity (U.S. Department of Justice, 2009). The impact
of this higher rate of gang affiliation on educational attainment and overall well-being is something of which Hispanic youth are already critically aware. In a study of young Latinos in the United States, aged 16 to 24, when discussing the impact of gangs on their communities, seven-in-ten stated that gangs “make life worse for Hispanics” in every aspect, including education (Pew Hispanic Center, 2009, p. 83).

Yet, despite these sobering statistics, Hispanics nationwide have been making steady gains in education, with the percentage of Hispanic, ages 18- to 24-year-olds, who have completed high school, rising to 73% in 2010 from 70% in 2009 (Fry, 2011). What has been most encouraging is the percentage of Hispanics, aged 18 to 24, attending college has increased significantly in the last of the 20th century and first ten years of the 21st century, from 13% in 1972, to 27% in 2009, to 32% in 2010 (Fry, 2011).

Community colleges have served the Latino population just as they have served African Americans, women, and many first-generation higher education attendees. The community college, with its affordable tuition, accessible entrance requirements, and network of support services plays a major role for many Latinos who may be the first in their families to consider a college education (Cohen & Brawer, 2008). Community colleges have been a major access point for Hispanics seeking post-secondary education, attracting over 50% of the total Hispanic college-going population (American Association of Community Colleges, 2001; Fry, 2005; Fry, 2011). While more Hispanics are attending post-secondary institutions, they are still more likely than their white peers to enroll and obtain a degree at a two-year institution (Fry 2011).

The mission of community colleges has always served attendees who are beginning their journey in post-secondary education. Bridge programs, which link high school students to college opportunities, are often considered an extension of the community college mission. The
popularity of bridge programs has been growing since the early part of the decade and they are viewed as a “strategy to increase post-secondary access for underserved populations” (Brown-Lerner & Brand, 2006, p. x). In the past fifteen years, however, bridge programs designed specifically for Latino students, have focused either on the high-school-to-four-year-institution connection or the community-college-to-four-year-institution transfer (Cazden, 2002; Rendon, 2006; Trevino & Mayes, 2006).

Although much can be learned from these models, little or no research exists on the programs that seek to enroll high school students and provide them with a pathway to the community college and ultimately to the university. Generically known as a 2+2+2 bridge model, this type of program involves a partnership agreement among a high school (the first “2”), a community college (the middle “2”) and a university (the last “2”). The 2+2+2 bridge program usually begins in a dual credit format, where high school students take college courses during the first “2” of this model and earn credit for both their high school studies and community college courses. In most cases, these courses are offered by a community college and are taught either by community college faculty or high school instructors who are eligible to teach at the college level (Bragg & Kim, 2006). During the second “2”, the students enroll at the community college partner institution and pursue additional coursework towards an associate degree while also planning for transfer and completion of a bachelor’s degree at a university, fulfilling the final “2” in the 2+2+2 model.

Because community colleges are the predominant access point for the majority of Hispanic students seeking post-secondary education (Fry, 2005; Lopez, 2009; National Center for Education Statistics (NCES), 2008; Nora & Crisp, 2006), a 2+2+2 model would be ideal for Latino students desiring to continue their post-secondary education. Dual credit initiatives as
part of these bridge programs would be an effective and efficient way for them to begin their college journey. Furthermore, since data also show that Latino students, who start their college education at 2-year institutions, are less likely to transfer to 4-year institutions and earn a bachelor’s degree (Fry, 2005; Lopez, 2009), the second and third “2” of the 2+2+2 bridge programs can provide this population with a seamless, more supportive connection between these two entities.

This study focuses on the initial phase and most critical juncture along this pathway: the high school and community college partnership years. The partnership foundation for this research is the already-established bridges to the baccalaureate in the research sciences (BBRS) 2+2+2 model. Findings and insights from the study can shed new light on what motivates Latino high school students to enroll and persist in bridge programs to higher education and assist community college leaders in designing the most effective models tailored for this population.

**Purpose of the Study**

The purpose of this study is to identify the factors that contribute to Latino students’ enrollment and persistence in the first two years of a 2+2+2 program (high school – community college – university). The study strives to explore and discover from the Latino student’s perspective how to improve a dual credit high school to community college bridge program to enhance their persistence in higher education.

**Research Guiding Questions**

Arising from this purpose, the study addresses the following research driving questions:

1. What do these students perceive as factors that have positively affected their persistence in the BBRS program?
2. Are there patterns of similarity or difference among the factors identified by the group of students who have persisted in the program?

3. Do these students, at this early point in their academic careers, already perceive themselves as “college-bound”?

4. How can community colleges be responsive to the factors affecting persistence (identified by these students) and ultimately develop more effective 2+2+2 programs?

**Significance of the Study**

Although bridge programs are seen as a viable option for minority students who have not previously considered getting a college education, the bridges to the baccalaureate in the research sciences (BBRS) 2+2+2 model, is a comprehensive model, which links three entities (the high school, the community college, and the university). Unlike other bridge programs, which confine themselves to just 2+2 (either high school to community college or community college to four-year institution), the BBRS model is distinctive. It was designed to provide an avenue for Latino high school students to become more aware of how all three partners, their high school, the community college, and the university, interrelate as they pursue their post-secondary education goals. Though it would be beneficial, this study does not explore all three institutional partnerships in the 2+2+2 BBRS model. This study seeks to understand the uniqueness of this model from the students’ point of view during the first segment of this particular bridge program, the high school to community college phase. It affords students the ability to experience what community college is like while they are still in high school, earn college credits, and have a better concept of their options for post-secondary education once they complete high school. No studies have been found that focus specifically on the Latino population in Illinois regarding high school – community college bridge programs, much less sought information from the perspective
of the student participants themselves. Therefore, a significant gap in the literature exists, which this research attempts to address.

Study findings will provide valuable information to community colleges that want to develop their own 2+2 or 2+2+2 bridge programs to assist the Latino population on the path to obtaining a bachelor’s degree. In addition, insights into the hearts and minds of the youngest learners along this 2+2+2 path can be invaluable as they confront the critical juncture of moving from the first “2” to the second “2” in this educational journey. Information obtained can assist the development and implementation of bridge programs, useful not only to this population, but also to all those beginning on the post-secondary educational pathway.

Brief Literature Review

This section provides a historical and theoretical perspective of the Bridges to the Baccalaureate in the Research Sciences (BBRS) Program. It addresses the history and purposes of dual credit programs in Illinois, followed by a description of the goals and history of the Bridges to the Baccalaureate in the Research Sciences (BBRS) Program. The theories and concepts that compose the conceptual framework of this study are then discussed.

History of Dual Credit Programs in Illinois

A brief history of dual credit programs in Illinois will provide a relevant context for this study. On May 10, 2009, the Dual Credit Quality Act, House Bill 1079, was enacted by the People of the State of Illinois, represented in the Illinois General Assembly, with the purpose, as follows:

1. To reduce college costs.
2. To speed time to degree completion.
3. To improve the curriculum for high school students and the alignment of the curriculum with college and workplace expectations.

4. To facilitate the transition between high school and college.

5. To enhance communication between high schools and colleges (Illinois General Assembly, 2009, p.1).

Although this act was passed in the latter part of the decade, dual credit programs had been existence long before that time but were not widely used. Two actions taken by the Illinois Community College Board (ICCB) are responsible for the expansion of dual credit programming in the state. First, in 1996 the ICCB changed an administrative rule relative to concurrent enrollment and credit hour grants, which would allow community colleges offering dual credit courses to receive credit hour reimbursement funding regardless of whether the secondary school was receiving average daily attendance (ADA) funding for the same student/course. Prior to this, only 63% of the community colleges in Illinois were offering dual credit courses, but within three years, all 48 community colleges in Illinois were offering dual credit courses (Kerr, 2012).

Second, from FY 2001 to FY 2008, the ICCB provided community colleges the Accelerated College Enrollment (ACE) grant (later renamed the P-16 Initiative Grant) which allowed community colleges to cover the cost of tuition and course-related fees for high school students desiring to enroll in college courses to accelerate their college degree attainment (Kerr, 2012). These two actions, spurred the growth of dual enrollment students in Illinois community colleges. Figure 1 shows the growth in high school enrollments in Illinois Community Colleges from 1995 through 2002.
Figure 1. *High School Enrollments in Illinois Community Colleges, 1995-2002*

**High School Enrollments in Illinois Community Colleges**

SOURCE: ICCB Databook 1996-2003

Note: The above data was taken from *The Illinois Community College Board Databook* (1996-2003).

**Goals for the Bridges to Baccalaureate in the Research Sciences (BBRS) 2+2+2 Model**

In the fall of 2004, as part of the Central Illinois Bridge Program, Illinois State University (ISU), sought to partner with two community colleges, one rural and one urban, with links to high schools with large minority populations, in order to create a unique 2+2+2 program. The goal of this program was to recruit and prepare talented and motivated underrepresented students, from high schools with high minority enrollment, to continue their studies at a community college and subsequently transfer to and complete their baccalaureate degrees in the bio-medical sciences at Illinois State University (ISU). This unique program was known as the bridges to the baccalaureate in the research sciences (BBRS) 2+2+2 model.

The following objectives guided the project's planning, implementation, and evaluation strategies for the link with the urban community college and high school:

- Strengthen partnerships between the Chicago Public (CPS) High Schools, community colleges and ISU related to the targeted program areas.
• Recruit, select, and support talented students from underrepresented groups in biology and chemistry.

• Expand the professional development opportunities for project students.

• Improve retention for underrepresented students in biology and chemistry.

• Increase the number of underrepresented students who enter occupational, undergraduate, graduate or professional schools in the biomedical sciences.

• Identify specific strategies that enhance underrepresented students’ professional and career aspirations.

• Help students from underrepresented groups complete their high school education, a 2-year science degree at a community college, and a 4-year degree at Illinois State University's biomedical programs in biology, chemistry, as well as develop support mechanisms for social and academic growth to initially 24 underrepresented students and increase this number to 72 in the next 3 years (McGinnis, et al., 2003).

**Brief History of the Bridges to Baccalaureate in the Research Sciences (BBRS) 2+2+2 Program**

At the formal inception of the BBRS Program in fall 2004, Harry S. Truman College, one of the seven City Colleges of Chicago, joined as the urban community college partner. Once on board as a community college partner, Truman College then invited Foster High School (pseudonym), one of the Chicago Public Schools’ (CPS) high schools with a large Latino population to become its first high school partner in this specific 2+2+2 bridge program.

From fall 2004 through spring 2006, comprehensive curriculum planning, including course alignment among three participant institutions (high school, community college, and university), and student recruitment, took place. In the summer of 2006, the program formally began, with a month-long science camp, with two cohorts of students – the Foster High School graduating class of 2008 and the Foster graduating class of 2009. During that time period, students conducted chemistry and biology laboratory research projects and also engaged in activities to enhance their reading and writing skills for the sciences. During the subsequent school year (FY
2006-2007), both student cohorts started on their dual credit courses in science, with each cohort focusing on a different discipline area – biology for the [Class of 2008] and chemistry for the [Class of 2009]. Specific to this bridge program, instead of each cohort completing the college course in one semester (16 weeks), the course content was spread throughout a year from fall through the end of spring (an entire high school year plus two college semesters). The students came to the college campus two Fridays a month, participating in day long lectures and laboratory classes conducted by Truman college faculty.

During this year, the Truman college faculty regularly visited the high school and conducted after school supplementary science curriculum enrichment sessions. This first year endeavor included the first summer camp in 2006, one full academic year at the community college, and completion of a two-week long summer camp in 2007. At the end of this time, students completed the dual credit biology course [Class of 2008] or the dual credit chemistry class [Class of 2009]. Each student in these cohorts earned four college credits for either Biology 114 or Chemistry 121.

Plans for the cohort of the [Class of 2008] final year of high school (2007-2008) included participation in independent research projects being completed by students in Truman College’s Center for Science Success. In addition, students were provided the opportunity to meet college advisors from either of the two partner post-secondary institutions: Truman College advisors (for those planning to enroll in Truman College after graduation from high school) or advisors from Illinois State University (for those who are considering immediate enrollment in a four year institution). As this bridge program seeks to encourage and assist talented, underrepresented Latino students in the research sciences, it is hoped this first cohort of students who have
completed the high school years of the 2+2+2 program will choose to enroll in one of the partner institutions in pursuit of a college degree.

**Study Conceptual Framework**

Many theories and concepts attempt to explain what contributes to the college aspirations and persistence of students who come from underrepresented groups. For the population on which this case study focuses, urban Latino high school students seeking to become first generation college students, Rendon’s validation theory (1994) provides a relevant theory to serve as a component of the conceptual framework for this research. In her research on the learning styles and experiences of ethnically and culturally diverse students making the transition to college, Rendon argues that validation, where someone takes an active role in helping these students see themselves as capable and successful, is a key element in this process.

What we learned is that when external agents took the initiative to validate students, academically/and or interpersonally, students began to believe they could be successful. Students were getting their validating experiences both in- and out-of-class. What occurred outside of class (e.g., at home, at work, in the patio area) was often equally as important as what occurred within the confines of the classroom (Rendon, 1994, p. 40).

Rendon (1994) identifies three types of validation: in-class academic validation, out-of-class academic validation, and interpersonal validation. According to Rendon, faculty are the primary agents for providing in-class academic validation, through their enthusiasm, compassion, respect, patience, and collaboration with their learners. Individuals other than faculty (counselors, coaches, mentors, classmates, and even family members) are acknowledged as a source of out-of-class academic validation when they take the time to listen to students, give encouragement, and help students build their self-esteem. Interpersonal validation, both in- and out-of-class, helps students realize their full potential, not only in academics but in all aspects of life (Rendon,
Rendon believes that all types validation share certain characteristics. Table 1 identifies these six key elements of validation characteristics.

Table 1. Elements of Rendon’s Validation Theory

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Validation is an enabling, confirming and supportive process initiated by in- and out-of-class agents that foster academic and interpersonal development.</td>
</tr>
<tr>
<td>2</td>
<td>When validation is present, students feel capable of learning; they experience a feeling of self-worth and feel that they, and everything that they bring to the college experience, are accepted and recognized as valuable. Lacking validation, students feel crippled, silenced, subordinate and/or mistrusted.</td>
</tr>
<tr>
<td>3</td>
<td>Validation is a prerequisite to student development.</td>
</tr>
<tr>
<td>4</td>
<td>Validation can occur both in- and out-of-class. In-class agents include faculty, classmates, lab instructors, and teaching assistants. Out-of-class validating agents can be significant others, such as a spouse, boy/girlfriend; family members, such as parents, siblings, children, and relatives; friends; and college staff, such as faculty who meet with students out of class, coaches, tutors, counselors/advisors.</td>
</tr>
<tr>
<td>5</td>
<td>Validation is a developmental process, not an end in itself. The more validation students receive, the richer the academic and interpersonal experience.</td>
</tr>
<tr>
<td>6</td>
<td>It is most effective to offer validation early in the student’s college experience, during the first year of college and first weeks of class.</td>
</tr>
</tbody>
</table>


To enhance and broaden the conceptual framework for this study, concepts and theories which provided a more eclectic viewpoint and encompassed perspectives regarding the students themselves were sought. Literature was found relating to diverse students in higher education addressing not only what these students need but also the strengths and resources they already possess. The concepts of Yosso’s (2005) community cultural wealth and Aragon and Kose’s (2007) cultural capital development for diverse college students identify and describe how the
backgrounds of students from communities of color provide reservoirs of strength from which they can draw for fulfillment of their academic aspirations. Yosso (2005) critiques “deficit-informed research”, which, as she states, “Takes the position that minority students and families are at fault for poor academic performance because (a) students enter school without the normative cultural knowledge and skills; and (b) parents neither value nor support their child’s education” (p. 75). Instead, her research offers a framework for affirming and celebrating the strengths that are uniquely synonymous with these students’ cultural and linguistic backgrounds (Yosso, 2005).

Aragon and Kose (2007) advocate an inclusive definition of cultural capital and education, which recognizes challenges faced by students from diverse backgrounds and areas in which they need development, but also outlines the advantages that these students bring to higher education, precisely because of their diversity. Aragon and Kose (2007) incorporate the six-component framework of community cultural wealth established by Yosso (2005): aspirational, familial, social, navigational, resistant, and linguistic capital, and add a seventh – citizenship capital – to form their framework of cultural capital development. The components of Aragon and Kose’s (2007) cultural capital development are shown in Table 2.

Table 2. Aragon and Kose’s Components of Cultural Capital Development

<table>
<thead>
<tr>
<th>Form of Capital</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspirational capital</td>
<td>Ability to maintain hopes and dreams for academic advancement despite obstacles</td>
</tr>
<tr>
<td>Linguistic capital</td>
<td>Ability to communicate in multiple languages and use them selectively and strategically</td>
</tr>
<tr>
<td>Familial capital</td>
<td>Cultural knowledge transmitted through networks of nurturing family members and friends</td>
</tr>
</tbody>
</table>
Social capital  
Support and guidance provided through social networks such as clergy, coaches and other sports staff, youth organizations, and peer groups

Navigational capital  
Ability to maneuver through the systems related to higher education (e.g., options for financial aid, knowing how to select and register for courses)

Resistant capital  
Ability to reaffirm one’s culture and background in the face of individual and institutional discrimination

Citizenship capital  
Realization that attaining an education may help other members of one’s family and/or community pursue academic advancement


Study Methodology - Qualitative Interpretive Paradigm

This study aims to make young voices heard and interpreted for educators and administrators who wish to better understand and serve them. It is these individuals and their stories, rather than a large-scale social problem, which are the focus of this inquiry. Therefore, the qualitative approach was determined to be the best approach for this research. Qualitative research is used for research “when we want to empower individuals to share their stories, hear their voices, and minimize the power relationships that often exist between a researcher and the participants in a study” (Creswell, 2007, p. 40) rather than quantitative research, which involves inquiry into a problem based on testing a theory composed of variables and conducting statistical analysis to determine whether the predictive generalizations of the theory are true. Qualitative
research is rigorous, principled, and systematic. Creswell identifies four major principles which qualitative researchers must undertake:

- Commit to extensive time in the field. The investigator spends many hours in the field, collects extensive data, and labors over field issues of trying to gain access, rapport, and an insider perspective.

- Engage in the complex, time-consuming process of data analysis through the ambitious task of sorting through large amounts of data and reducing them to a few themes or categories.

- Write long passages, because the evidence must substantiate claims and the writer needs to show multiple perspectives. The incorporation of quotes to provide participants’ perspectives also lengthens the study.

- Participate in a form of social and human science research that does not have firm guidelines or specific procedures and is evolving and constantly changing. This guideline complicates telling others how one plans to conduct a study and how others might judge it when the study is completed (Creswell, 2007, p. 41).

Qualitative research is often called interpretive research, because the researchers attempt to make sense of (or interpret) the meanings others have about the world (Creswell, 2007). In their discussion of qualitative research, Miles and Huberman (1994) explain that qualitative research “attempts to capture data on the perceptions of local actors “from the inside”, through a process of deep attentiveness, of empathetic understanding (Verstehen), and of suspending or “bracketing” preconceptions about the topics under discussion” (p. 6). They add that a distinctive feature of the qualitative paradigm is its emphasis on the interpretive aspect of the research. Interpretivists regard “human activity as the “text” – a collection of symbols expressing layers of meaning” (Miles & Huberman, 1994, p. 8). Within the interpretive paradigm, “human beings construct their perceptions of the world, no one perception is “right” or “more real” than the other [and] these realities must be seen as wholes rather than divided into discrete variables that are analyzed separately” (Glesne, 2006, p. 7). This research study aims precisely to do just that – to bring the inner worlds of these students to the forefront and better understand, through
their spoken, firsthand accounts, the factors that have encouraged these young people to complete the first phase of this particular 2+2+2 high-school-community college-university bridge program.

Case Study

Merriam and Simpson (2000) define a case study as “an intensive description and analysis of a particular social unit that seeks to uncover the interplay of significant factors that is characteristic of that unit” (p. 225). A case study is empirical inquiry that “investigates phenomenon in depth and within its real-life context” (Yin, 2009, p. 18) and seeks to answer the questions of “how” and “why” rather than “who” “what” or “where” (Yin, 2009, p. 27). Since this research attempts to explore the perceptions of a group of students who have shared a particular academic experience, case study is the most appropriate method to address the research purpose and driving questions of this study.

A case study is particularistic and bounded, setting it apart from others. Creswell (2007) states, “The case selected for study has boundaries, often bounded by time and place” (p. 244). Yin (2009) refers to the case as a “unit of analysis”, which is identified through defining the purpose and driving questions of the research (p. 29). This case study is bound by the purpose of the study, the particular cohort of Latino students at the Chicago public high school involved in this 2+2+2 bridge partnership who are finishing the first 2+2 component of the Bridges to the Baccalaureate in the Research Sciences (BBRS) Program and the specific Chicago community college.

Site Selection

The site is the Bridges to the Baccalaureate in the Research Sciences (BBRS) Program, a partnership between the Chicago Public Schools and Harry S. Truman College, one of the City
Colleges of Chicago. While all of the sites could be used in the study, the purpose of the study is the first component of the bridge program, the 2+2. Therefore, the two sites selected for this study are the high school partner in this particular 2+2+2 program and the community college partner. It is important to note that in this study, a pseudonym will be used for the name of the high school, in order to assure anonymity of the students, administrators, faculty, and staff at that institution.

**Participant Selection**

Creswell (2007) explains that those engaging in qualitative research must be thoughtful and deliberate about participant selection for a case study and identify individuals and sites that “can purposefully inform an understanding of the research problem and central phenomenon of the study” (p. 125). Merriam (1998) concurs and stresses that inquirers “must select a sample from which the most can be learned” (p. 64). The purposeful selection of participants for this study will be limited to the senior students from the BBRS cohort of the Foster High School graduating [Class of 2008] because they will be the first to complete the first two years of this bridge program. Seven to ten high school students will be interviewed for this study. Since it is assumed that high school students are under the age of 18, only those students whose parent(s) and/or guardian(s) have given consent to participate will be eligible.

**Data Collection**

Three methods of data collection will be used in this study: (1) interviews; (2) journaling; and (3) field notes. The primary data collection technique will be semi-structured, face-to-face interviews with the students. The interview will start with questions on demographic data, such as ethnicity, age, birthplace, and whether or not the participant is the first in his/her family to aspire to attend college. Once demographics have been recorded, the interview will proceed to
semi-structured, open-ended questions that will allow for flexibility yet still maintain a baseline for comparison of participant responses. Throughout the data collection period, a research journal will be kept. The researcher’s journal is a valuable tool within the interpretivist paradigm because it “allows researchers to trace their own development and biases throughout the course of the investigation” (Merriam & Simpson, 2000, p. 107). In addition to journaling throughout the data collection process, field notes will be taken, in order to produce a “written account of what the researcher hears, sees, experiences, and thinks in the course of collecting and reflecting on the data in a qualitative study” (Bogdan & Biklen, 2007, p. 119). It is anticipated that the interviewing, journaling, and field notes will provide a level of triangulation that allows the researcher to be part of the research but would also enable another researcher to replicate this study.

**Data Analysis**

Since qualitative research is used to understand social phenomena from the perspectives of those involved (Glesne, 2006), the methods for analyzing the data must be complementary to the study’s lens of the conceptual framework concepts and theories. This study will employ the reflective and recursive methods of reading, memoing, and coding (Creswell, 2007). In this study, participants’ responses will be read numerous times, coded within Rendon’s validation theory (1994), read again, and then subsequently coded with the concept of community cultural wealth by Yosso (2005) and the concept of cultural capital development for diverse students by Aragon and Kose (2007). Further reading and review of the data, the researcher’s journal and field notes will be used to identify any emergent themes, so that all insights and information will be captured.
Definition of Terms

In order to understand this study, several terms related to high-school-to-college programming are redefined below:

*Dual Credit* - An instructional arrangement where an academically qualified high school student enrolls in a college-level course and, upon successful course completion, concurrently earns both college credit and high school credit. Courses can be offered at the college, high school, area career center, online, or via distance learning. The instructors for these courses shall be selected, employed and evaluated by the community college. They shall be selected from full-time faculty and/or from adjunct faculty with appropriate credentials and demonstrated teaching competencies at the college level (Illinois Community College Board (ICCB), 2009).

Dual credit courses are often run by community colleges, in partnership with secondary schools; the community college assumes primary responsibility for recruiting students, identifying instructors, creating and monitoring assessment, and subsidizing tuition (Bragg & Kim, 2006).

*Dual Enrollment* - Dual enrollment provides high school students the opportunity to take post-secondary courses in state two-and four-year institutions. Eligibility requirements and tuition requirements, funding streams, and program features vary widely from state to state. Courses may or may not be designed specifically for high school students; they may be offered at the high school or at the college, and they may be taught by regular college faculty or by specifically certified high school teachers (Krueger, 2006).

*2+2 Bridge Program* - Although no one official definition exists, these programs are articulation agreements between two- and four-year post-secondary institutions, where a community college student who has completed a requisite number of transferable, general education courses may smoothly transfer to a four-year institution and be accepted into the four-year institution with junior (3rd year) standing.

Organization of the Dissertation

Chapter 1 begins by providing a context for the phenomenon to be studied and then presents the research purpose and driving questions which guide the study. This is followed by an explanation of how this issue is significant to the community college field. A brief literature review highlights the conceptual framework used to situate this research. A brief history of dual credit programming in Illinois, an overview of the high-school-to-community-college bridge program being studied, and definitions of relevant terms provide background information from
which the reader can better understand the case. The chapter closes with a brief description of
the study design and methods for data analysis.

Chapter 2 presents a review of literature pertinent to the study of Latino students in
higher education. It provides in-depth discussion of the study’s conceptual framework, which
also serves to analyze the data and information gathered. The literature review includes: (a) an
overview of historical models of persistence theory in higher education (Tinto, 1975, 1989, 1993,
1997, 1998; Bean, 1980; Terenzini & Pascarella, 1980; Bean & Metzner, 1985); (b) Rendon’s
validation theory (Rendon, 1994); (c) community cultural wealth by Yosso (2005); and (d)
cultural capital development for diverse college students by Aragon & Kose (2007).

Chapter 3 provides an overview of the research design: a qualitative case study, situated
within an interpretive paradigm. The methodology used in the study and rationale for such are
discussed in detail, including criteria for case selection, methods of data collection, techniques
used for analysis, the role of the researcher as an instrument, and ethical considerations.

Chapter 4 is where the participants’ voices come alive. The first part of the chapter
provides a description of each partner institution and the participants. The second part of the
chapter is the tapestry of the rich, thick, description of the data. It concludes by analyzing the
data gleaned from the study participants, using the conceptual framework.

Chapter 5 presents the findings, conclusions, and implications of the study by utilizing
the driving questions. This chapter culminates in the presentation of the King 2+2 bridge model
to support high school to community college persistence for Latino Students and a brief
discussion of recommendations for future research.
CHAPTER 2: LITERATURE REVIEW

The purpose of this study is to identify the factors that contribute to Latino students’ enrollment and persistence in the first two years of a 2+2+2 program (high school-community college – university). Emphasis will be on the Bridges to the Baccalaureate in the Research Sciences (BBRS) Program, a partnership between the Chicago public schools and Harry S. Truman College, one of the city colleges of Chicago. The study strives to explore and discover, from the Latino student’s perspective, how to improve a dual credit high school to community college bridge program to enhance their persistence in higher education.

The Latino population in the United States, both foreign born and native, continues to rise at a rapid rate. Between 2000 and 2010, the Latino population in the United States increased by 43% and is also the fastest-growing group in the nation (Passel, Cohn, & Lopez, 2011). This rapid growth is augmented by the relative youth of the population, especially among native-born Latinos. In 2010, the median ages for male and female native-born Hispanics were 17 and 18, respectively, compared to 35 and 37 for the total population, and the fertility rate among both foreign-born and native-born Latinas has outpaced that of Caucasians, African-Americans, and Asians, with a rate of 8.6% compared to the non-Hispanic birth rate of 6.4% (Pew Hispanic Center, 2009). Coupled with this significant population growth, however, is the lower level of educational achievement of Latinos in the United States, compared to non-Latino groups. As early as the middle school years, Latino youth show a significant gap in reading and math skills when compared to their non-Hispanic white and Asian counterparts (Lopez, 2009). At the high school level, Latinos are underrepresented in advanced science and mathematics high school courses and in gifted and talented education programs (Kohler & Lazarin, 2007). In terms of higher education, while more young Latinos are enrolling in college than ever before, they are
50% as likely as their white peers on campus to finish a bachelor’s degree (“Hispanic College Enrollment”, Pew Hispanic Center, 2011).

Although Hispanic youths have narrowed the gap in college enrollment, Hispanic young adults continue to be the least educated major racial or ethnic group in terms of completion of a bachelor’s degree. In 2010, only 13% of Hispanic 25- to 29-year-olds had completed at least a bachelor’s degree. In comparison, more than half (53%) of non-Hispanic Asian young adults have a college degree, and nearly 39% of white young adults have completed a college degree (Pew Hispanic Center, 2011, p. 6).

In addition, within the community college setting, an institution that enrolls a significant number of Latinos, studies show that Latino students who begin their college educations at a two-year institution are, again, half as likely as their white peers to finish a bachelor's degree (Fry, 2005). At the local level, in Chicago, researchers have found that Latino students are the least likely to plan to go to college or apply to go to college, with just 60 percent of those who said they had college as a goal actually taking steps to enroll the fall after high school graduation, compared with 77 percent of African American students and 76 percent of white students (Gewektz, 2008).

This “academic disconnect” from high school to college must be addressed for this sizeable population, and community colleges, with their history of accessibility and affordability, (Cohen & Brawer, 2008) are particularly well positioned to bridge the gap between high school and college. Nevertheless, the existence of open enrollment policies and the relatively low cost of tuition are not enough to assure that Latino students will enroll in community colleges, graduate from them, and either embark on career plans or complete the baccalaureate degree at a four-year institution. Consequently, of primary importance to this study are the factors that influence Latino students’ attraction to and persistence in higher education.

Much research has been conducted on why students either persist or drop out of college, and much has been learned about this phenomenon, primarily for students coming from groups
with a long tradition of representation in higher education (Tinto, 1975, 1989, 1993, 1997, 1998; Bean, 1980; Terenzini & Pascarella, 1980; Bean & Metzner, 1985). Nevertheless, researchers, in the area of first-generation minority students entering college, have argued that previous research, while beneficial for students coming from groups with a long tradition of representation in higher education, does not present an accurate or comprehensive picture of students coming from groups traditionally underrepresented in higher education. Consequently, these researchers have proposed theories and conceptual frameworks derived from close study and analysis of what minority students consider when deciding to enroll in college and what factors contribute to their persistence in higher education (Nora & Cabrera, 1993, 1996; Nora & Rendon, 1998; Vazquez & Garcia-Vazquez, 1998; Rendon, 1994, 1995, 2002, 2006; Rendon, Jalomo, & Nora, 2000).

From the body of literature that has emerged on this issue, one theory and two concepts serve as the conceptual framework of this study. The first is validation theory, which stresses empowerment and confidence building as two factors critical for Latino students’ embarkation on the journey through college (Rendon, 1994, 1995, 2002). This study is also interpreted through the closely related concepts of community cultural wealth (Yosso, 2005) and cultural capital development (Aragon & Kose, 2007). These concepts seek to affirm the cultural traditions and practices that diverse students bring to the college setting while also recognizing that these students will need further tools and knowledge in order to navigate their journey through postsecondary education. Consequently, within this literature review chapter, earlier theories on student persistence are briefly discussed in order to provide a historical perspective, but there is much more emphasis on the conceptual models and theory that examine what diverse
students already possess and what they still need in order to overcome the barriers that have kept them from enrolling and succeeding in higher education.

**Persistence Theories for Higher Education Students**

Tinto’s (1975, 1985, 1987) student departure theory and student integration theory (1997, 1998, 2006/07) are considered seminal works in this field and have been the “springboard” from which other theories of student persistence have emerged. Tinto’s 1975 article, *Dropout from Higher Education: A Theoretical Synthesis of Recent Research*, marked a turning point from earlier perspectives on student retention, where a student’s decision to leave college was seen as a reflection of individual characteristics, skills, and motivation, and no consideration was given to the role of the institution in this choice. Tinto (1975, 1985, 1987) viewed student departure as a result of a student’s lack of adjustment to the institutional systems within the college. Tinto’s model turned attention to the connections between the match between an individual’s characteristics and those of the institution, which shape two “underlying individual commitments: a commitment to completing college (goal commitment) and a commitment to his/her respective institution (institutional commitment)” (Cabrera et al, 1992, p. 144). Tinto’s research on student integration posited that the greater the degree of student integration into the social and academic systems of the college, the greater the likelihood of persistence and graduation (Tinto, 1975, 1985, 1987). According to this theory, the first year of college plays a critical role in students’ decisions to persist, and, in response to Tinto’s research, in the late 1970’s and early 1980’s many colleges and universities began offering “a range of programs to enrich the freshman year experience [including] freshman seminars and a variety of extracurricular programs (Upcraft, Gardner, & Associates, 1989). The goal was to help students become integrated into the college and develop a sense of belonging. Implicit in this theory was
the assumption that with increased involvement, students would successfully “blend into” the academic and social environment of the institution. Early critics of Tinto’s student integration model argued that the role of external factors was absent from this model, and over the years, an alternative model to explain the college persistence process was developed. Known as the student attrition model, Bean (1980) suggested that student attrition was affected by: a) student background variables, (b) interaction by students within the institution, (c) environmental variables such as finances and family support, (d) perceived quality and satisfaction with the institution, and (e) student intent to transfer and/or attain a degree (Metz, 2004). Bean’s model of student persistence, thus, expanded on Tinto’s findings by adding external and internal environmental factors. Bean later collaborated with Metzner (Bean & Metzner, 1985) to study nontraditional students’ persistence or departure, and central to their conceptual model was the argument that “the chief difference between the attrition process of traditional and nontraditional students is that nontraditional students are more affected by the external environment than by the social integration variables affecting traditional student attrition” (p. 485). Representing an important expansion from Tinto’s focus on traditional students, Bean & Metzner (1985) defined several important factors that distinguish nontraditional students from traditional students. They argued that although it would be virtually impossible to provide a profile of a typical nontraditional student, nontraditional students would fit into one or more of these groups: age (25 and older), part-time rather than full-time enrollment, commuter versus resident status. They also added that the variables of gender, race/ethnicity, and socioeconomic status could also characterize the nontraditional student (Bean & Metzner, 1985, p. 488). Bean and Metzner’s model of nontraditional student attrition posited that the decision to drop out of college was based on four sets of variables: background and defining variables (age, enrollment status,
residence situation, high school performance, educational goals, ethnicity, gender; academic variables (study habits, academic advising, course availability); psychological variables (satisfaction, goal commitment, stress); and environmental variables (finances, outside employment, family responsibilities, outside encouragement) (p. 491). During the same time that Bean’s model was suggested, several other researchers began exploring student persistence and attrition. Terenzini and Pascarella (1980) examined the interactions and interrelationships between students and faculty, finding that the amount of time students spent with faculty, both in and out of the classroom, played a significant role in student persistence. The emergence of these models influenced Tinto to revisit his earlier theory and led him to factor in the variables of ethnographic, societal, economic, organizational, and interactional factors into his conceptual model of student persistence (Tinto, 1987, 1989, 1993, 1997, 1998).

**Persistence Theories Pertinent to Latino Students in Higher Education**

Though it is true that historical theories of student persistence at both four-year and two-year institutions have greatly contributed to the understanding of what is needed for students to have a successful college experience, many researchers, particularly researchers of color, question the relevance of these existing models to fully and appropriately capture the experiences of nonwhite students (Attinasi, 1989; Nora & Cabrera, 1993, 1996; Vazquez & Garcia-Vazquez, 1998; Nora & Rendon, 1998; Rendon, 1994, 1995; Nora & Cabrera, 1996; Rendon, Jalomo, & Nora, 2000). Tinto’s theory is particularly cited due to its “linkage between interactionalist theory and the assimilation/acculturation perspective” (Rendon, Jalomo, & Nora, 2000, p. 126). It is argued that Tinto’s theory is not appropriate for students of color due to the use of mainstream cultural norms as evaluative criteria and the related assumption that minority group norms and cultural patterns are inferior, deviant, and self-destructive.
A model that equates persistence with the premise that minority students must separate from their cultural realities and take the responsibility to become incorporated into the college’s academic and social fabric in order to succeed, with little or no concern to address the systemic problems within institutions or the notion that minority students are often able to operate in multiple contexts becomes central to the critique of Tinto’s student departure model (Rendon, Jalomo, & Nora, 2000, p. 60).

Nora and Cabrera (1996), Hurtado (1997), Hurtado and Carter (1997), and Rendon et al. (2000) argue that models based on an assimilation/acculturation framework don’t address the dimensions of multiple group identifications and how both minority and majority groups change when they come into contact with each other. DeAnda’s (1984) concept of dual socialization identifies six factors that affect the ability to exist within two cultures: 1) the degree of commonality between the cultures; 2) the availability of cultural translators, mediators, and models; 3) the amount and type (positive or negative) of corrective feedback provided by each culture regarding attempts to produce normative behavior; 4) the conceptual style and problem-solving approach of the minority individual and their mesh with the prevalent or valued styles of the majority culture; 5) the individual’s degree of bilingualism; and 6) the degree of dissimilarity in physical appearance from the majority culture, such as skin color and facial features (Rendon et al., 2000, p. 135). Rendon et al. (2000) thus argue the need for models such as deAnda’s, which are not about separation and loss but rather the convergence of two worlds in order to function successfully in both.

It is precisely these emerging theories that can shed further insight into the sociocultural factors which figure so prominently into Latino students’ decisions to enroll and persist in college. Rendon et al. (2000) assert that although Tinto’s revised model of persistence theory concedes that integration might be replaced by membership; to some degree, in one or more of the many subcultures that comprise a college community, of greater importance to minority students’ persistence in higher education is a total transformation of colleges and universities
from monocultural to multicultural institutions (p. 138). Hurtado (1997) (citing in Rendon et al., 2000) suggests that group contact should be less unidirectional, where the ethnic group changes to reflect the mainstream group, because “this type of approach effectively blocks the possibility that cultural contact can indeed bring change in both the minority and majority groups” (Rendon et al., 2000; citing in J. Braxton, p. 140).

As researchers argue that minority students are more likely to maintain their ties with their past communities as they enter into in a new or alien culture (Jalomo, 1995; Nora & Cabrera, 1996; Hurtado & Carter, 1997), the need for models of persistence which embrace this duality has grown stronger.

**Rendon’s Validation Theory**

A salient theoretical model for promoting and understanding the first-generation Latino student’s experience with higher education is Laura I. Rendon’s theory of validation (1994, 1995, 2002). Validation theory is based upon research which shows that validating experiences such as encouragement, affirmation and support have a significant impact on student development in and out of college and are particularly important for nontraditional populations such as returning adults, low-income students, first-generation college students, and many women and minority students from working-class backgrounds (Rendon, 1994). Rendon argues that validation theory differs from theories of student persistence and student involvement for traditional populations in that involvement theory is based on students’ proactive role in the learning process; validation theory, on the other hand, emphasizes the critical role that institutional agents play in students’ decisions to enroll and stay in college (Rendon, 1994, 2000, 2002). Rendon et al., (2000) assert that while previous models have focused on the student’s responsibility for seeking involvement in college life, the model used for validation theory shifts
the emphasis to the institutional agents themselves. Rendon posits that earlier retention theories considered the importance of student involvement with faculty in enhancing persistence, but argues that retention theorists who study nontraditional students must become much more aware of how differently traditional and nontraditional students get engaged with the academic community. She states, “It appears that nontraditional students do not perceive involvement as them taking the initiative. They perceive it when someone takes an active role in assisting them” (Rendon, 1994, p. 44). Rendon stresses that within a validating academic environment, faculty and staff must step outside of their traditional roles and “help students make the social and emotional adjustments in college, if not in their personal lives” (Rendon, 2009, p. 35).

There are two types of validation: academic and interpersonal (Rendon, 1994). Academic validation involves validating agents taking action in assisting students to “trust their innate capacity to learn and acquire confidence in being a college student” (Rendon, 1994, p. 40), and “interpersonal validation occurs when in- and out-of-class agents take action to foster students’ personal development and social adjustment (Rendon, 1994, p. 42).

The work of Jalomo (1995) is consistent in this finding, and he notes that because nontraditional and first-generation students bring diverse and complex dynamics with them when they enter the mainstream society of college, they are often reluctant to take the first step and seek out assistance from authority figures whom they view as different and distant. In recognition of the cultural chasm that often exists between underrepresented students of color and the primarily Caucasian cadre of faculty, Rendon (2000) argues that teaching and learning, therefore, must be a relationship-centered process, which she refers to as “academics of the heart”:

Academics of the heart is about connection and community. It is about aligning faculty with students and bringing this relationship to full consciousness. Often, the alignment is
there, but it is repressed or devalued. We need to value and make this relationship viable, for it is through relationships that we can re-define the nature of learning and growth. In relationship-centered teaching and learning, faculty are partners with the students in the teaching and learning process. The learning community brings faculty and students together in activities such as collaborative learning, field trips, service learning, and research projects, where both teachers and students become co-creators of knowledge and co-beneficiaries of learning (p. 4).

Rendon (2000) asserts that validation theory, comprising “academics of the heart,” has strong implications for the design of teaching and learning environments for nontraditional populations. She cites the Community College Puente Project as a model of a validating environment for underrepresented students of color. In place at 38 community colleges in California, Community College Puente seeks to increase the number of Latino students transferring from 2- to 4-year colleges and universities in that state (Rendon, 2002; citing in Townsend & Bragg). Rendon reports that an average of 48% of the students who complete Community College Puente transfer to a 4-year institution (Rendon, 2002, citing in Townsend & Bragg). Within this model, a cohort of Latino first-year college students commits to a year-long writing program which includes both a developmental course and the standard, transferable English composition course as well as the involvement of a team of college counselors and members of the surrounding professional/business community. In reporting on the success of this program, Rendon (2000, 2009) highlights the multiple forms of validation the students receive such as (a) nurturing teachers who shared freely of their time both in and out of class, (b) a curriculum that reflected the contributions of feminist teaching and learning theorists and also affirmed the students’ own cultural and familial resources, (c) counselors who worked not only with students but their whole families as well, and (d) successful members of the Latino business and academic community who served as mentors and role models for these students.
Concepts of Community Cultural Wealth and Cultural Capital Development for Diverse College Students

Research on the enrollment and retention of underrepresented students in higher education has continued in the new millennium. At the midpoint of the decade and beyond, one of the newer directions is examining the role cultural capital plays in the development and success of diverse students in higher education (Jan & Colyar, 2002; Yosso, 2005; Villalpando & Solorzano, 2005, citing in Tierney et al.(Eds), 2005; Aragon & Kose, 2007). As advanced by Bourdieu (1986), cultural capital is defined as a set of cultural knowledge, skills, and abilities possessed and passed on by privileged groups in society, and it implies that groups outside the mainstream do not have the opportunities that the dominant group has. However, this notion has been challenged by researchers and theorists who argue that students from diverse racial, cultural, and linguistic backgrounds do not have a cultural deficit when embarking on higher education, but that they already possess legitimate forms of cultural capital which can aid them as they enter the arena of higher education.

The cultural wealth approach identifies elements and cultural practices in the students’ home and community that are compatible with school achievement and then seeks to integrate elements of these culturally compatible activities into early college experience programs designed for students of color (Weisner, Gallimore, & Jordan, 1988; Villalpando & Solorzano (2005), citing in Tierney et al. (Eds), 2005). “With this approach, we can ask whether there are forms of cultural capital that students of color bring to the college intervention table that cultural capital theory does not recognize or cannot see (e.g., parental value of education, awareness of parental sacrifices, hard work of the parents, etc.)” (Villalpando & Solorzano, 2005; citing in Tierney et al. (Eds), 2005, p. 17).
A model like this examines and analyzes other forms of capital that, while not having been recognized by or even necessary for groups with historical access to higher education, have played an instrumental role in the college-going aspirations and success for students of color. For example, while parental involvement in students’ college-going aspirations has long been measured by practices of white, middle class parents, researchers on the effects of family involvement for students of color have discovered factors, such as parents’ verbal encouragement and financial sacrifice as well as mentoring and information-sharing from older siblings, which have had a positive impact on these students’ decisions to embark on a college career (Lareau, 1989; Valdes, 1996; Mehan et al., 1996; Gandara, 1995; McDonough, 1998; Tierney & Auerbach, 2005). Similar to the cultural wealth approach, the concept of community cultural wealth (Yosso, 2005) also advocates a departure from Bourdieu’s traditional interpretation of cultural capital (Bourdieu, 1986) and infuses critical race theory into the lens through which students of color are viewed in higher education.

The concept of community cultural wealth challenges the assumption that students of color come to the classroom with cultural deficiencies and instead argues that these students bring unacknowledged or under-utilized assets with them into the academic arena (Yosso, 2005). “Centering the research lens on the experiences of people of color in critical historical context reveals accumulated assets and resources in the histories and lives of communities of color. Community cultural wealth is an array of knowledge, skills, abilities and contacts possessed and utilized by communities of color to survive and resist macro- and micro-forms of oppression” (Yosso, 2005, p. 77).

Expanding on Yosso’s work, Aragon and Kose (2007) propose a conceptual framework of cultural capital development for diverse college students (also known simply as cultural
capital) and define cultural capital as “the knowledge, skills, education, or resources that provide individuals with the ability to perform at a high level in a given postsecondary context” (p. 105). Aragon and Kose argue that while on one hand, diverse students need to learn college rules and regulations and all of the intricacies involved in obtaining a college education, they also emphasize that these students’ cultural and life experiences should be maximized and recognized for the roles they can play in enhancing these students’ journeys in higher education.

The concept of cultural capital for diverse college students is comprised of seven components, with the first six (aspirational, linguistic, familial, social, navigational, resistant) developed by Yosso (2005) and the seventh (citizenship), added by Aragon and Kose (2007). Aragon and Kose assert that “these forms of capital build upon one another as opposed to remaining mutually exclusive” (Aragon & Kose, 2007, p. 117). Table 3 contains a description of these seven forms of cultural capital, as developed by Yosso (2005) and expanded upon by Aragon and Kose (2007).

Table 3. Seven Forms of Capital Related to Community Cultural Wealth and Cultural Capital for Diverse College Students

<table>
<thead>
<tr>
<th>Theme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspirational capital</td>
<td>“[This type of capital refers to] the ability to maintain hopes and dreams for the future, even in the face of real and perceived barriers” (Yosso, 2005, p. 77). It occurs when individuals look beyond current obstacles or lack of preparation and instead focus on attaining something no one around them has achieved before. “Those with this form of resiliency are capable of dreaming of possibilities beyond their present circumstances even without specific means of attaining those goals” (Aragon &amp; Kose, 2007, p. 117)</td>
</tr>
<tr>
<td>Linguistic capital</td>
<td>According to Yosso (2005), a considerable amount of cultural wealth is accrued through knowing and using more than one language. Yosso asserts that bilingual children not only possess enhanced social/communication abilities but also often develop specialized skills in interpretation and translation as they help their monolingual parents navigate English-dominant mainstream society.</td>
</tr>
<tr>
<td>Capital Type</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Familial capital</td>
<td>“[This capital refers to] cultural knowledges nurtured among familia (kin) that carry a sense of community history, memory, and cultural intuition” (Yosso, 2005, p. 79). Familial capital encompasses the richness of support provided by extended family such as aunts, uncles and friends who may be considered to be as close as family members, as well as connections made in other settings such as religious gatherings or sports events (Yosso, 2005; Aragon &amp; Kose, 2007).</td>
</tr>
<tr>
<td>Social capital</td>
<td>For students belonging to groups traditionally underrepresented in higher education, social capital is composed of the networks of people and community resources which assist these young people as they embark upon and navigate through their educational journey (Yosso, 2005; Aragon &amp; Kose, 2007). Aragon and Kose (2007) report on studies which show the positive impact of coaches, mentors, neighbors, clergy on these students’ educational outcomes.</td>
</tr>
<tr>
<td>Navigational capital</td>
<td>For students who have historically been marginalized in higher education, “[navigational capital] infers the ability to maneuver through institutions not created with communities of color in mind” (Yosso, 2005, p. 80). It is the ability to move successfully through the college or university setting, including knowing options for obtaining textbooks and securing financial aid (Aragon &amp; Kose, 2007).</td>
</tr>
<tr>
<td>Resistant capital</td>
<td>In an educational setting, this type of capital is accrued when students whose race or culture have historically been undervalued or unacknowledged in higher education defy these negative precepts and challenge this inequality (Yosso, 2005; Aragon &amp; Kose, 2007). “Examples of resistant capital can include affirming one’s self and background and recognizing and persevering through both individual and institutional discrimination” (Aragon &amp; Kose, 2007, p. 118).</td>
</tr>
<tr>
<td>Citizenship capital</td>
<td>Building on Yosso’s work, Aragon and Kose (2007) developed this type of capital. Citing the influence of Westheimer and Kahne (2004), Aragon &amp; Kose (2007) state that citizenship capital occurs when “students learn to act responsibly in their community (i.e., personally-responsible citizenship); are active members of community organizations and improvement efforts (participatory citizenship) and critically assess social, political, and economic structures to see beyond surface causes (justice-oriented citizenship)” (p. 118).</td>
</tr>
</tbody>
</table>

The concept of cultural capital asserts that the development of student cultural capital may and should begin at the secondary level and continue at either the two- or four-year postsecondary level and also suggests that these institutions work together in order to further these students’ chances of enrolling and succeeding in college. Aragon and Kose (2007) state,
“For example, partnerships between schools, communities, and community colleges or universities will help optimize students’ opportunities to build college cultural capital” (p. 120).

Aragon and Kose (2007) argue for the need for greater insight on the role that cultural capital plays in the critical juncture between high school and college and they observe that while much of the recent literature on cultural capital has examined either secondary or post-secondary sites, there has been very little research on “how cultural capital influences the transition from high school to college and how secondary and postsecondary institutions can help build the cultural capital that matters” (p. 116). Aragon and Kose suggest areas of future research emanating from their model, among them being an examination of organizational practices that influence student cultural capital development. Consequently, the data collected in this research study are examined and analyzed using this model as a basis for detecting a priori themes as well as emerging themes.

**Summary**

This chapter begins by establishing the need for institutional models which assist Latino students in making the transition from high school to community college and, ultimately, to attainment of a bachelor’s degree or beyond. The usefulness of this purpose is confirmed by the presentation of statistics and related information which show that Latino students’ progress in high school graduation and subsequent attainment of a college degree still lags behind white and African-American student populations in the United States. The critical role of the community college is also highlighted since the chapter notes the high degree of Latino students’ enrollment in two-year institutions.

The chapter then provides an overview of the historical theories of college student persistence at both four-year and two-year institutions and then presents evidence that these
traditional theories have not provided a complete picture of the variables and factors that play a role in first-generation-college-going Latino students’ enrollment and persistence in college. Consequently, the chapter focuses on a discussion of more recent research conducted on students of color, primarily Latino students, and their realities in higher education. This section of the chapter places emphasis on Rendon’s (1994) theory of validation and describes the critical elements and notions that assist this student population in the transition from high school to community college to four-year institution.

Since this dissertation focuses on students’ perceptions of the transition from high school to college, the final section of this chapter discusses the concepts of cultural capital development for diverse college students (Yosso, 2005; Aragon & Kose, 2007), which view students of color/students from backgrounds traditionally underrepresented in higher education, from a “value added” rather than a “deficit” model and provides a framework for understanding the extent to which a dual credit program has enabled these young participants to access and/or activate the cultural capital that is necessary for them to succeed in postsecondary education.

This research study, therefore, fills a void in the literature and will contribute to the body of knowledge that exists on Latino students who seek to enhance their lives through higher education.
CHAPTER 3: METHODOLOGY

This chapter begins with a review of the purpose of the study and its research questions in order to connect the rationale for the particular research paradigm used in this study. The chapter then explains the research design, research perspective, role of the researcher, and case and participant selection. The chapter goes on to review the data collection methods and data analysis procedures which were used, and it also discusses issues of credibility, transferability, dependability, and confirmability. The chapter also describes the ethical considerations involved in doing this study and closes with a summary, which re-states why the interpretive paradigm was the best way to conduct this research.

The purpose of this study is to identify the factors that contribute to Latino students’ enrollment and persistence in the first two years of a 2+2+2 program (high school-community college – university). Emphasis will be on the Bridges to the Baccalaureate in the Research Sciences (BBRS) Program, a partnership between the Chicago Public Schools and Harry S. Truman College, one of the city colleges of Chicago. The study strives to explore and discover, from the Latino student’s perspective, how to improve a dual credit high school to community college bridge program to enhance their persistence in higher education. Arising from this purpose, the study will address the following research questions:

1. What do these students perceive as factors that have positively or negatively affected their persistence in the BBRS program?

2. Are there patterns of similarity or difference among the factors identified by the group of students who have persisted in the program?

3. Do these students, at this early point in their academic careers, already perceive themselves as “college-bound”?

4. How can community colleges be responsive to the factors affecting persistence (identified by these students) and ultimately develop more effective 2+2+2 programs?

**Research Design**

This research study is based on a relativist ontological perspective of reality, which recognizes that reality is subjective and multiple, as seen by the participants in the study, as well as the researcher conducting the study (Creswell, 1998; Willis, 2007). Reality is viewed as something “socially constructed, complex, and ever changing.” Willis (2007) states that “Realities exist in the form of multiple mental constructions, socially and experientially based, local and specific, dependent for their form and the content on the persons who hold them” (p. 9). Since it is the words of the students themselves that embroidered the tapestry of this study, the researcher used quotes and themes from the words of these participants in order to advance a relativist ontological perspective of reality and provide evidence of different perspectives.

**Qualitative Research**

Since this study aims to enable voices to be heard, the qualitative, rather than quantitative, approach better fulfills this purpose. “Qualitative researchers’ goal is to better understand human behavior and experience. They seek to grasp the processes by which people construct meaning and to describe what those meanings are” (Bogdan & Biklen, 2007, p. 43). Because the voices the researcher endeavors to bring forth and interpret are also the voices of students with whom the researcher has directly worked (as their teacher), she relishes the opportunity that qualitative research gives her to step away from developing curricula, teaching lessons, etc., and instead, as Bogdan and Biklin say, “devote full time and energy to taking it all
in” by systematically collecting data, keeping detailed records, and using well-grounded theory to guide the interpretation of research findings (p. 40).

Lichtman (2006) characterizes one of many critical differences between quantitative and qualitative research by the presence or absence of a hypothesis. “Since qualitative researchers are interested in meaning and interpretation, they typically do not deal with hypotheses. Quantitative research is designed to test a hypothesis. But no type of qualitative research is designed to test a hypothesis or to generalize beyond the group at hand” (p. 8). This assertion provides yet another example of why the qualitative approach is more appropriate in this research study. Merriam (1998) outlines three salient characteristics of a qualitative case study:

1. Particularistic; case studies focus on a particular situation, event, program, or phenomenon.
2. Descriptive; the end product of a case study is a rich description of the phenomenon under study.
3. Heuristic; case studies illuminate the reader’s understanding of the phenomenon under study. They can bring about the discovery of new meaning, extend the reader’s experience, or confirm what is known (pp. 29-31).

Since the particular type of high-school-to-college bridge program involved in this study is not widely found in the United States, the case study model helps the researcher, as Merriam and Simpson (2000) state, “uncover the interplay of significant factors that are characteristic of the phenomenon” (p. 108), and obtain a multi-dimensional understanding of this local context. While Stake argues that ultimate interest may lie in “a general phenomenon or a population of cases more than in the individual case” he also emphasizes that “while we are studying [a single case], our resources are concentrated on trying to understand its complexities” (citing in Denzin & Lincoln, 2007, p. 444). In their discussion of qualitative research, Miles and Huberman (1994) assert that qualitative research “attempts to capture data on the perceptions of local actors
“from the inside,” through a process of deep attentiveness, of empathetic understanding
(Verstehen), and of suspending or “bracketing” preconceptions about the topics under
discussion” (p. 6). This research study aims precisely to do just that – to bring the inner worlds
of these students to the forefront and better understand, through their spoken, first-hand accounts,
as well as observations, documents, and artifacts related to this program, the factors that had
encouraged these young people to complete the first phase of this high-school-community
college-university experience.

In their summary of over twenty years of research on how college affects students,
Pascarella and Terenzini (1991) recognize the need for qualitative models of inquiry and suggest
that “judicious and creative qualitative, naturalistic, or ethnographic approaches may simply be
better and more sensitive ways of capturing many of the subtle and fine-grained complexities of
college impact than the more traditional quantitative approaches” (p. 634). A review of the
literature confirms these findings, as a growing number of research studies on Latino students
making the transition to higher education have used qualitative models of inquiry with
meaningful results (Attinasi, 1989, 1992; Jalomo, 1995; Rendon & Valadez, 1993). This
researcher, consequently, is confident that a qualitative case study method of inquiry is well
suited to this study because it will enable her to use a holistic approach toward data analysis.

**Interpretive Paradigm**

This qualitative research study uses an interpretive paradigm, which emphasizes that
reality is socially constructed and that variables may be complex, interwoven, and difficult to
measure (Creswell, 1998; Glesne, 2006; Merriam & Simpson, 2000; Miles & Huberman, 1994).
Miles and Huberman (1994) point out that the interpretivism has a “long intellectual history”
based on the assertion that human discourse and action cannot be analyzed with the methods used in physical and natural science (p. 18). Interpretivists posit that “human activity [is] seen as the “text” – as a collection of symbols expressing layers of meaning” (Miles & Huberman, 1994, p. 8). The interpretivist paradigm recognizes that when collecting and analyzing data involving people’s attitudes, feelings and perceptions, “there are many realities rather than one, observable, measurable reality” (Merriam & Simpson, 2000, p. 97). Within the interpretive paradigm, “human beings construct their perceptions of the world, no one perception is “right” or “more real” than the other [and] these realities must be seen as wholes rather than divided into discrete variables that are analyzed separately” (Glesne, 2006, p. 7). Since the individual face-to-face interview is the principal data collection method for this study, the interpretive paradigm advanced by qualitative research will provide a flexible, rather than restrictive framework for data analysis.

**Case Study**

Although many approaches have been used to study students’ transitional experiences from high school to college, the researcher has selected a qualitative research design involving the case study approach. Merriam and Simpson (2000) describe case study as “an intensive description and analysis of a particular social unit that seeks to uncover the interplay of significant factors that is characteristic of that unit” (p. 225). Case study operates from the premise that human behavior can best be studied as “lived experience in the social context” and enables the researcher to gather “thick, detailed data in an authentic setting” (Willis, 2007, p. 240).

Stake (2000) identifies three types of case study: intrinsic, instrumental, and instructive. In an intrinsic case study, the researcher studies a particular setting, group of people, etc., not so
that s/he can make a generalization or formulate a new theory based on the case, but rather so that s/he can gain a richer, deeper understanding of that particular phenomenon. Stake unapologetically states, “Here, it is not undertaken primarily because the case represents most other cases or because it illustrates a particular trait or problem, but because, in all its particularity and ordinariness, this case itself is of interest” (p. 437). In an instrumental case study, on the other hand, the case itself is not as central as its ability to help the researcher gain greater understanding of a larger issue. Stake emphasizes, “The case is still looked at in depth, its contexts scrutinized, its ordinary activities detailed, but all because this helps the researcher pursue the external interest” (p. 437). At the extreme end of this continuum is the collective case study, which Stake refers to as “instrumental study extended to several cases” (p. 437). The emphasis is on the ability to generalize and to use these cases as multiple sources of support for a theory or conclusion. “[Individual cases] are chosen because it is believed that understanding them will lead to better understanding, perhaps better theorizing, about a still larger collection of cases” (p. 437).

Yin (2009) acknowledges that case study as a research method in the social sciences has an “overlapping relationship” with other methods, such as experiments, surveys, archival analyses, and histories (p. 2), but that it has a distinct advantage when a “how” or “why” question is being asked about a contemporary set of events over which the investigator has little or no control” (p. 13). Rather than seeking to answer a question by conducting an experiment, where variables are tightly controlled and often times conditions are purposely manipulated in order to obtain particular kinds of information, the case study method allows the researcher to still use a disciplined, systematic approach, but apply it to a situation in its natural state, without,
as Yin (2009) states, “deliberately divorc[ing] a phenomenon from its context” (p. 18). The critical features of a case study are defined as follows:

1. A case study is empirical inquiry that
   - investigates a contemporary phenomenon in depth and within its real-life context, especially when…
   - the boundaries between phenomenon and context are not clearly evident.

2. The case study inquiry
   - copes with the technically distinctive situation in which there will be many more variables of interest than data points, and one result;
   - relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result…
   - benefits from the prior development of theoretical propositions to guide data collection and analysis (Yin, 2009, p. 18).

Of critical importance in case study research is the delineation of the case itself, the phenomenon or phenomena to be studied. The question of what setting, what group, and what time frame to study comprise what is known as the “bounding” of the study (Creswell, 2007; Merriam, 1998; Yin, 2009). Merriam (1998) considers the bounding of the case to be the defining element in case study research. “I have concluded that the single most defining characteristic of case study research lies in delimiting the object of the study, the case” (p. 27). Yin (2009) posits that there is an inextricable connection between the research questions being asked and the “unit of analysis” (p. 30) to be studied. He suggests that once researchers have identified their research questions, they should critically examine how the naming of these questions clarifies the boundaries of the case study, with regard to the relevant social group,
organization, or geographical area. Therefore, because this researcher seeks to identify the factors that contribute to first-generation college-going Latino students’ enrollment and persistence in one targeted 2+2+2 program, this intrinsic case study is bounded not only by the one particular community college and the specific high school involved in the partnership, but also by only the student participants who will have completed the first “2” of the 2+2+2 program.

Role of the Researcher

Qualitative research recognizes that rather than being a detached observer (as in quantitative research), the researcher plays a critical role in a qualitative study (Creswell, 1994; Denzin & Lincoln, 2000; Glesne, 2006; Merriam & Simpson, 2000; Miles & Huberman, 1994). According to Merriam and Simpson (2000), “In all forms of qualitative research, the researcher is the primary instrument for data collection and analysis” (p. 98). As understanding human perception is what drives this study, the researcher herself will be able to be immediately responsive and adaptive during the interview process. Lichtman (2006) emphasizes the vibrancy of the researcher in qualitative research and states,

Unlike quantitative research, where those who are studied are the subjects or the sample – nameless and faceless individuals who have been chosen at random to represent others with similar characteristics – those studied in qualitative research are real people with real needs, ambitions, and desires. Their stories touch the researcher and touch the readers. I argue here that an understanding of the other does not come about without an understanding of the self [researcher] and how the self and the other connect. I believe each is transformed through this research process (p.192).

In exploring the many aspects of the role of the researcher in qualitative research, Merriam and Simpson (2000) are cautionary as they point out that the researcher, as the primary instrument for data collection and analysis, must understand and explain how his/her subjectivity shapes the investigation and its findings. In this study, the researcher endeavors to eliminate
personal bias during the data collection process by making a conscious effort not to ask any leading questions or to inject any personal comments while interviewing the participants. In the data analysis phase, the researcher will painstakingly compare each audio recording with the written transcription to also ensure the highest level of accuracy and objectivity. Moreover, during the journaling process, the researcher will also reflect on her thoughts and interpretations as a way of identifying and controlling any biases of her own that could possibly affect the findings. The researcher is confident in the level of trustworthiness of the findings but also that by the very nature of qualitative research, the researcher’s perception cannot be extricated from the findings. Miles and Huberman (1994) state, “Many interpretivist researchers take the position there is no “fact of the matter” and suggest by extension that it is not really possible to specify criteria for good qualitative work – and that the effort to do so is somehow expert-centered and exclusionary, not responsive to the contingent, contextual, personally interpretive nature of any qualitative study” (p. 277). Peshkin (1988) emphasizes the positive dimension that subjectivity adds to qualitative research and states, “[It] can be seen as virtuous, for it is the basis of the researchers’ making a distinctive contribution, one that results from the unique configuration of their personal qualities joined to the data they have collected” (p. 55). This researcher is confident that a qualitative method of inquiry will enable her to add this perspective to her research.

**Case and Participant Selection**

Merriam and Simpson (2000) stress the importance of purposeful sample selection in qualitative research. “When there is an in-depth understanding of those who know the most (rather than the average opinion of many), you select a purposeful sample” (p. 100). They also assert that the most purposeful sample will be one that is “information rich” – where the
researcher can learn the most (p. 100). Unlike random sampling, in quantitative research, where the sample ensures that the characteristics of the subjects in a study appear in the same proportion as they appear in the total population, purposeful sampling involves the selection of particular subjects because they “are believed to facilitate the expansion of the developing theory” (Bogdan & Biklen, 2007, p. 73).

Purposeful sampling will be used to select the research site and participants for this study. As the researcher’s “…unit of analysis is related to the way [the researcher] [has] defined [his/her] initial research questions” (Yin, 2009, p. 32), this researcher’s case study is bounded by the particular high school, community college, and university comprising the specific 2+2+2 program (BBRS) of which the researcher desires to gain a deeper, richer understanding. The high school and community college are located in Chicago, Illinois, and the university is located in the central region of the state. Furthermore, since this study focuses exclusively on the students, not on the high school teachers or college faculty teaching in the program, only those students who have completed the first “2” of the 2+2+2 will be eligible to participate.

With its inception in the summer of 2006, the BBRS Program was still in its early stage, and at the time this study will be conducted (2008), just one high school is involved – Foster High School (pseudonym), one of the Chicago public high schools, and none of the participants has yet gone beyond the first “2” of the 2+2+2 sequence. Consequently, of the three cohorts in the program at the time this dissertation began Cohort 1:10: [Class of 2008], Cohort 2:20: [Class of 2009], and Cohort 3:2: [Class of 2010], the researcher has chosen to study students from Cohort 1 since they are the participants who have spent the longest time in the program and are about to graduate from high school.
In early winter of 2008, the researcher will meet with Cohort 1 and explain the purpose of her research study and the data collection methods to be used. In late winter of 2008, the researcher will mail out the parental/legal guardian consent form (Appendix A), in both English and Spanish, to the parents of the students in Cohort 1. These consent forms are essential since most of the participants are under the age of 18. For this study, neither gender nor age is a part of the selection criteria. At the start of each interview, the participant will sign a consent form (Appendix B) to validate his/her agreement to engage in the research. The selection criteria for the research participants consists of the following: 1) senior year at Foster High School (partner high school in the BBRS program), 2) Latino (a general designation), 3) member of Cohort 1 of the BBRS program, 4) member of Junior Reserve Officer Training Corps (a requirement to be in the BBRS program), 5) about to successfully complete the first two years of this 2+2+2 program, and 6) parental consent to participate in this research study obtained.

Data Collection Methods

Data collection within a qualitative case study involves a variety of methods that allow the researcher to form a detailed picture of the phenomenon under study (Creswell, 2007; Willis, 2007). Merriam (1998) states that multiple methods of data collection assist the researcher to triangulate, improve the validity of the study, and cross-check findings. Three data collection methods will be used in this study: face-to-face individual interviews, field notes, and the researcher’s journal. Data collection will take place over a one-to-three day period, in late May, or early June 2008.

Semi-structured Face-to-Face Interviews

Of these three methods, the primary data collection tool used in this study will be the individual face-to-face interview. Guba and Lincoln (1981) state that “the ability to tap into the
experience of others in their own natural language, while utilizing their value and belief frameworks, is virtually impossible without face-to-face and verbal interaction with them” (p. 155). The interview (the dialogue) as an instrument of data collection is harmonious with an ontological perspective of reality, and therefore fits well with the qualitative nature of this study. Freire (2007) notes the inextricable relationship between human nature and dialogue.

Human existence cannot be silent. To exist, humanly, is to name the world, to change it. Once named, the world in its turn re-appears to the namers as a problem and requires of them a new naming. If it is in speaking their word that people, by naming the world, transform it, dialogue imposes itself as the way by which they achieve significance as human beings. Dialogue is thus an existential necessity (p. 88).

Within this perspective, the researcher, with a strong personal connection to this area of study, fervently hopes that this process of interviewing, of engaging in dialogue, not only will provide her with an effective tool for data collection, but also enable the student-participants to engage in the articulation of their own realities.

Willis (2007) asserts that semi-structured interviewing, rather than structured interviewing, is favored by interpretivists because this less structured form of interviewing allows more interplay among the “life world, interview situation, and analytic framework” (p. 245). Consequently, the researcher will utilize this semi-structured format where she will begin with a set of eight questions but will continually improvise and add questions if the participants’ responses reveal the opportunity for further exploration. The interview protocol will begin with an oral survey that has demographic questions pertinent to the study: students’ backgrounds and the educational attainment of significant members of their families. The interview will then proceed to prompts that elicit information about students’ experiences in the BBRS program and their perception of the effects of their participation in it. These questions are open-ended and constructed to avoid leading students to any particular response. The interview
questions can be found in Appendix C. During the interviews, the researcher will utilize depth-probing techniques (Glesne, 2006), as she follows up prescribed questions with comments such as “tell me more” and “please give some examples of that” so that she can, as Glesne states, “understand phenomena in their fullest possible complexity” (p.105). Since the researcher is guided by the interpretivist ontological perspective, which recognizes that both the participants and the researcher share in the construction of their personal realities, she anticipates that there will be times in the interviews when a participant’s response resonates within the researcher to a degree that it will impel her to introduce a bit of her past educational background, relative to their current situation, into the conversation. Nevertheless, the researcher will be mindful of the amount of talk time she may occupy during the interview and be careful to stay on track.

During these interviews, the researcher will also constantly be aware of the hierarchical relationship that exists between her, as a teacher interviewer and them, as young students. Kvale (2006) considers the interview as “being ruled by the interviewer, enacting a one-way dialogue, containing hidden agendas, leading to the interviewer’s monopoly over the interpretation” (p. 490). Keeping this in mind, the researcher will make sure to share her agenda up front, with the students. It will be emphasized that the purpose of this study is to help educators, academicians and administrators develop better ways to connect high school students to the college experience, and thus the students’ honest, uncensored input will have a considerable impact on this outcome.

The interviews will take place over a two-day period at Foster High School. These 45 to 60 minute one-on-one sessions will occur after classes let out for the day and will be conducted in a vacant classroom in which none of the students have any classes. The interviews will be digitally recorded and later transcribed, with some transcription to be done by the researcher and other transcription to be done by a professional transcriptionist. In order to reduce the possibility
of missed information, no note-taking will occur during the interviews. However, once each interview is completed, the researcher will engage in two additional data collection methods: making field notes and writing in her research journal.

**Field Notes**

Field notes are “the written account of what the researcher hears, sees, experiences, and thinks in the course of collecting and reflecting on the data in a qualitative study” (Bogdan & Biklen, 2007, p. 119). Creswell (2007) categorizes field notes in two parts: observations and reflections. The observations capture what is perceived through the five senses: sight, hearing, smell, taste, and touch. Parallel to the observations, the researcher records reflections that loosely correspond to the observations. In this study, field notes will be written with the understanding that this documentation will provide a relatively “real time” account of the dimensions of sight, sound, appearance, space, and non-verbal communication that occur during the interviews. Glesne (2006) urges researchers to record their observations without preconceived notions or socialized viewpoints, and cautions researchers not to be restricted by “guiding myths,” which are “comprised of the ensemble of contexts you take for granted” (p. 52).

The systematic recording of field notes will also aid the researcher in triangulating her study and minimizing researcher bias. Because the researcher will be an insider observer (Creswell, 2007, p. 130) (having already spent extensive time with these students) she has decided that it will be more effective to interview the student participants at their high school rather than at the Truman College campus (where the researcher has exclusively interacted with the students); being in the students’ day-to-day environment, she may gain a fuller perspective of their lives and better understand both the enriching and challenging aspects of their educational setting. Consequently, the researcher will conduct data collection at the high school over a two-
day period, spending approximately three hours each day. On each day, the researcher will arrive an hour ahead of the scheduled interview time so that she can walk around, absorb everything going on around her, and take copious notes.

Since the researcher has been cautioned not to write field notes while interviewing, in order to avoid intimidating the participants, a special “grid” will be created beforehand, on which field notes will be recorded immediately after each interview. The grid will be divided into the following categories: (a) physical proximity of student to researcher, (b) student’s non-verbal communication (eye contact, gestures, positioning of arms and legs), and (c) student’s demeanor (talkative, cheerful, shy, pensive, etc.)

This grid will be an effective tool in the production of field notes because it will allow the researcher to capture and retain the non-spoken dimension of the interview long after the face-to-face session has ended. Appendix D contains the template for the field notes grid.

**Researcher’s Journal**

In addition to field notes, another researcher-initiated form of data collection (journaling) will be employed in this study. At this point in the dissertation process, the researcher has already begun making entries into this reflexive journal, as the data collection process is being planned. Glesne (2006) notes that during the data collection process, researchers often feel like “[they] are not learning enough, are learning more than [they] can ever deal with, [or] are not learning the right stuff” (p. 46), but she acknowledges that this feeling of anxiety is normal. Merriam and Simpson (2000) consider the researcher’s journal a valuable source of data collection because it “allows researchers to trace their own development and biases throughout the course of the investigation” (p. 107).
In addition to capturing the immediacy of the here and now aspect of the data collection phase of a research study, the researcher journal also becomes an indispensable tool in triangulation and audit trails, in order to maintain the dependability, transferability, and confirmability of a study. Merriam (1998) discusses triangulation and audit trails. In triangulation, the researcher uses various sources of data collection, of which a researcher journal can play an important part. In an audit trail, the researcher describes in great length how data were collected, how coding and analysis were done, and how the researcher arrived at his/her conclusions. The researcher journal thus serves as an effective vehicle to drive the audit trail.

**Data Analysis Techniques**

In qualitative research, analyzing the data that have been collected consists of making sense of what was seen and heard and, if possible, organizing it into themes or concepts. Qualitative researchers assert that the processes of data collection, data analysis, and data interpretation are not separate, distinct steps, but are interconnected and often occur simultaneously (Bogdan & Biklen, 2007; Creswell, 2007; Miles & Huberman, 1994). Creswell (2007) states that to analyze qualitative data, the researcher engages in the process of moving in analytic circles rather than using a fixed linear approach (p. 150). Lichtman (2006) emphasizes that “making meaning from qualitative data is a process that moves between questions, data, and meaning” (p. 171). In qualitative research, “Data analysis is not off-the-shelf; rather it is custom built, revised, and “choreographed”” (Creswell, 2007, p. 150). Nevertheless, despite its recursive process, a qualitative research study benefits from a well-planned system for analyzing data. Data analysis is “a process of systematically searching, arranging, and rearranging the obtained information, observations and data in order to enable findings to emerge” (Lake, 2008). According to Bogdan and Biklen (2007), “Data analysis
involves working with the data, organizing them, breaking them into manageable units, coding them, synthesizing them, and searching for patterns” (p. 159). Stake (2000) perhaps best sums up the reflective, recursive yet systematic nature of qualitative casework, and states, “If we typify qualitative casework, we see data sometimes pre-coded but continuously interpreted, on first sighting and again and again. An observation is interpreted against one issue, perspective, or utility, and then interpreted against others” (p. 445).

**Reading and Memoing**

In this qualitative case study, the researcher’s data analysis will be guided by particular “loops” comprising Creswell’s (2007) “data analysis spiral” (p. 151). Creswell’s “reading and memoing” loop (p. 151) will be the first step in analysis of the data. In this process, the researcher will read the transcripts in their entirety several times and get a general sense of the interviews. As the researcher reads, she will write short notes and comments in the margins. Creswell states that this process helps researchers gain a holistic picture of the interviews before dissecting them into parts.

**Coding**

Reading and memoing flow into the loop of “describing, classifying, and interpreting” (Creswell, 2007, pp. 152-154). Creswell (2007) regards describing, classifying, and interpreting data as “the heart of qualitative data analysis”, when the researcher begins to make sense of and translate what s/he has seen and heard. “Here researchers describe in detail, develop themes or dimensions through some classification system, and provide an interpretation in light of their own views or views of perspectives in the literature” (Creswell, 2007, p. 151). Qualitative researchers Ryan and Bernard (2000) pre-date Creswell’s heart metaphor and state that “coding is the heart and soul of whole-text analysis [as it] forces the researcher to make judgments about
the meanings of contiguous blocks of text” (p. 780). One of the tasks associated with coding is identifying themes (Ryan & Bernard, 2000). “Themes are abstract (and often fuzzy) constructs that investigators identify before, during, and after data collection” (Ryan & Bernard, 2000, p. 780). Miles and Huberman (1994) recommend that researchers begin with broad themes taken from a review of the literature, known as a priori themes, and add more themes as they go deeper into analysis. In this qualitative research study, the data analysis will be guided by the conceptual framework of the study, which includes validation theory (Rendon, 1994), community cultural wealth (Yosso, 2005), and cultural capital development for diverse students (Aragon & Kose, 2007) discussed in the literature review, but the researcher will also be sensitive to the notion of emergent themes.

In this descriptive coding process, the researcher will examine the transcripts of the face-to-face individual interviews and interpret how their words fit into the aspects of community cultural wealth (Yosso, 2005) and cultural capital development for diverse students (Aragon & Kose, 2007), as well as certain elements of validation theory (Rendon, 1994). Creswell (2007) suggests that it is best to initially control the number of codes so that themes or concepts may more readily appear and then the categories can be expanded as the researcher continues to review and re-review the data. Consequently, the researcher will re-read each interview transcript in its entirety and annotate where codes appear. Once this step has been done for all of the interview transcripts, as a second step, the researcher will produce a separate grid, where each code will be listed on the vertical axis and each interviewee will be listed on the horizontal axis. The researcher will then formulate initial counts of data codes and note how many times each interviewee has made a comment that falls into one of these codes/nodes. The researcher will also copy and paste the representative quotes from the interviews directly beneath the count
for inclusion in the data analysis. Creswell (2007) advises that quotes can be quite effective within qualitative research, as they “bring in the voice of participants in the study” (p.182). Lake (2008) observes that quotes provide the “rich, thick description” that makes the research come alive.

**Discovery of Emergent Themes**

Despite the argument which posits that using a priori concepts and counting codes may preclude the researcher from recognizing emergent themes (Creswell, 2007), this researcher is confident that using a priori concepts from the theoretical and conceptual frameworks that anchor the research will not limit this researcher’s data analysis. Instead, within this interpretive research paradigm, these a priori concepts will provide the researcher with a relevant lens for making sense of participants’ words and behavior and give her the necessary ontological orientation to take risks as a novice researcher and induce novel themes on her own.

The third step in this classification process will involve making a separate grid, on which each structured interview question will be positioned on the vertical axis and participants’ names along the horizontal axis. The participants’ responses will be copied and pasted into the corresponding places on the grid. This will provide an additional means of confirming the relevance of the pre-existing codes and also enable the researcher to look for what Crabtree and Miller (1997) describe as “emergent categories” (p. 151).

Miles and Huberman (1994) posit that “coding is analysis” (p. 56). Ryan and Bernard (2000) argue that the act of coding is synonymous with analysis. “No matter how the researcher actually does coding, by the time he or she has identified the themes and refined them to the point where they can be applied to an entire corpus of texts, a lot of interpretive analysis has already been done” (Ryan & Bernard, 2000, p. 781). Consequently, as the researcher engages in
coding, she will also move into classifying and simultaneously begin “making sense” (Creswell, 2007) of the data. The researcher will study these codes associated with the principal concepts and theoretical frameworks that have guided her research: validation theory (Rendon, 1994, 2000), the conceptual framework of community cultural wealth (Yosso, 2005) and Aragon and Kose’s (2007) conceptual framework of cultural capital development for diverse college students, along with her own insights, intuition and openness to undiscovered themes.

**Trustworthiness of the Study**

Qualitative researchers often face the question of whether or not a qualitative study is believable, accurate, or right (Creswell, 2007; Denzin & Lincoln, 2000; Willis, 2007). That challenge often comes if quantitative measurements, where believability and accuracy are associated with statistically significant numerical data and results, are applied to qualitative research. At the core of quantitative research is the assumption that researchers “are looking for universals (for laws) and therefore want to conduct research that is generalizable and replicable” (Willis, 2007, p. 218). However, within the interpretivist paradigm of qualitative research, the focus is not on generalizable truths and laws but instead on understanding human behavior in a local context (Willis, 2007). “Qualitative researchers strive for “understanding”, that deep structure of knowledge that comes from visiting personally with participants, spending extensive time in the field, and probing to obtain detailed meaning” (Creswell, 2007, p. 201).

Consequently, in order to establish credibility, transferability, dependability, and confirmability, qualitative researchers must uphold the naturalistic aspect of their work, where the researcher is embedded in the research and serves as the interpreter of the findings (Lake, 2008).

The trustworthiness of this research will be established by the use of triangulation, rich thick description, and audit trails (Creswell, 2007; Lichtman, 2006; Glesne, 2006; Merriam,
1998; Stake, 1995; Willis, 2007) in order to provide an accurate understanding of the local reality of the participants in this particularistic case study.

**Triangulation of Data**

The truth value and credibility of a case study are established by employing multiple sources of evidence (Creswell, 2007; Yin, 2009). “In triangulation, researchers make use of multiple and different sources, methods, investigators, and theories to provide corroborating evidence” (Creswell, 2007, p. 208). Stake (2000) acknowledges the challenges case researchers face when validating their work and explains that triangulation, “the process of using multiple perceptions to clarify meaning, verifying the repeatability of an observation or interpretation” is used in order to avoid misinterpretation (p. 443). In the researcher’s analysis of the data to be collected (the recorded interviews, the interview transcripts, field notes/journal, and observation) she will search for the convergence of information in order to assure that her assertions and key interpretations are confirmed by multiple sources.

Although there will be multiple sources from which the data can be interpreted, the primary sources responsible for credibility will be the recorded interviews and transcripts of the interviews. The researcher will devote a considerable amount of time to “immersion in the data” (Creswell, 2007) with these interviews, and she will interpret and synthesize these individual stories in order to provide a holistic picture of this case. Through the systematic process of 1) listening to the audio recordings and reading along with the transcripts to assure accuracy, 2) reading the transcripts and writing short notes in the margins, and 3) reading the transcripts and engaging in intensive coding and classifying, a clear and accurate picture will be presented of the many realities concerning the factors that have caused these Latino high school students to
persist in the first phase of this high-school-to-community-college-to university bridge program as well as the challenges and benefits they have encountered.

**Rich, Thick Descriptive Data**

Rich, thick description serves to establish both credibility and transferability. In terms of credibility, by using direct quotes from the participants, researchers can illustrate and support the congruence of their interpretation with what the participants have actually said (Lichtman, 2006). Because this case study endeavors to present the students’ perspective, rather than the views of educators and administrators, of the benefits and challenges associated with bridge programs, the researcher will include numerous excerpts from the interviews in order to capture the truth according to these young participants and support her interpretation of the phenomenon.

In terms of transferability, rich, thick description of the setting, participants, and processes used enables readers to judge whether the findings would be relevant in other settings (Creswell, 2007) and whether other researchers -- using the same research framework methodologies, and techniques, would come to the same understanding of this phenomenon (Lake, 2008). In this study, the researcher will establish transferability by providing consistent justification for her decisions regarding the research paradigm and theoretical and conceptual frameworks used to interpret the case. The researcher will also maintain transparency throughout all stages of the study, from the selection of the site and participant sample to data analysis, discussion, and conclusions based on the findings.

**Audit Trail**

While quantitative research seeks to know whether the findings of a study are replicable, qualitative research seeks to establish whether the procedures and processes can be replicated in another setting. Within the interpretivist paradigm, qualitative researchers understand that when
investigating people’s perceptions of reality, the same findings could never be attained twice; therefore, instead of determining the reliability of a study, whether the outcome would be the same under different conditions, qualitative research is concerned with the transferability of a study and whether the design, process, and procedures in the study can be transferred to another setting (Creswell, 2007; Lake, 2008; Yin, 2009).

Yin (2009) likens this to a notion associated with forensic investigations. He points out that reliability is where an external observer should be able to trace the steps in either direction (from the conclusions back to initial research questions or from questions to conclusions). As with criminological evidence, the process should be tight enough that evidence presented in ‘court’ – the case study report – is assuredly the same evidence that was collected at the scene of the “crime” during the data collection process (p. 122).

Towards this aim, an audit trail addresses issues of transferability, as it serves to document every step of a qualitative study, from the gathering of raw data through the discussion and conclusion of the study (Willis, 2007). In this research study, the audit trail will consist of chronological entries in the researcher’s journal, extensive written field notes, maintenance of the interview recordings and transcripts, and visual displays of the coding and classification processes.

The audit trail also attests to the dependability of a study as it captures the choices made by the researcher of design, process, and procedures, as well as any changes that have taken place in the study which may affect interpretations of the findings (Lake, 2008). Once again, the researcher’s own journal will play pivotal role in this area by serving as a daily diary, of sorts, and chronicling the steps taken throughout data collection and interpretation, as well as the researcher’s immediate thoughts post-interview and reflections during the data analysis process.
Reflexivity

In his discussion on reflexivity in qualitative research, Creswell (2007) advances the notion that qualitative researchers do not have to distance themselves from their writing and that instead, “qualitative research today acknowledges the impact of the writing on the researcher, on the participants, and on the reader” (p. 179). “How we write is a reflection of our own interpretation based on the cultural, social, gender, class, and personal politics that we bring to research. All writing is “positioned and within a stance” (Creswell, 2007, p. 179). Early on in her own research, the researcher acknowledged her personal connection to this study (in terms of her own experiences as a high school student and also as a participant observer in the high school bridge program being studied). For this reason, the researcher will maintain a reflective journal throughout the interview process, to make sure she does not disclose too much of her own experience or ask leading questions. Furthermore, during the coding and data analysis stages, the researcher will make frequent entries in her researcher journal in order to be cognizant of the possibility of researcher bias.

In quantitative research, objectivity is a primary goal and the researcher should strive to maintain his/her distance throughout the study (Creswell, 2007; Lake, 2008; Willis, 2007). However, while qualitative research embeds the researcher in the design and analysis of the study in the study, qualitative researchers must also demonstrate that their findings are free of subjectivity and that bias has been controlled (Creswell, 2007; Lake, 2008; Willis, 2007). This results in what is known as confirmability, “the degree to which the results [of a study] could be confirmed or corroborated by study participants and others” (Lake, 2008). The confirmability of a qualitative research study is strengthened by triangulation, transparency, maintenance of an audit trail, and reflexivity.
Ethical Considerations

Since the thoughts and emotions of young people are woven into the fabric of this research study, ethical consideration will serve as a reinforced thread, which will maintain the ethical parameters of the study and constantly protect these participants. Bogdan and Biklen (2007) emphasize two main issues regarding ethics in research: “informed consent and the protection of informants from harm” (p. 48). Bogdan and Biklen elaborate on this and state that participants should enter into the study on a voluntary basis and fully comprehend the dangers and obligations involved. They also caution that participants should not encounter risks that might prove greater than the gains they might acquire.

Lichtman (2006) discusses different viewpoints or stances a researcher can adopt to assure ethical behavior. At the conservative end of spectrum is the “absolutist stance,” in which the researcher constantly considers four central issues: “protection from physical or psychological harm, prevention of deception, protection of privacy, and informed consent” (p. 58). Due to the young age of the participants (17 to 18 years old), the researcher has adopted this stance. The first step will be obtaining informed consent. As mentioned earlier in this chapter, after receiving approval from National Louis University’s Institutional Research Review Board and then informally discussing with the participants the intent of her research study, the researcher will send out written consent forms (Appendix A), in both English and Spanish (since some of the participants’ parents may feel more comfortable using Spanish as a medium of communication), to the participants and their parents. Although there are ten participants in the group, there is a possibility that not all of their parents will return the consent forms. Consequently, the researcher is aware of the fact that research may only be conducted with only those students who have received informed consent. Once consent has been obtained, before
each interview, the participants will be asked to sign an informed consent form to validate their willingness to engage in this study (Appendix B).

In terms of ethical consideration, the fact that the researcher has a pre-established rapport with the participants will be deserving of attention. Because the researcher has been one of the instructors in the program and is also in close contact with the other instructors in the program, she will be careful not to ask questions directly related to a specific instructor. For example, the participants will never be asked which of the college professors has been most/least effective/helpful, etc. Instead, only open-ended questions will be used, such as “Which aspects of the program have been most beneficial?” and “Which aspects of the program have been most challenging?” Furthermore, an additional layer of ethical consideration to the study will be added by purposely waiting until the students have “officially completed” the first “2” of this 2+2+2 program before engaging in the interview process. The students will be made aware of the fact that their final grades will be submitted a full week before the researcher conducts the interviews, so they will understand that their participation in this study will not affect their grades in any way.

In their discussion of confidentiality in ethical research, Bogdan and Biklen (2007) emphasize the importance of anonymity both while the study is being done and when the findings are written up.

Unless otherwise agreed to, the informants’ identities should be protected so that the information you collect does not embarrass or in other ways harm them. Anonymity should extend not only to writing, but also to the verbal reporting of information that you have learned through observation. The researcher should not relate specific information about individuals to others and should be particularly watchful of sharing information with people at the research site who could choose to use the information in political or personal ways (p. 50).
Two levels of confidentiality will be utilized in this study. In the first place, at the outset of the study, it will be made clear to the students, high school teachers, and college professors, that no information, verbally or in writing, which will come from the interviews will be shared until the dissertation is published. The second level of confidentiality involves the use of pseudonyms, instead of the students’ real names or the name of the high school from which they come in order to protect their identities. These two levels of confidentiality will serve to honor the trust and honesty that these participants will give to the researcher in order to make their voices come alive for the community at large.

As an additional measure to ensure the ethical integrity of this study, only the researcher will have access to the data. All paper and digital documents, including field notes, audio recordings, and transcripts will be kept securely stored for five to seven years, after which time they will be completely and safely destroyed.

**Limitations**

In the interpretive paradigm, the researcher endeavors to make sense of what others have said (Lake, 2008), and while this is a hallmark of qualitative research, it also presents a challenge in terms of credibility. Therefore, in qualitative research, it is incumbent upon the researcher to address the following questions:

1. To what extent do the findings match the evidence and are they convincing?

2. Is the evidence open to scrutiny?

3. Are the researcher’s interpretations plausible, relevant, and justified  
   (Lake, 2008, unpublished lecture notes)?

Leedy and Ormrod (2005) explain that “no research study can be perfect, and its imperfections inevitably cast at least a hint of doubt on its findings. Good researchers know, and
they also report the weaknesses along with the strengths of their research” (p. 276). These weaknesses are considered the limitations of the study. Creswell (2008) defines limitations as “potential weaknesses or problems with the study identified by the researcher” (p. 207). In this particular case study, two limitations will be discussed: (a) researcher bias, and (b) honesty in participants’ responses.

**Researcher Bias**

As the qualitative researcher takes others on his or her journey, he or she must account for how his or her subjectivity has been “both a producer and product of [the] text” and “hold himself or herself accountable to the standards of knowing and telling of the people he or she has studied” (Richardson & St. Pierre, 2005, p. 964). As stated earlier in this chapter, the researcher has already established intimacy with the purpose under study, as she is one of the coordinators of the BBRS program and has worked with the student participant interviewees prior to conducting the research. Consequently, the issue of researcher bias must be recognized as a limitation in this study. According to Creswell (2007), “Clarifying researcher bias from the outset of the study is important so that the reader understands the researcher’s position and any biases or assumptions that impact the inquiry” (p. 208), and he adds, “In this clarification, the researcher comments on past experiences, biases, prejudices, and orientations that have likely shaped the interpretation and approach to the study (p. 208). Reflective field notes comprise an important part of this effort (Bogdan & Biklen, 2007; Cresswell, 2007; Glesne, 2006). Bogdan and Biklen state,

> Because you are so central to the collection of the data and its analysis, and because neither instruments nor machines nor carefully codified procedures exist, you must be extremely aware of your own relationship to the setting and of the evolution of the design and analysis. In order to do a good study, you must be self-reflective and keep an accurate record of methods, procedures, and evolving analysis (p. 122).
Therefore, in order to account for any bias the researcher might have, reflective field notes and entries into the research journal will occur consistently, in order to monitor for and minimize the chance of any pre-conceived notions or assumptions affecting the interviews themselves or the interpretation of the findings.

**Honesty in Participants’ Responses**

As discussed earlier in this chapter, no matter what population is being studied, within any interview situation, a hierarchical relationship exists between the interviewer and the interviewee(s) (Kvale, 2006), and attention must be paid to whether or not participants are tailoring their responses to what they think the interviewer wants to hear. Lake (2008) remarks that during the interview process, the interviewer must be cognizant of whether or not he or she is leading the participants’ answers. In this study, because the researcher is aware of the fact that she will be, to some degree, a participant observer (Bogdan & Biklen, 2007), having already known and worked with the students for two years, the interviews will purposely be scheduled at a point in time after the participants’ final grades have been submitted, and this fact will be made abundantly clear to the participants, in order to put them at ease during the interviews. As another measure to minimize influencing or intimidation, the participants will be reassured that no actual names, neither those of the participants nor those of the teachers/professors to whom they refer, will be used in the presentation or discussion of the findings. Furthermore, the researcher’s observation notes, where she will describe participants’ non-verbal cues and gestures during the interviews and reflect on them, will serve as an additional mechanism to monitor for honesty of participants’ responses.
Researcher as the Instrument

The researcher has both a professional and personal connection to this study. Her own connection to higher education would not have occurred if not for a high-school-to-college bridge program and a Latina mentor professor, and it is precisely due to this personal connection that she has chosen this particular area to study.

The researcher was raised in a racially, culturally, and economically diverse suburban setting. At the high school she attended, there was a definite continuum related to “college readiness.” Although there were some exceptions, the majority of the college-bound students came from white, middle to upper-class families where at least one previous generation had graduated from college. Consequently, these students had what is now referred to as “helicopter parents”: mothers and fathers who hover around their offspring at this pivotal moment of their lives, accompany them on college tours, assist them in the application process, etc. The researcher, on the other hand, came from a much different background. Both of her parents were first-generation Americans raised in low socioeconomic level households (products of Spanish and Cuban Sefardi Jewish parentage on her mother’s side and Austrian Ashkenazi Jewish on her father’s side), who had limited knowledge of the U.S. system of higher education. And while the researcher’s parents had aspirations for her educational attainment, college was a distant, unpleasant memory for her mother, and not really a part of her father’s background at all.

Despite the lack of role models in her immediate family, the researcher was often told by her high school teachers that she should consider college after high school, but throughout those four years the researcher had not formed a close relationship with any one particular teacher or advisor who could serve as a mentor. In addition, none of the researcher’s high school friends were on the college bound track, so this was not part of her daily reality. However, the
researcher’s junior year in high school served as a pivotal moment in her education, as she became involved in a type of “dual enrollment” program where she began earning college credits while still in high school and also began to understand what higher education was about.

As one of the few heritage language speakers (a speaker who has acquired a foreign language informally, due to the background of his/her parents or grandparents) in the researcher’s advanced Spanish class, she always felt special and like she had an extra edge over the students who had no background with the Spanish language or any Spanish-speaking cultures. Consequently, the researcher worked hard, earned good grades, and looked for any opportunity to enhance her language skills. It was precisely in that third year of high school that her Spanish teacher announced the Spanish Immersion Weekend Program at George Williams College’s “extension” campus in Wisconsin (a two-day program where high school upperclassmen/women and college students engaged in language development and cultural activities conducted entirely in Spanish). The experience also allowed students to earn one semester hour of college credit in the humanities if they did additional writing activities after completing the weekend program. The moment the researcher’s Spanish teacher asked if anyone was interested, her lone hand shot up in the air. The rest was history…

During the researcher’s junior and senior years of high school, she participated twice yearly in the Spanish Immersion Weekend Program, thus earning four credits of humanities before entering college. But far more valuable than getting a “jump-start” on earning college credits was her introduction to the social and navigational capital needed for college and the validation she received (Aragon & Kose, 2007; Yosso, 2005: Rendon, 1994, 1998, 2000, 2002).

It was precisely during this time that the researcher met the woman who would become her mentor, the director of the Spanish Immersion Weekend Program and a dynamic Latina who
not only physically resembled the researcher’s mother but also had the same nurturing manner. The researcher was at first drawn to her for her similarities to her mother but later more so because she could de-mystify the college “maze”. Social capital enables students to connect with “adult, non-family informal mentors and role models” (Aragon & Kose, 2007, p.118), who provide “instrumental and emotional support to navigate through society’s institutions” (Yosso, 2005, p. 80). And, indeed, this mentor provided the researcher with valuable insights about the world of higher education.

This high-school-to-college program also provided the researcher with the validation (Rendon, 1994, 1998, 2000, 2002) to know that she could do college-level work and that she would “fit in” in that particular college campus climate. Rendon states that both in-class academic validation, where faculty are “personable and approachable toward students” and “structure learning experiences that allow students to experience themselves as capable of learning” and out-of-class academic validation, where classmates and college staff take an interest in students’ lives, are equally important for providing culturally diverse students with the components to persist and succeed in higher education (p. 40).

It was due to the acquisition of navigational and social capital (Aragon & Kose, 2007; Yosso, 2005) and the validation (Rendon, 1994, 1998, 2000, 2002) the researcher received through this dual enrollment experience that she decided to go to college and selected the college that hosted the Spanish Immersion Weekend Program, George Williams College, as her first and only choice of institution. The researcher now realizes what a life-changing event that early college experience was for her, and that is precisely why she has devoted her doctoral research to studying the impact this type of experience has on today’s first-generation, urban, Latino college students.
As an undergraduate, the researcher majored in Latin American Studies and spent a semester in Bogota, Colombia, doing fieldwork with homeless youths, before earning her degree in social science from George Williams College, Downers Grove, Illinois, in 1981. The experience in Colombia gave the researcher additional “fuel” for her passion to teach and provide educational experiences that could transform and empower young people.

Consequently, in pursuit of the goal to become a teacher, the researcher enrolled in the master’s program in Adult Education with a concentration on teaching English to speakers of other languages at National Louis University (then National College of Education), in Evanston, Illinois.

Upon earning her master’s degree from National Louis University in adult education with a concentration in teaching English to speakers of other languages in 1989, the researcher joined the department of applied language at National Louis University as a fulltime, tenure-track faculty member, where she taught English as a second language (ESL) to primarily Eastern European student populations and also played a significant role in establishing the university’s sister campus in NowySacz, Poland. Despite earning tenure and being promoted from instructor, to assistant professor, and associate professor, the researcher left National Louis University in December 2003, as the university’s English-as-a-second-language program faced elimination, due to the changing economic and political climate at the university.

Before leaving National Louis University, the researcher was urged by colleagues in the field to apply for a full-time, tenure-track position teaching ESL at Harry S. Truman College, one of the city colleges of Chicago. In January 2004, once hired at Truman College, the researcher immediately began teaching ESL in the Transitional Bilingual Learning Community, a one-year cohort experience designed for first-generation-college-going, Spanish-speaking high school
graduates who had recently arrived in the USA. This endeavor enabled the researcher to “re-
connect” with Spanish-speaking youth and share with them her own high-school-to-college
journey, as well as her early college experience working with disenfranchised youth in South
America. By teaching in this program and often serving as a mentor for these students, the
researcher witnessed first-hand, the transformative effect that “bridge-type” programming had on
young people who might not have considered themselves college material, and she quickly
became interested in expanding these programs to reach out and meet the needs of these students
while they were still in high school.

In 2005, the researcher was asked to join the Bridges to the Baccalaureate in the Research
Sciences (BBRS) Program, as a member of the instructional design team and the ESL faculty
member on the “college side” of the project. Although the researcher had already had
considerable experience in program and curriculum development through her international
experience at National Louis University, the BBRS program represented a turning point for the
researcher, because this work-related endeavor enabled her to “give back” to the same type of
student she had once been: unconfident and uncertain about whether or not higher education was
in her future.

After becoming so intimately and actively involved in two programs designed for Latino
youth, the researcher came to appreciate the role that community colleges play as the “gateway”
for higher learning for many who have been underserved by the education system, and this
served as the impetus for her to pursue a doctorate in community college leadership. The
researcher chose National Louis University because as a former faculty member there for so
many years, she was confident in the integrity of its programs and appreciative of the
university’s progressive, practical approach to scholarly pursuits.
By selecting the BBRS program as the subject of her dissertation, the researcher endeavors to enable the voices, minds, hearts, and emotions of the young members of the high-school-to-college experience – the students, themselves – to be heard by the scholarly community, and thus make a contribution to the research that is worthy of attention.

**Summary**

This qualitative case study, situated in an interpretive paradigm, will provide an investigation of Latino high school students who have completed the first component of a high-school-to-community-college-to-university bridge program for the research sciences. An interpretive paradigm has been chosen because it will allow for eliciting multiple perspectives of the factors that have kept these students invested in the program and enabled them to experience a transformation in their lives. The study will employ multiple data collection methods, with semi-structured, individual face-to-face interviews and observation comprising the main sources of data. In addition, field notes and a researcher’s journal will be examined to seek further consistency and corroboration. Trustworthiness of the study design will be maintained by triangulation of data sources, rich, thick descriptive information and data, maintenance of a transparent audit trail and addition of reflectivity by the researcher. Ethical considerations are to be closely adhered to due to the age of the study participants. Limitations have been acknowledged and description of how these are to be mitigated is included.
CHAPTER 4: DATA PRESENTATION AND ANALYSIS

The first part of this chapter discusses the history, goals, and structure of the Bridges to the Baccalaureate in the Research Sciences (BBRS) Program. A description of each partner institution: Harry S. Truman College, City Colleges of Chicago, and Foster High School (pseudonym), one of the Chicago Public Schools, is presented. Participant demographics, with an explanation, provide the situational context for the data obtained. The second part of this chapter defines the concepts and theories used to analyze the data collected as well as the data collection methods. Emergent themes from the data are also discussed. The chapter concludes with the data presentation and analysis.

Structure of Bridges to Baccalaureate in Research Sciences (BBRS) Program

In fall 2004, Illinois State University, located in the rural Midwest, invited Harry S. Truman College, the community college, to be a partner (co-PI) in the Central Illinois Bridge Program, whose goal was to recruit and prepare talented underrepresented students from three Illinois community colleges with high minority enrollment for subsequent entry and success at Illinois State University (ISU), followed by admittance and success in professional or graduate schools in the bio-medical fields (McGinnis et al., 2003). During early meetings between ISU and Truman College, one of the Truman College biology professors suggested making this a 2+2+2 program by recruiting students while they were still in high school instead of already being enrolled at the college, since he had had significant experience teaching biology to inner-city high school students and felt that the connection to the sciences should be made earlier in students’ educational journey. ISU agreed, and Foster High School (a pseudonym for one of Chicago’s public high schools), the high school in which the Truman College biology professor had previously taught, was selected as the initial partner high school. After nine months (August
2005 to April 2006) of planning and curriculum alignment between Foster High School and Truman College, in late spring of 2006, the first two cohorts (students from the graduating class of 2008 and students from the graduating class of 2009) of the BBRS program were formed.

BBRS was designed as a dual credit model, where students would earn college credit for the time they spent doing work within their specially-designed high-school level biology and chemistry courses, where the regular curriculum was enhanced to incorporate college-level standards, and as well as additional hours spent on the college campus, spending day-long sessions attending lectures and conducting labs, taught by college professors. An additional requirement for earning the college credits was participating in week-long summer sessions, at the end of their freshman, sophomore, and junior years. Students successfully completing the first “2” of the 2+2+2 program would earn four credits of college-level biology and four credits of college-level chemistry by the time they completed their junior year of high school. The sequence of the BBRS for high school students program is shown in Table 4.

Table 4. *Sequence of the BBRS Program for High School Students*

<table>
<thead>
<tr>
<th>TIME PERIOD</th>
<th>ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School (HS) freshman year: April – May</td>
<td>Student recruitment and selection: high school science teachers identify students who would be a good fit for this program. Criteria for selection include grade point average (“C” or better), interest in the sciences, student motivation (based on attendance, study habits, and attitude), and satisfactory performance on Compass reading (adaptive reading test, using web-based software) and math tests.</td>
</tr>
<tr>
<td>HS freshman year: late May</td>
<td>Parent/student open house session: Truman professors and high school instructors give an overview of the program; students and parents decide if students will sign on.</td>
</tr>
<tr>
<td>Post-freshman year summer</td>
<td>Week-long orientation to the BBRS program, conducted at the college campus: activities include hands-on science labs and an overview of reading and writing for the sciences.</td>
</tr>
<tr>
<td>Year</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Sophomore year</td>
<td>Enrollment in a special section of biology at the high school, taught by the BBRS liaison HS teacher and concurrent enrollment in a special section of Truman College’s 4-credit Biology 114 (General Education Biology w/lab) during the spring semester. NOTE: To fulfill the instructional minutes to earn college credit, over the course of the year, students spend one 6-hour Friday per month, at the college, where they spend an entire day attending lectures and doing lab activities with the Truman College Biology 114 instructor, and they also participate in another summer session at the end of their sophomore year (see below).</td>
</tr>
<tr>
<td>Post-HS sophomore year summer</td>
<td>Participation in a 2-week intensive summer program (M-Th 9-2) conducted at the college campus. A capstone to the Bio 114 course, the program consists of advanced lab experiments in biology and continued instruction in reading/writing for the sciences.</td>
</tr>
<tr>
<td>HS junior year</td>
<td>Enrollment in a special section of chemistry at the high school, taught by the BBRS liaison chemistry teacher and concurrent enrollment in a special section of Truman College’s 5-credit Chemistry 100/121: Basic Chemistry course, during the spring semester. NOTE: To fulfill the instructional minutes to earn college credit, the college chemistry teacher visits the high school and conducts periodic after-school enrichment sessions. In addition, over the course of the year, students spend one 6-hour Friday per month, at the college, where they spend an entire day attending lectures and doing lab activities with the Truman College Chemistry 100/121 instructor, and they also participate in another summer session at the end of their junior year (see below).</td>
</tr>
<tr>
<td>Post-HS junior year summer</td>
<td>Participation in a 2-week intensive summer program (M-Th 9-2) conducted at Truman. A capstone to the Chemistry 121 course, the program consists of advanced lab experiments in chemistry and continued instruction in reading/writing for the sciences.</td>
</tr>
<tr>
<td>HS senior year</td>
<td>Advanced placement (AP) science courses at the high school; year-long independent research projects with a Truman mentor (either a faculty member or one of Truman College’s Center for Science Success (CSS) students.</td>
</tr>
</tbody>
</table>
Partners in the BBRS Program

The partners in this dual credit high-school-to-community-college bridge program are both public institutions in large urban settings. A common bond of these partners is their involvement with Latino students. The community college has a long history as a Hispanic serving institution, and Hispanics are the dominant group among the student body at the high school.

**Harry S. Truman College, City Colleges of Chicago**

One of the seven colleges comprising the City Colleges of Chicago, Truman College is located in the uptown neighborhood, on the northeast side of Chicago, which has long been a magnet for many refugee and immigrant groups. Truman has a yearly enrollment of over 23,000 students, who come from approximately 160 countries and speak approximately 90 languages. Truman has the second largest English is a second language (ESL) and general equivalency degree (GED) programs in Illinois and also has the oldest and most successful two-year nursing program in Illinois. In recent years, Truman has also made inroads in the science field, having the state’s only two-year biotechnology program, as well as an active center for science success program, where students interested in pursuing careers in the sciences are mentored by the college’s biology, chemistry, and mathematics professors and receive hands-on research experience, attend regional and national science meetings, and visit laboratories at four-year institutions and in the industry (“About the College”, http://www.ccc.edu/colleges/truman/menu/Pages/About-the-College.aspx, 2012).

**Foster High School, Chicago Public Schools (pseudonym)**

Foster High School (pseudonym), one of the Chicago Public Schools, located on the southwest side of Chicago, has a high minority enrollment and a below-average academic
standing. According to its online report card, in 2008, enrollment was 2,114, composed of Hispanics in the majority (78.9%), followed by African Americans (19.8%), and Caucasians (0.3%). A significant portion of the student body is limited English proficient (12.3%), and the majority of students (98.6%) come from low-income households. Between 2007 and 2010, the average SAT score for Foster High School students was 15.6, below the national low-end status of 16, and the average one-year dropout rate between 2007 and 2010 was 16.5%, well above the national alert level of more than 10% (Chicago Public Schools Office of Performance, 2010).

Participant Demographics

The research participants’ demographic data were obtained during the interview and not in a separate demographic survey. Of the seven Latino participants, five were females and two were males. Although it was assumed that these participants would be 17 years old at the time of the interviews, it was found that three of the study participants had turned 18 at the time of the interview. However, since age was not a criterion for participant selection, each of these students was allowed to participate. Interestingly, it was discovered that five of the participants were not first-generation college students in their families. They had either a parent or sibling who had completed some college. Table 5 contains study participant demographics.

Table 5. Study Participants’ Demographics

<table>
<thead>
<tr>
<th>Student’s Name (Pseudonym)</th>
<th>Gender</th>
<th>Age</th>
<th>Ethnicity</th>
<th>Birthplace</th>
<th>1st Generation College Student</th>
<th>JROTC</th>
<th>Employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pamela</td>
<td>F</td>
<td>18</td>
<td>Hispanic</td>
<td>USA</td>
<td>no</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Julian</td>
<td>M</td>
<td>17</td>
<td>Mexican</td>
<td>USA</td>
<td>no</td>
<td>yes</td>
<td>worked junior year but quit during senior year</td>
</tr>
<tr>
<td>Ines</td>
<td>F</td>
<td>17</td>
<td>Mexican</td>
<td>USA</td>
<td>no</td>
<td>yes</td>
<td>yes: 10-15 hrs per week</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>Age</td>
<td>Ethnicity</td>
<td>USA</td>
<td>No/Yes</td>
<td>Yes: Hours per Week</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>--------</td>
<td>-----</td>
<td>-----------</td>
<td>-------</td>
<td>--------</td>
<td>--------------------</td>
<td></td>
</tr>
<tr>
<td>Sylvia</td>
<td>F</td>
<td>18</td>
<td>Mexican</td>
<td>USA</td>
<td>no</td>
<td>yes: 20-25 hrs per week</td>
<td></td>
</tr>
<tr>
<td>Araceli</td>
<td>F</td>
<td>17</td>
<td>Mexican</td>
<td>Mexico (Arrived in USA at age 2.)</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Dario</td>
<td>M</td>
<td>17</td>
<td>Mexican</td>
<td>Mexico (Arrived in USA at age 12.)</td>
<td>yes</td>
<td>yes</td>
<td>yes: 24 hrs per week</td>
</tr>
<tr>
<td>Marisol</td>
<td>F</td>
<td>18</td>
<td>Hispanic</td>
<td>USA</td>
<td>no</td>
<td>yes</td>
<td>no</td>
</tr>
</tbody>
</table>

**Ethnicity**

During the interviews, students were encouraged to self-disclose, in terms of what they perceived their ethnicity to be. Consequently, while two of the respondents identified as being Hispanic, transcripts reveal that all of the participants were of Mexican descent, as all of their parents were born in Mexico, and two of the participants, themselves, were born there.

**First-Generation College Student**

It is important to note just two of these students were truly the first to go to college in their families. Most of these students had at least one parent or one sibling who had completed some college or was currently enrolled in college. However, each interviewee indicated that s/he felt that she would be the first in the family to persist through four years of college in the United States and ultimately attain a bachelor’s degree.

**Junior Reserve Officer Training Corps (ROTC)**

Foster High School has a well-developed Junior Reserve Officer Training Corps (ROTC) program. At the inception of the BBRS program, the main high school liaison science teacher felt that due to the level of discipline and motivation required to be a member of the Junior ROTC program and the ease at which to interact with an already assembled group of Latino
students, those who were concurrently enrolled in the Junior ROTC would make the best candidates from which to draw students for BBRS.

**Employed While Full-time High School Student**

Of the three students who worked in addition to going to school, one was a movie theater attendant, another was a manager of a dollar-store, and the third was a houseman at a hotel. A fourth student mentioned that he had worked as a busboy during his junior year but had quit due to his inability to balance schoolwork with employment. All of the students who were employed mentioned that working in addition to handling school-related demands was a struggle but that they were doing this in order to help their families with day-to-day living expenses.

**Concepts Used for Coding of the Interviews**

In order to organize the interview transcripts, each student’s responses were coded according to the a priori concepts which informed this study: community cultural wealth (Yosso, 2005), cultural capital development for diverse college students (also referred to as cultural capital) (Aragon & Kose, 2007), and validation theory (Rendon, 1994). The following section provides a brief description of each a priori concept used for data analysis of the data obtained.

Although a priori concepts were used to analyze the data, great care was taken to capture any additional themes which emerged during the data analysis phase of the research. Two emergent themes were discovered: a) having college faculty as teachers, and b) attending classes on a college campus.

**Community Cultural Wealth and Cultural Capital for Diverse College Students**

The concept of community cultural wealth, established by Yosso (2005) has its roots in critical race theory, as related to the field of education (Solorzano, 1997, 1998), and argues that minority students should be viewed for the value they bring with them to college based on their
unique knowledge, abilities, and skills, rather than being viewed as marginalized outsiders who lack the preparation necessary for post-secondary studies. The concept of community cultural wealth was adopted and expanded on by Aragon and Kose (2007), who referred to it as the cultural capital for diverse students (also referred to as cultural capital) conceptual framework and added a seventh form of capital to the six forms of capital originally established by Yosso (2005). These seven forms of capital used as a priori concepts for data analysis are: aspirational capital, linguistic capital, familial capital, social capital, navigational capital, resistant capital, and citizenship capital. Table 6 displays these seven forms of capital as well as a description of each.

<table>
<thead>
<tr>
<th>Table 6. Seven Concepts of Capital, Related to the Conceptual Frameworks of Community Cultural Wealth and Cultural Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept</td>
</tr>
<tr>
<td>Aspirational capital</td>
</tr>
<tr>
<td>Linguistic capital</td>
</tr>
<tr>
<td>Familial capital</td>
</tr>
<tr>
<td>Social capital</td>
</tr>
</tbody>
</table>
### Navigational capital

For students who have historically been marginalized in higher education, “[navigational capital] infers the ability to maneuver through institutions not created with communities of color in mind” (Yosso, 2005, p. 80). It is the ability to move successfully through the college or university setting, including knowing options for obtaining textbooks and securing financial aid (Aragon & Kose, 2007).

### Resistant capital

In an educational setting, this type of capital is accrued when students whose race or culture have historically been undervalued or unacknowledged in higher education defy these negative precepts and challenge this inequality (Yosso, 2005; Aragon & Kose, 2007). “Examples of resistant capital can include affirming one’s self and background and recognizing and persevering through both individual and institutional discrimination” (Aragon & Kose, 2007, p. 118).

### Citizenship capital

Building on Yosso’s work, Aragon and Kose (2007) developed this type of capital. Citing the influence of Westheimer and Kahne (2004), Aragon & Kose (2007) state that citizenship capital occurs when “students learn to act responsibly in their community (i.e., personally-responsible citizenship); are active members of community organizations and improvement efforts (participatory citizenship) and critically assess social, political, and economic structures to see beyond surface causes (justice-oriented citizenship)” (p. 118).


### Validation Theory

Validation theory asserts that students coming from groups who have historically had limited access to higher education often express doubt in their ability to thrive, or even survive, in college, and acts of validation can serve as powerful vehicles to help these students succeed (Rendon, 1994; Terenzini, Rendon, Upcraft, Millar, Allison, Gregg, & Jalomo, 1994). Rendon (1994) describes validation as “an enabling, confirming and supportive process initiated by in- and out-of-class agents that fosters academic and interpersonal development” (p. 44). Table 7 displays the concepts and description of validation, used as a priori concepts to code the data obtained.
Table 7. Validation Theory: Concepts and Descriptions Use for Data Analysis

<table>
<thead>
<tr>
<th>Theme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-class Academic Validation</td>
<td>During class meetings, faculty member treats students equally and recognizes each student as being capable of learning; faculty member modifies teaching styles to accommodate diverse learning styles; faculty member gives frequent, meaningful feedback to students.</td>
</tr>
<tr>
<td>Out-of-class Academic Validation</td>
<td>Individuals such as parents, spouses, boy/girlfriends, friends, school staff (including teachers, counselors, coaches, etc.) spend time with students outside of class and give students motivation and support.</td>
</tr>
</tbody>
</table>


Two Emergent Themes Arising From the Data

Willis (2007) posits that qualitative researchers “search for truths about the local context” and use their interview data “to discover facts about a situation in an effort to build a local (or general theory)” (p. 291). During the coding process using a priori themes from two conceptual frameworks and one theoretical framework, the researcher discovered two emergent themes, which came through in the majority of the participants’ interviews. In numerous instances during the interviews, students cited two factors as being most valuable to them in the BBRS program: 1) having college faculty as teachers, and 2) attending classes on a college campus. Table 8 displays these emergent themes and provides a description of these themes which were discovered during data analysis.
<table>
<thead>
<tr>
<th>Theme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Having College Faculty as Teachers</td>
<td>Arose when participants spoke of how they were treated “as adults” in the classroom setting and were called upon to work in groups and solve problems on their own.</td>
</tr>
<tr>
<td>Attending Classes on a College Campus</td>
<td>This theme has subthemes, which encompass experiences from having access to the laboratories and technology that college students use to “being able to talk face-to-face with an actual college student.”</td>
</tr>
</tbody>
</table>

**Data Collection Methods**

A total of seven high school seniors from BBRS Cohort 1, Foster High School graduating [Class of 2008], who had successfully completed the program, participated in one-on-one, semi-structured interviews with each interview lasting 45 to 60 minutes. All interviews were audiotaped using a digital recorder and then transcribed at a later date. The interviews were conducted over a two-day period at the students’ high school (May 29 and May 30, 2008). Four of the interviews took place on May 29 and three of the interviews occurred on May 30, 2008. Students were excused one-by-one from their classroom activities and the interviews were conducted in an empty classroom in which none of the students had classes that semester. Since these students were selected for the study because they were among those who had completed the entire BBRS program, the questions in the interview were designed to help the researcher understand what factors contributed to students’ persistence in the program and whether or not participation in the program enabled participants to perceive a college-going transformation in themselves. Although the researcher was initially concerned that these relatively young (17 to 18 years of age) interviewees might simply respond with attenuated utterances, this was not the
case. Each participant seemed to relish the opportunity to share his/her experiences in the BBRS program, and everyone spoke frankly and often animatedly as his/her interview progressed.

To assist with consistency of the field notes written after each interview, extensive entries were made on a grid form. Great care was made not to write during the tape-recorded interview so as not to make the interviewee uncomfortable. However, once the interview had ended, the researcher wrote copiously about the interviewee’s body language, including proximity to the interviewer while speaking, gestures, and facial expressions. She also noted the interviewee’s tone of voice and ease of speaking. Moreover, the interviewer noted which particular questions resonated most within each interviewee and caused him/her to expound at length.

**Presentation of Data: The Interviews**

The interview data gleaned from the interviews depicts the constructed reality of these students as they articulated the factors which caused them to persist in BBRS program until completion and discussed the ways in which being a part of this program had enabled them to perceive themselves as future college students. Understanding that the purpose of a case study is “not to represent the world, but to represent the case” (Stake, 2000, p. 448), the researcher recognized the importance of presenting the actual words the students used during the interviews, as they painted a vivid picture of the situation. However, recognizing that the interview data for this study were voluminous, the researcher decided to present a reduced version of pertinent data gleaned from the participants in a cohesive, logical, and concise manner. Creswell (2007) states, “Data analysis in qualitative research consists of preparing and organizing data for analysis, then reducing the data into themes through a process of coding and condensing the codes, and finally representing the data in figures, tables, or a discussion” (p. 148). Consequently, the analysis of the interviews will be presented in the following manner:
1. Table of participants’ responses by the a priori concepts of community cultural wealth (Yosso, 2005) and cultural capital (Aragon & Koss, 2007);

2. Table of participants’ responses by the a priori components of validation theory (Rendon, 1994);

3. Table of the emergent themes gleaned from participant responses; and

4. Summaries of each participant’s interview, starting with a brief demographic of the student, followed by a summary of his/her interview responses and salient quotes.

It is felt that by providing a combination of the researcher’s summary of each interviewee’s responses as well as samples of his/her words, the reader will hear “a third voice that is neither the interviewee’s nor the researcher’s but is a combination of both” (Glesne, 1997, p. 203). Therefore, rich thick information and quotes are provided. It is important to note that pseudonyms are used, rather than the student, high school teacher, or college faculty real names, in order to adhere to ethical concerns regarding anonymity and confidentiality. Table 9 provides a display of the participant’s responses regarding community wealth and cultural capital.

Aspirational capital was the only component of these concepts described by all of the participants.

Table 9. Participants’ Responses Analyzed by Seven A Priori Components of Community Wealth and Cultural Capital

<table>
<thead>
<tr>
<th>STUDENT</th>
<th>AC</th>
<th>LC</th>
<th>FC</th>
<th>SC</th>
<th>NC</th>
<th>RC</th>
<th>CC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pamela</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Julian</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Ines</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Sylvia</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Araceli</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
Interestingly, the participants acknowledged all of the components of Rendon’s validation theory (Table 10). It was apparent from this that they saw both in and outside of classroom validation as important to their persistence in the BBRS program.

Table 10. Participants’ Responses Analyzed by the Two A Priori Components of Validation Theory

<table>
<thead>
<tr>
<th>STUDENT</th>
<th>In-class Academic Validation</th>
<th>Out-of-class Academic Validation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pamela</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Julian</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Ines</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sylvia</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Araceli</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Dario</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Marisol</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

What is interesting is the emergence of two additional themes in the participants’ responses. All of the participants indicated that having college faculty teach the dual credit courses was primary in assisting them to persist in the dual credit program. In addition, all but one of the seven student participants felt attending classes on the college campus was crucial to their persistence. Table 11 illustrates the two emergent themes from the data.
Table 11. *Two Emergent Themes from Participants’ Responses*

<table>
<thead>
<tr>
<th>STUDENT</th>
<th>Having College Faculty as Teachers</th>
<th>Attending Classes on a College Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pamela</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Julian</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Ines</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sylvia</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Araceli</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Dario</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Marisol</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**Analysis of Participant Interviews**

These were face-to-face semi-structured interviews employed to gather verbal data and observe non-verbal cues. The interviews were like a conversation, allowing time for these young participants, who had never before engaged in an extended one-on-one conversation with a researcher, to feel comfortable giving their opinions about their experiences in the BBRS program. According to Creswell (2008), participants in a narrative study share their stories and feel important and comforted that their stories are heard. When the stories are well told, there is a sense of connection between the listener and the teller. All names of the participants are pseudonyms to maintain anonymity.

**Participant #1: Pamela (pseudonym)**

Pamela is an 18-year-old female who identifies as Hispanic. She was born in the United States to parents who immigrated from Mexico. She is the third and youngest child in the family. Her older sister and brother have both completed some college, but as she stated in the
interview, have dropped out due to financial constraints. Pamela describes herself as a “full-time student” who does not have to work while going to school.

Analysis by A Priori Concepts of Community Cultural Wealth and Cultural Capital

Aspirational Capital

Pamela indicated that spending time on a “real college campus,” due to enrollment in BBRS, made her feel more confident about her ability to succeed in college and not have to settle for a life of menial jobs.

Interview Question: Having completed a portion of the BBRS program while still in high school, how do you feel about your post high-school options?

The environment, really. Just being around other college students made me realize, you know what -- I don’t just want to sit around home or settle for some job flipping burgers or something. I actually want to do something I enjoy doing, and you know, just learning at the same time. I mean--. I want to be able to be fifty years old and not say “Oh, I took the easy way out or I learned everything I had to learn.” I want to continue learning and reading.

Pamela discussed the potential financial obstacles she would face, and she stated that she was resolved to not let them stand in her way.

Because -- because I always said, you know what, financially it’s --. I’m not going to not go to a college just because I won’t be able to afford it. I told myself, you know, I’m going to work something out, but I want to do something that I want to do whether I have to make sacrifices or not. I’m not going to let my financial issues get in the way, even though it does… I’m not going to let transportation get in the way. If I want to do something, I’m going to do it no matter what. So, I -- I always had that view of going to college.

Linguistic Capital

No information was obtained from this participant relevant to analysis by the a priori concept of linguistic capital.
Familial Capital

Yosso (2005) explains that familial capital is the “wealth of cultural knowledges nurtured among familia (kin) that carry a sense of community history, memory, and cultural intuition” (p. 79). During the interview, it became evident that Pamela’s educational and career choices were framed within her desire to stay connected to her family.

Interview Question: How do you envision your post-high-school options?

I did want to go to (named a large, public university located in another part of the state). I did -- but well -- for one, I didn’t send in my application on time because I had already decided you know what -- I’m not going to go. I was like, well, if I’m over there, my family won’t be nearby. What if I come -- you know -- what if I get sick? Who’s going to take care of me? Or, if I need, you know, money all of a sudden? Or, you know, I’m going to have to find a job over there.

In addition to the “safety net” provided by her family, Pamela also said that she would turn to her brother or sister, who had already attempted the college experience, for assistance.

And you know, starting something new like college --. I think it’s better to have people around you that I can talk to about it. Like if I have trouble in a class, I can talk to my brother or sister. They understand me.

Social Capital

Aragon and Kose (2007) cite research which shows that some urban, low-income Latino youth benefit from interaction with adult, non-family mentors and role models. Pamela’s experience supports this finding.

Interview Question: And again, now that you are getting to the end of high school and the BBRS program, what factors, again, have made you feel most positive about college as an option?

Pamela cited her biology teacher, Mr. Vandermere (pseudonym), for giving her encouragement to stay in the BBRS program and continue her educational journey.

I think a lot of it has to with -- of course, Mr. Vandermere (pseudonym), who really pushes us to try really hard and come here [Truman College] and -- I mean, there were students that were like, “Mr. Vandermere, I’m…” Like he gave us the permission slips
like two days ago and they were like, “I don’t feel like going, Mr. Vandermere.” “No, you have to go.” “You better go.” And it was kind of like, oh, I don’t want to let Mr. Vandermere down. He’s making me go.

Navigational Capital

The question of how she envisioned her post-high school options caused Pamela to talk at length about how the BBRS program made her feel more hopeful about her ability to maneuver through a post-secondary setting. She explained that the opportunity to actually be in a college setting was just as, if not more, valuable than the enrichment in the sciences.

And we’re really looking forward to going to college because we’re taking these college courses and being exposed to college, so it’s kind of like well, you may not like science because it’s science -- like you may not like the BBRS program because it has to do with science, but because it exposes you to the college life and college -- just the college level. I mean, it’s great.

Resistant Capital

The ability to dispel negative stereotypes by overtly challenging discrimination and ultimately persevering in one’s academic goal (Aragon & Kose, 2007; Yosso, 2005) is a trait of resistant capital, and as Pamela discussed her early years in science, it was evident that she possesses a high level of this type of capital.

Interview Question: When did you first become interested in science?

Pamela explained that it wasn’t until her freshman year of high school that she became interested in science. She talked at length about her environmental science teacher, who had gotten Pamela excited about how the world around her functioned and encouraged her to participate in all-city science fairs. Pamela then explained that these extramural events also made her recognize the inequalities of education and further explained how these challenges only increased her resolve to succeed.

I mean --. I was in rooms [at the science fair] with these kids who have parents that were lawyers and doctors, and I was having conversations with them and I was kind of like,
“Yeah, my parents were born in Mexico and my mom’s very sick.” And you know --. I mean, it was somewhat, you know, intimidating.

Pamela went on to explain that even though her parents weren’t able to give her academic support and her school had limited resources, she would defy the odds and accomplish her goals.

So, I mean --. I -- I was like oh, my God, you know, these kids, they have it so easy. I was like, you know, I’m over here researching on Google all my information when they can just ask their parents or go to their nice lab at school. So I was heartbroken to think, oh, my god, if only my dad was a scientist. I could have done my science experiment in a lab. But I still did my experiment and I was successful.

As Pamela ruminated on the inequalities of academic opportunities and preparation between inner-city schools and suburban institutions, she indicated that the BBRS program was helpful in giving underserved students an advantage that they might not have otherwise received.

BBRS gave us something more than what we learned in high school. I mean, high school does play a big part of it all because -- I mean, the reason why I am scared to go to college. I mean, yeah, I’m looking forward to it and everything. But I don’t want to get there and say well, I didn’t learn this and all the other students are like, I learned that in my high school. Oh -- oh, you went to Foster? Oh, that’s why… Like if they use certain vocabulary, I don’t want to have to pick up a dictionary -- even though I probably will. I’ll probably have a little sticky note where I’d write down words I don’t know, but I’m not going to ask them. But I’m going to look them up when I get home.

Pamela also discussed the negative stereotypes associated with urban Latino youth and explained how participation in the BBRS program challenged these views.

And yeah, I mean the BBRS program really separated us -- I mean --. I mean, it’s kind of weird looking at a kid with baggy pants and like a big giant gangbanger shirt holding a test tube, you know what I mean? You don’t see that every day. And it’s kind of funny, you know, because I mean they’re over here cursing, “I can’t get this,” you know, but they do know what they’re doing. It’s just, I mean, it’s pretty hilarious actually.

Citizenship Capital

Citizenship capital is evidenced when students “learn to act responsibly in their community” (Aragon & Kose, 2007) and Pamela’s ultimate career choice illustrates this trait.
Interview Question: What are your educational plans, now that you have chosen to enroll at (XYZ University)?

During the interview, Pamela identified one particular local, public, four-year institution as the college to which she had applied and had been accepted. She also revealed that she wanted to become a teacher. When asked about her motivation for this, she explained that it was important for her to help others and “give back” to her community.

I want to teach because I love the school environment -- students -- the diversity they offer. You know, just seeing different faces every day and still being involved in the community and making a difference, and just -- I feel like I’d be able to go home and say I’m doing something right. I’m doing something with myself -- the students wouldn’t be the only ones learning. I can learn from the students.

Analysis by A Priori Components of Validation Theory

In-class Academic Validation

Pamela cited the teachers associated with the BBRS program, both at Truman and at Foster High School, as being of key importance in making her and her fellow students feel like they could succeed.

Interview Question: Who and/or what has been helpful in keeping you in the BBRS program?

Teachers help a lot. The program helps a lot. It all depends on how -- how much they can push the students because -- believe it or not, students do need that push.

She added that her high school teacher’s constant interest in what students were doing on their Fridays at Truman and his reinforcement of that content once students came back to their high school classes provided an additional source of support.

Oh, yes, Mr, Vandermere (pseudonym), yeah. He’d talk to us about BBRS when we were in his class. He’s like “You can’t miss more than two days or else.” He’s really into it. Like, if we do work here, he asks us, “Oh, what did you do there?” And “What was it about?” “Did they give you handouts?” “Can I see those handouts?”
Out-of-class Academic Validation

While discussing how she first became interested in science, Pamela revealed that teacher-student interaction outside of class not only cultivated her interest in science but also served as a powerful reassurance for academic success.

And then my freshman year environmental science teacher. She was kind of like my bat phone. You know, she helped me so much. And even like during her lunch period we would just hang out in her room and she’d eat lunch with, lunch with us and we’d just talk about all these things, science and just whatever we wanted to talk about.

Emergent Theme #1: Having College Faculty as Teachers

Interview Question: What did you like most about the BBRS program?

Pamela’s gaze became more intense and her gestures grew more animated as she stressed that having “real college professors”, as opposed to high school teachers giving the BBRS courses, was one of the most beneficial aspects of the program.

And it was just actually being at a higher level than where we are at our school because, well, at our school we don’t have as many materials and they don’t treat us that much like adults. And here in BBRS it’s kind of like “Okay; here’s the stuff; do it.” And we’re like, “Oh, okay, Mr. Professor, you know you don’t have to tell us what do to.” We do it and we help each other out. At high school it’s kind of like the teacher is like doing it for us, and here we’re actually doing it ourselves.

Interview Question: Now that you are coming to the end of the BBRS program, what effect has it had on you?

Pamela cited the years of spending time on the Truman campus, taking science classes all day long, as having a major impact on her.

College life. I mean, just being in a college really. I mean, it may not be like a university or anything. It’s a community college. But just getting to know how teachers are in college and kind of what they expect of you, the type of vocabulary they use.
Emergent Theme #2: Attending Classes on a College Campus:

Interview Question: What did you like most about the BBRS program?

In addition to the experience of having “real college professors” as teachers, Pamela also emphasized that being physically present on a college campus was one of the greatest advantages for students who otherwise would probably not set foot in a college until the first day of their first semester.

Also, I mean, just when we walk the hallways [of Truman College], we’d see college students and like -- sometimes like we’d come -- like we’d bump into somebody like in the bathroom and we’d have conversations like “Oh, what’s your major?” “Oh, I’m majoring in chemistry” and then we’d be like, “Oh we are doing this thing [BBRS].” And they would ask us how it has been. So having conversations with actual college students is great because you just don’t walk down the street and say, “Hey, you know, do you go to college?” “What’s it like?”

Pamela mentioned that for many students like her, who don’t normally come in contact with college students either in their families or in their communities, being on a college campus gave them the opportunity to meet college students and interact with them in a non-threatening, pressure-free way.

I mean, when we’re here at Truman on Fridays I see a lot of students in the hallways. But, I mean, just like seeing, whoa, I’d be going to school with people like this. It’s like, it’s actually making me look forward to college and getting to meet these people that have different majors and different interests.

Participant #2: Julian (pseudonym)

Julian is a 17-year-old male who identifies as both Mexican and Latino. He was born in Florida to immigrant parents from Mexico, who separated shortly after their arrival in the United States. Julian and his older brother were raised by their mother, who left Florida for Chicago when Julian was four years old. Julian explained that his mother had finished college in Mexico but never pursued a career since she had gotten married shortly after finishing her degree. Julian also mentioned that his older brother had completed two years of college at a public four-year
college in the metro area but had stopped out, due to financial constraints. Julian reflected on how he had gotten a part-time job during his junior year of high school, in order to help contribute to the household but that once senior year arrived, he had to quit the job because it was interfering with his studies.

**Analysis by A Priori Concepts Community Cultural Wealth and Cultural Capital**

**Aspirational Capital**

Yosso (2005) asserts that members of groups that have traditionally been underrepresented in higher education possess a “resiliency” which allows “themselves and their children to dream of possibilities beyond their present circumstances, often without the objective means to attain those goals” (pp. 77-78). Julian’s “resiliency” became evident when he was asked about his interest in science and how that related to his education and career plans.

*Interview Question: When did you first become interested in science?*

Based on the non-verbal responses Julian demonstrated when posed with this question (arms folding across his chest and eyes gazing off into the distance), it was evident that this question not only caused him to reflect on his past but also elicited information about his desire to attain his ultimate career goal, even in the face of financial uncertainty.

Even in grade school, I realized that it came -- it’s like -- it’s not that it comes easy to me -- it’s just that I understand it. I realized that basically everything could be explained by science. I’m a huge analyzer. So that’s why science is a big thing for me.

But when the interviewer probed further, asking Julian why he hadn’t mentioned science as a career path for his future, Julian explained that although he liked this subject, his true desire was to become a lawyer, and that he would attend a two-year college upon graduation from high school, so that he could start working as a paralegal assistant and then start saving for law school.
And like I was accepted to [named a local, private four-year college], and the school itself will set me up with a job that goes under the career I want to go under. And that job is going to help me save to go into law school, like I said, and become the lawyer that I want to be.

Linguistic Capital

Yosso (2005) finds that bilingualism enhances an individual’s ability to co-exist in two “worlds”, or cultures, and cites that bilingual children who often serve as translators or interpreters for their parents “gain multiple social tools of vocabulary, audience awareness, cross-cultural awareness, “real world” literacy skills, metalinguistic awareness, teaching and tutoring skills, civic and familial responsibility, [and] social maturity” (p. 79). During the interview, it was evident that Julian valued his bilingual skills and saw them as an asset for future advancement. When discussing how his mother had advised him on education and career choices, Julian mentioned that their conversations were exclusively in Spanish because, as he explained, that was the language in which his mother felt more comfortable. Based on Julian’s enthusiastic response to this question, the interviewer decided to probe further into the role linguistic capital played in Julian’s life.

Interview Question: Have you kept up your ability to read and write in Spanish?

Of course. Like my mom gives me a lot of Spanish books and I read them. And I’ve been writing in Spanish since I was like four. My mother, like, she always made me write. She was like, “Do the circle and the little lines.” But like a lot of the students I talk to, like they can’t even read it or they can’t even write it, and it’s like, it amazes me… Like I feel that it’s good for me to have, to be able to say I know English and Spanish. And like now that I am taking my French class, I am planning hopefully to go deeper into French, so I could be trilingual someday.

Familial Capital

For many first-generation Hispanic families living in the USA, sacrifices are made by the parents in order to provide better academic opportunities for their children, and in community cultural wealth (Yosso, 2005), familial capital provides young people with strength and
reassurance to go forward and accomplish what their parents perhaps have not. “Our kin also model lessons of caring, coping, and providing educación, which inform our emotional, moral, education, and occupational consciousness” (Yosso, 2005, p. 79). A constant thread within Julian’s interview was his mother’s encouragement, and he acknowledged how hard she was working to provide him and his brother with a better life.

*Interview Question: Did your mother go to that, that parents’ night thing we had in the ROTC gym?*

Oh, yeah. That’s when she heard everything. She was like, yeah, you should go. You’re going to be in college even before you finish high school. She… I -- I was like so excited after she said that.

**Social Capital**

No information was obtained from this participant relevant to analysis by the a priori concept of social capital.

**Navigational Capital**

Julian cited the BBRS program as an important vehicle for helping him find out about what higher education would be like.

*Interview Question: What made you decide to get involved with the BBRS program? What made you decide to say, “All right; I want to try this?”*

Actually, it was like, it was more like I told my mom about it and she was like, “Go for it.” And I was --. I actually wanted to go because it was going to help me for when I do go to college, I will know what it’s like, so I will be more -- like less, less intimidated.

**Resistant Capital**

Resistant capital involves the ability to stand up to both the real and perceived challenges that come from being associated with a so-called “disadvantaged group” (Aragon & Kose, 2007; Yosso, 2005) and Julian’s responses to the following question illustrate this form of cultural capital.
Interview Question: If you had to sum up, of your years in the BBRS program, what has been most helpful?

BBRS helped me see that it’s a huge world out there. It’s -- it’s not only [gave the name of the predominantly Mexican neighborhood in which he lives]. And people might say we’re just from a little place, but you have to make the best of what you’ve got. And especially like --. And don’t let small things like no money and poverty get to me because I realize that most people’s lives are ruined by little things.

Citizenship Capital

During the interview, while responding to inquiries on what aspects of BBRS had been most helpful to him, Julian included the community college student interns who were assisting the Truman College professors teaching in the BBRS program, and he stated that he had noticed a “parallel” between what these college student interns were doing with the BBRS students and what he was about to get involved with, as a tutor for children in a local elementary school.

But I’m going to be tutoring and stuff like that, and it’s going to be -- like it’s going to be a huge deal. So like -- like Billy [pseudonym for a BBRS community college student intern] showing us what it’s like -- it’s like we’re going to help these kids.

Analysis by A Priori components of Validation Theory

In-class Academic Validation

Interview Question: So, if you had to sum up the effect BBRS has had on you?

It’s definitely been positive in so many ways. Like, it’s helped me develop myself into realizing that there’s life after high school. In the BBRS classes, I have to be able to make decisions. The teachers ask us to, and I see that now I can make these decisions in everything -- like do your best in your classes, get all your credits, learn what you have to learn at this level so that later on when you need it you’ll be able to have it like as a tool for your future.

Out-of-class Academic Validation

Rendon (1994) states that for many students coming from backgrounds where there has not been a long tradition of accomplishment in higher education, this type of validation is “a process that affirms, supports, enables, and reinforces their capacity to fully develop themselves

Interview Question: If you had to sum up, of your years in the BBRS program, what has been most helpful?

BBRS helped me see that it’s a huge world out there. It’s -- it’s not only [gave the name of the predominantly Mexican neighborhood in which he lives]. And people might say we’re just from a little place, but you have to make the best of what you’ve got. And especially like --. And don’t let small things like no money and poverty get to me because I realize that most people’s lives are ruined by little things.

Citizenship Capital

During the interview, while responding to inquiries on what aspects of BBRS had been most helpful to him, Julian included the community college student interns who were assisting the Truman College professors teaching in the BBRS program, and he stated that he had noticed a “parallel” between what these college student interns were doing with the BBRS students and what he was about to get involved with, as a tutor for children in a local elementary school.

But I’m going to be tutoring and stuff like that, and it’s going to be -- like it’s going to be a huge deal. So like -- like Billy [pseudonym for a BBRS community college student intern] showing us what it’s like -- it’s like we’re going to help these kids.

Analysis by A Priori components of Validation Theory

In-class Academic Validation

Interview Question: So, if you had to sum up the effect BBRS has had on you?

It’s definitely been positive in so many ways. Like, it’s helped me develop myself into realizing that there’s life after high school. In the BBRS classes, I have to be able to make decisions. The teachers ask us to, and I see that now I can make these decisions in everything -- like do your best in your classes, get all your credits, learn what you have to learn at this level so that later on when you need it you’ll be able to have it like as a tool for your future.

Out-of-class Academic Validation

Rendon (1994) states that for many students coming from backgrounds where there has not been a long tradition of accomplishment in higher education, this type of validation is “a process that affirms, supports, enables, and reinforces their capacity to fully develop themselves
as students and individuals” (p. 45). Throughout the interview, Julian mentioned how his mother was a consistent source of support, whether it was seeing to the maintenance of his heritage language or encouraging him to sign up for BBRS. He seemed especially touched by how his mother consistently provides him with both financial and emotional support.

She works at my old school, in, like in the kitchen helping. Like -- like serving food for the kids. Like -- she’s a lunch lady. So, like she’s there Monday through Friday, six hours -- it’s a hard job and especially her being 47 and everything. But like, I need money for graduation, or I need this or that. She’s always on it. She believes in me. And like it feels weird asking her for money, it’s like “ew” but she’s always there, helping me continue.

Emergent Theme #1: Having College Faculty as Teachers

*Interview Question: All right, so you’ve mentioned Dr. T and Dr. G [BBRS professors] a lot during the interview. Do you perceive any differences between high school teachers and college teachers?*

The method of teaching is very different. I realized that. Like, Mr. Vandermere (pseudonym), he’s like -- he goes back onto something again and again so he knows that everybody knows what -- what he’s talking about. And I noticed that like in college, college teachers are more like if you understand it, okay. If you don’t, okay; whatever. It -- it -- it’s like your responsibility to be here, and be able to -- like go -- like give to the class and contribute to the class and not only just sit and really like, “Okay I’m here.” Like you have to actually do the work.

Emergent Theme #2: Attending Classes on a College Campus

During the coding and analysis of data, the researcher recognized that this sub-theme (having access to the college’s resources and technology in the classroom) frequently occurred in Julian’s responses.

*Interview Question: What effect has BBRS had on your high school studies?*

Well, I remember this one time, we were talking about molarity and stuff like that… but in class, with Mr. Vandermere (pseudonym) -- he can’t actually show us because we don’t have the stuff to do experiments. And so, the next time we came… the time when we came to BBRS they actually showed us and they -- we actually did the experiments, and it was like a totally different thing. Like we actually saw what was going on and we grasped the concept easier.
This point emerged again during the interview.

So like, they [high school teachers] are limited to certain things they can do. And like I’ve seen -- I’ve noticed here -- like they have almost everything to do whatever project they want.

**Participant #3 Ines (pseudonym)**

Ines is a 17-year-old female who identifies as Mexican. She was born in Chicago, IL, to immigrant parents from Mexico. She lives with her parents, two older sisters, and a younger brother. Ines also has a half-brother, on her father’s side, who does not reside with the family. Ines’s parents did not complete high school, but among her siblings, her half-brother is in dental school and one of her older sisters is currently completing her sophomore year at a nearby public four-year institution. Ines’s other older sister, Sylvia, is one year ahead of her at the same high school and is also enrolled in the BBRS program. Ines has a part-time job at a local movie theater, where she works 10 to 15 hours on the weekends.

**Analysis by A Priori Concepts Community Cultural Wealth and Cultural Capital**

**Aspirational Capital**

Ines credited the BBRS program with enabling her to confront her fear of chemistry and ultimately make the decision to major in chemistry in college.

*Interview Question: Have you made any decisions about your post-high school options?*

I’m going to major in chemistry, but see, I’m debating because my older brother said it was kind of difficult, chemistry. So, he’s like, if I want to go to pharmacy school -- take biology -- which is, I guess, the easier way. But I mean, after -- during -- during the BBRS program and taking that chemistry class, it’s like -- it motivated me and inspired me to take it, yeah.

**Linguistic Capital**

No information was obtained from this participant relevant to analysis by the a priori concept of linguistic capital.
Familial Capital

For first-generation-college-going students, having same-generation family members who have gone or are going through the college experience takes on increased importance when these students consider their college futures (Aragon & Kose, 2007; Yosso, 2005). Ines often mentioned her half-brother and older sister when discussing BBRS, her intended major, and her college of choice.

*Interview Question: Has BBRS made any difference about how you regard college?*

Yes -- yes because -- how should I say this? Well, my sister, she takes college courses, too, and she told me about her chemistry courses and she passed, and like she was good at it -- I think it’s Chem 101 and when I told her like the credits we’re getting now count towards Chem 101 and like we do good things, she told me that I should stick with this.

Social Capital

No information was obtained from this participant relevant to analysis by the a priori concept of social capital.

Navigational Capital

Most of the students enrolled in the BBRS program were also members of Junior ROTC, and it was disclosed during the interviews, that at one point in the BBRS sequence, students concurrently enrolled in ROTC would have to choose between attending a summer ROTC program (and automatically being dropped from the BBRS program), or continuing with their second intensive summer session in BBRS. Ines was emphatic about her choice.

*Interview Question: What kept you staying in BBRS?*

The fact that it was, it would help me know about college before I go to college and like it would give me credit for college courses already.
Resistant Capital

Yosso (2005) points out that within communities of color, mothers often encourage their daughters to “resist the barrage of societal messages” which devalue and belittle them (p. 81). She cites evidence of how Latina mothers “try to teach their daughters valerseporsimisma (value themselves and be self-reliant) within structures of inequality such as racism, capitalism, and patriarchy” (p. 81). During the interview, Ines mentioned the dilemma young Latinas face (motherhood versus education) and explained how supportive her parents are of the young women in their family.

*Interview Question: Do you ever tell your parents about it [BBRS]?

I tell them -- I tell them about how it’s college courses and they’re proud of me and my sisters. Like, they couldn’t graduate from high -- high school, and like they’re proud of us and they really want us to do good. It’s hard because there’s a higher rate of, you know -- in Mexico and here, teenage girls get pregnant, and they just don’t want us to fall in there. My mom experienced this, so she’s… So it’s three girls and we’re all going to go to -- it’s one in college and two of us are going to college next year. They want us to…We are going to proceed with our education.

Citizenship Capital

No information was obtained from this participant relevant to analysis by the a priori concept of citizenship capital.

*Analysis by A Priori Components of Validation Theory

In-Class Academic Validation

A hallmark of in-class validation is when faculty structure learning experiences allow students to experience themselves as capable of learning (Rendon, 1994). When asked about what she liked best about the BBRS program, Ines spoke at length about how certain in-class activities made her feel confident and strong.
**Interview Question:** And so, what do you like the most about the BBRS program?

I like conducting experiments and stuff.

**Interview Question:** Tell me more of that.

It’s like -- it’s so amazing, like we’re figuring out new things and stuff, and just like when the professors give you experiments to do, it’s like you’re excited to know the results, and like, yeah, sometimes you mess up and make errors and stuff, but they tell you it’s part of the process. Then you see what you get and don’t get. I love doing these experiments.

**Out-of-class Academic Validation**

Consistent with Rendon’s (1994) theory that teachers who spend time with students outside of class, giving motivation and support are powerful resources in minority students’ lives, Ines cites the encouragement of her science teacher, Mr. Vandermere (pseudonym), as a powerful force in her decision to enroll in the BBRS program.

I was actually shocked because he [Mr. Vandermere] told us only certain students were chosen and I was like happy at the same time. I was like, “Okay, so I’m going to this college to take college courses.” So that made me kind of happy because it’s like, I was afraid of going to college. I was like, “I don’t know what I’m going to do.” But because he said that, I guess I did good and I wasn’t going to be afraid about college.

Ines went on to explain how that even when she was no longer taking classes with Vandermere, he was still around to provide her with support while she was continuing in BBRS.

**Interview Question:** Who and/or what has been helpful in keeping you in the BBRS program?

Mr. Vandermere, especially. Like he -- from all my teachers, I feel like he’s the one that has really motivated me to keep on going with BBRS and with school and not be afraid. Like, he would always tell me, you know, college is not that bad. It’s like, you know, you’re going to the outside world and it’s like you’re not going to have somebody taking care of you or telling you to go to school. I was scared at first, but his talking to me all the time made me feel more comfortable.

**Emergent Theme #1: Having College Professors as Teachers**

As Ines expressed her comfort with the notion of college, due to her first-hand experiences in a college setting, the interviewer asked probing questions related to faculty.
Interview Question: What are your thoughts on the college professors you’ve encountered in BBRS?

Working with professors is, I think, amazing because you have, like, more connections with them than you think. You’re able to talk freely to them and feel comfortable with them. You can ask questions and they answer you.

Interview Question: Is there a difference between a high school teacher and a college professor?

Well, not really, but in a way, yes, because in high school they’re the ones that you have as -- like -- a teacher --. So it’s like you depend on them -- on your -- like your grades and stuff. And in college, it’s like, they’re there but, they’re not always going to be there because they have a lot of other students to work with, to talk to and stuff. So, in high school, there’s like only one class and it’s the same students all the time, and in college, yeah, it’s different in college. I see that now.

Emergent Theme #2: Attending Classes on a College Campus

Interview Question: Now that you’ve been through BBRS, do you feel differently about your post-high school options than if you hadn’t gone through BBRS?

Yes, I do because I feel like I’ve been more exposed to things that people who didn’t participate in BBRS, like the college life -- college life that a lot of people -- like most people like ask me about. Like me and college seniors are kind of like scared, but I guess now, I go to college. I see those students and I feel more comfortable.

Participant #4: Sylvia (pseudonym)

Sylvia, whose younger sister, Ines, is also enrolled in the BBRS program, is an 18-year-old female who describes her ethnic identity as Hispanic. Like Ines, Sylvia was born in Chicago, and she lives with her parents, sisters, and her younger brother. Sylvia has been employed part-time (20-25 hours per week) at a dollar store since the age of 16, and has worked her way up from salesperson to one of the store’s managers.
Analysis by A Priori Concepts Community Cultural Wealth and Cultural Capital

**Aspirational Capital**

Yosso (2005) notes that this form of cultural wealth nurtures a “culture of possibility” in which both students and their families strive to help these students surpass their parents’ occupational status and achieve higher academic goals (p. 69).

*Interview Question: Have there been any difficulties associated with the BBRS program?*

In response to this question, Sylvia referred to her initial reaction to whether or not she could join the BBRS program in the first place, due to financial circumstances.

I didn’t think I was going to join the program because I work a lot in the summer, and I’m like -- “Well, if I’m working, I don’t think I’m going to be able to go.” But my parents and I both said, “Education comes first,” and that’s when I decided to come.

**Linguistic Capital**

No information was obtained from this participant relevant to analysis by the a priori concept of linguistic capital.

**Familial Capital**

As did her younger sister, Ines, Sylvia cited the eldest sister of the family as one of the guiding forces in her choice of college.

*Interview Question: When did you make the decision about which college to go to?*

I was a senior. And then I applied to the college that I wanted to go to, and I didn’t -- I didn’t get anything. But that was okay, because my sister, my sister… she goes to [named a local, large public university] and I want to go there because of her. Like, she’s telling me how it is, and I’m learning from her, so I’m not that scared or worried.

**Social Capital**

No information was obtained from this participant relevant to analysis by the a priori concept of social capital.
Navigational Capital

During the interview, it became evident that Sylvia’s primary motivation for becoming involved in BBRS was not due to her interest in science but in her desire to be exposed to college at this early point in her education.

Interview Question: So when did you first become interested in science?

Science…well, Mr. Vandermere (pseudonym) brought up the BBRS program, and then he told us like we’re going to get a chance to go to college and see how it is, and it got me kind of thinking -- oh, you know, before I even go to college, I’m going to experience how it is to be a college student and do what they do.

Interview Question: So, had you even been interested in science before?

No, not really. I wasn’t --. I didn’t really think about it. I want to go for psychology, but when he said about science and about college classes, I said, well, I’m going to try it.

Resistant Capital

No information was obtained from this participant relevant to analysis by the a priori concept of resistant capital.

Citizenship Capital

No information was obtained from this participant relevant to analysis by the a priori concept of citizenship capital.

Analysis by A Priori Components of Validation Theory

In-class Academic Validation

Rendon (1994) stresses the importance of in-class experiences that help students “trust their innate capacity to learn and to acquire confidence in being a college student” (p. 40). During the interview, Sylvia credited two of her high school teachers with helping her develop self-confidence.
Interview Question: Are there any people who have contributed to your “eyes on college”?

Yes, my two teachers, my biology teachers, Mr. Vandermere (pseudonym) and Mr. Albano (pseudonym), both of them because they never gave up on us. No matter -- like if we do bad or we don’t understand, they never get tired. They ask us questions and make us understand. They’re patient, and I like that in a teacher.

Out-of-class Academic Validation

Sylvia credited her high school teacher, Mr. Vandermere with convincing her to enroll in the BBRS program when she was having doubts about whether she should get involved.

At first, me and my sister weren’t going to get involved because usually -- well, during the summer my parents -- like, they want to go on vacations. But then, I - - but then I talked to Mr. Vandermere, and he’s the one that told us it’s a great opportunity, you know. It looks good on your college application when you’re going to go and stuff, and you’re going to learn new things and do experiments. And I was like yeah, you’re right. And we decided to come and join.

Emergent Theme #1: Having College Faculty as Teachers

Interview Question: What did you like most about the BBRS program?

It prepared me for college, and I think I’m ready, and I -- I experienced how college classes -- well, chemistry classes would -- would be like, and that’s the way I learn.

Interview Question: Are they different from high school classes?

In a way they are because right here, the teachers show us their labs and everything. It’s a lot of work. They do a lot of writing and presentations, and in high school we don’t really do presentations. We just do labs and stuff like that.

Emergent Theme #2: Attending Classes on a College Campus

While discussing the differences between college professors and high school teachers, Sylvia added another dimension: having the chance to interact in the classroom with “actual college students,” as she put it.

Interview Question: So what do you mean by “you do presentations here?”

Here -- well, we were once -- I don’t remember when… we were sitting in the classroom and we were listening to actual college chemistry students, and they were presenting their
-- their labs they did – their -- their labs, and we don’t present labs. So, like, we get a chance to see how it is.

**Participant # 5: Araceli (pseudonym)**

Araceli is a 17-year-old female who stated that she was “half Hispanic/Latina/Mexican.” She was born in Mexico, but came to the United States with her parents when she was two years old. Araceli is the eldest of four daughters. Araceli’s parents both dropped out of high school in Mexico, but her father obtained his GED and is currently studying at a community college near Araceli’s home. Araceli does not have a job outside of school.

**Analysis by A Priori Concepts Community Cultural Wealth and Cultural Capital**

**Aspirational Capital**

Araceli’s firm decision to go away to college, despite financial hardship and self-doubt, illustrates her capability of “dreaming of possibilities beyond their present circumstances even without specific means of attaining those goals (Aragon & Kose, 2007, p. 117).

And personally – me -- I’m going off to college this fall. Actually, I’m having a slight -- like a small problem with financial aid – but -- though, everything else is all perfect. I couldn’t ask for anything else.

**Interview Question: What challenges do you envision for staying in college?**

I feel that I’m going to be very intimidated because I’m the first generation to attend college where I will go away, and I’m going to -- I’m practically going to be on my own, and it scares me because I’ve never been exposed to this and no one in my family has either. So I just hope I’m strong enough to stay in school and continue on.

**Linguistic Capital**

No information was obtained from this participant relevant to analysis by the a priori concept of linguistic capital.
**Familial Capital**

Araceli credited her immediate family with providing her with moral support and encouragement to pursue higher education and cited her father as a role model.

*Interview Question: So, have either of your parents or any of your sisters or brothers attended or graduated from college?*

Actually, no. I’m the oldest, so I’m the first generation to actually attend college. My mother, she dropped out of high school and my dad… he studied English and he got his GED, and afterwards -- well now he wants to get a degree. He wants to start off small, but he wants me to go all the way. I’ll do it for him and for me. I’m going to study as a nuclear engineer -- bachelor’s degree. Obviously, start out with a bachelor’s, and then continue on. I want to continue on to get a, to obtain a Ph.D. and then teach.

**Social Capital**

No information was obtained from this participant relevant to analysis by the a priori concept of linguistic capital.

**Navigational Capital**

During the interview Araceli mentioned that in her junior year of high school, she participated in a three-day engineering workshop, held at a large, public four-year institution in another region of the state, and Araceli spoke at length about how this experience gave her some first-hand insight about college. “And my dorm -- my roommate… I was like, oh, “What is it like?” And she started explaining to me all these things.

*Interview Question: So you actually stayed in a dorm while you were there?*

Yeah, I got to experience more of a college environment living at the dorms. And that was pretty cool. She got me interested, and I’m like -- well, I like that stuff, and I’m really good at it -- so why not, you know, go to college and continue on in that field.

**Resistant Capital**

*Interview Question: Having completed the BBRS program while you’re still in college, has it affected how you feel about your future?*

Before I started high school, I didn’t care so much about my education. I would just go to school every day just because. And when I started the BBRS program, I started noticing -- noticing that there was so many professionals -- people with degrees, but not people like me. I was never exposed to that environment because of the fact that my parents are
not people who went to college. My family, they were never exposed to a big environment with different cultures like there is in college. And people who are educated and been exposed to a lot of things --. They think very different. They think very open-minded, and it’s like they’re not scared to fight for what they want and what have you, because they know what it’s like being -- they know what the real world is. And I’m like -- well, I want to be -- be one of those kind of people who actually know what they’re doing and work really hard and succeed in life.

**Citizenship Capital**

Aragon and Kose (2007) posit that one of the components of citizenship capital includes the feeling of being personally responsible for the welfare of others. Araceli demonstrated this trait when she explained how her intended major -- something in the science field, would enable her to “give back” to the younger generation.

My little sister, a four-month-old baby… it’s like I want to leave something behind. And in the science field, you know, like in BBRS, where I was taught all the science stuff and how we can improve our environment, I can -- I can invent something that can make a better future for my baby sister… something that will help them develop as well and be great minds, just as I want to be, you know.

**Analysis by A Priori Components of Validation Theory**

**In-Class Academic Validation**

The teaching styles of the college faculty with whom Araceli interacted instilled a kind of confidence Araceli claims she hadn’t experienced until taking part in the dual credit classes.

*Interview Question: Is there a difference between doing labs at Truman and doing them here at Foster (pseudonym)?*

At Truman it was a little bit more hard. It was a lot more challenging.

*Interview Question: How come?*

Because at Truman we had to figure out things mostly on our own, which is pretty cool because, you know, that helps us develop in our brains how to think and analyze -- what have you. We were challenged more than I expected, and that was great. They [the college faculty] really pushed us to -- you know, work harder and work towards our goals.
Out-of-class Academic Validation

Araceli mentioned that she had spoken with several of the BBRS professors outside of class regarding further opportunities for science study, such as internships and scholarships, and she told the interviewer that because of her “strong interest in science” (as she described it), the Truman College BBRS professors had made her feel confident about her academic future.

I noticed that the teachers were very dedicated to their job. They were -- they would help students. They wouldn’t leave them alone as sometimes here at Foster. There, teachers don’t care and they just don’t -- I mean, they stay after school but only if the students ask. They never really offer help. So, at Truman College the professors actually do, you know, they will help you, blah, blah, blah, and that’s how -- I’m -- I want to go to school where, you know, they’re going to help me and encourage me to go on.

Emergent Theme #1: Having College Faculty as Teachers

Interview Question: If you had to say any difficulties associated with being in the BBRS Program -- what -- what were they?

Araceli’s response to this question provided yet another piece of evidence for the interviewer’s finding that these high school students consider the opportunity to experience the teaching styles of faculty in higher education to be one of the most valuable aspects of a dual enrollment or dual credit program.

There were times when I would get frustrated -- frustrating -- because I -- I would try to pay attention and what have you, but the teachers at BBRS, at Truman College, they have more of a developed language.

Interview Question: What do you mean by that?

Meaning as in they use different terms to explain their ideas or would incline, you know, get the students to learn. As with here at Foster, they use very simple words. But in Truman, they’re very sophisticated, and sometimes I’ll be like “What is he talking about?” I’d be like, “What does this mean?” And I would ask for help all the time, raise my hand. And I -- and I’ve learned a lot.
Emergent Theme #2: Attending Classes on a College Campus

*Interview Question: What did you like most about the BBRS program?*

The most -- it was being able to experience what it’s like to be a college student. Being exposed to what college is really all about. You’re around students who actually want to go to school, who are very determined, who are there for a reason. As in high school, you’re just there because, you know, probably your parents -- you’re supposed to be in school, so you have to go to school. There are students around here at Foster who don’t want to go to college, and they’re just slacking off. But, in Truman College, you’re in the envir -- environment of wanting to learn, and you know, succeed, and be gaining knowledge, you know? And it keeps you going, and yeah, it’s really motivating.

Participant # 6: Dario (pseudonym)

Dario is a 17-year-old male who describes himself as Mexican. Born in Mexico, Dario arrived in the USA at the age of twelve. Dario is one of seven children. He lives in Chicago with his mother and two of his brothers. Dario’s parents never went beyond elementary school, but one of his sisters, who is living in Mexico, is about to graduate from law school. Dario works part-time, 24 hours a week, as a houseman at a hotel in downtown Chicago.

**Analysis by A Priori Concepts Community Cultural Wealth and Cultural Capital**

**Aspirational Capital**

Dario spoke at length about having to work in addition to going to school, but, consistent with the notion of aspirational capital (Aragon & Kose, 2007; Yosso, 2005), he expressed his unwavering determination to obtain a college education in spite of this challenge.

*Interview Question: Have there been any difficulties with staying in the BBRS program throughout these years?*

Yes, because sometimes I have to work, so I couldn’t go, but I was like, should I go or I shouldn’t go.

*Interview Question: How did you handle that?*

I have to call my manager and then I, you know, I have to go to school, and it’s basically my education and my future, so I have to go. And if you are going to fire me or
something, then I guess I have to look for another job; and they’ll be like, “No, don’t worry; it’s okay.”

**Resistant Capital**

Aragon and Kose (2007) cite the ability to affirm one’s self worth and persevere in the face of stereotyping and/or discrimination as elements of resistant capital. During the interview, Dario disclosed his status as an undocumented individual in the United States and how he was dealing with issues of discrimination.

*Interview Question: Have you been thinking about your post-high school options?*

Well, I have applied to different schools, to different colleges and universities, but since my status here -- I’m illegal -- some places aren’t interested in me. But I didn’t stop. I contacted [named a small, private, four-year college], and they’re like, you know, “We’re private and we’re going to give you money, and if we see that you are taking advantage of it and getting good grades and everything, we’ll give you more money.” So, I’m like, I think that’s good.

**Other A Priori Concepts of Community Cultural Wealth and Cultural Capital**

No information was obtained from this participant relevant to analysis by the a priori concepts of linguistic capital, familial capital, social capital, navigational capital, or citizenship capital.

**Analysis by A Priori Components of Validation Theory**

**In-Class Academic Validation**

Rendon (1994) affirms that faculty who practice validating behavior make students feel that they have the talent and skills to excel in education. During the interview, Dario became animated when discussing how the BBRS college faculty increased his confidence in his ability to college-level work.

*Interview Question: What did you like most about the BBRS program?*

Hmm, that most of the labs that we did in BBRS prepared us for chemistry.
Interview Question: How?

We learned stuff that was going to be difficult, like titration. And the college professor was like, “Hey, you are doing this, see?” So we felt like we were learning something that our high school teacher wouldn’t have to explain all over again.

Out-of-Class Academic Validation

Consistent with Rendon’s (1994) findings that racial and ethnic minority students who have not had a legacy of college-going in their backgrounds benefit greatly from out-of-class experiences with teachers, Dario cited his on-going interaction with one of his high school teachers as playing a pivotal role in his decision to go to college. As he discussed his dilemma regarding documentation and how he would pay for college, the interviewer asked if there was anyone who was assisting him with this situation.

Interview Question: Is anyone helping you decide, you know, navigate this whole college thing?

My freshman English teacher -- yeah --. Ms. Maxwell (pseudonym) --. And we have kept in contact. And also, every single year for seniors, she makes them, the seniors apply to two colleges, at least. When I told her I wasn’t sure about my situation, she said, “You have to do, you have to do it.”

Emergent Theme # 1: Having College Faculty as Teachers

Interview Question: Who and/or what has been helpful in keeping you in the BBRS program?

Well, actually, the first day I was like bored. I was like ah, you know, because they were just giving lectures. I was like no, I don’t want this. I don’t want to come anymore. But after we started doing some labs, I’m like actually -- I’m doing something. I’m not just memorizing stuff, like in high school.

Interview Question: Is there a difference between doing labs in BBRS and doing labs in high school?

Well, yes, because we have more -- more things to work on like in college. You have everything you need and here sometimes you don’t have it, so you have to wait -- wait for things to come.
*Interview Question: Is there a difference between high school teachers and college teachers?*

Well -- high school -- the teachers have to be reminding you about everything, like your homework and this and that. And in college, it’s upon you. Right here, it’s different. These professors treat you like you’re by yourself. You know, it’s your life.

**Emergent Theme # 2: Attending Classes on a College Campus**

No information was obtained from this participant relevant to analysis by the emergent theme of attending classes on a college campus.

**Participant #7: Marisol (pseudonym)**

Marisol is an 18-year-old female who identifies as Hispanic. She was born in the United States, to parents from Mexico. Marisol is the second oldest of five children, ranging in age from twenty to five. Marisol does not have a job. During the interview, Marisol mentioned that her mother had begun college before she left Mexico but never completed it. She also mentioned that was not sure if her father had completed high school. Marisol’s older sister has just completed an 8-month post-secondary program at a two-year proprietary institution to become a pharmacist technician.

**Analysis by A Priori Concepts Community Cultural Wealth and Cultural Capital**

**Aspirational Capital**

For Hispanic students, this form of cultural wealth occurs when young people’s educational aspirations thrive and these students are nurtured by their families to surpass their parents’ educational and occupational statuses (Yosso, 2007). During the interview, Marisol spoke at length about her parents’ lack of completion of higher education and her sister’s minimal motivation to go to college but how high her own hopes and dreams for higher education were.
Interview Question: Have either of your parents or any of your brothers or sisters attended or graduated from college?

My mom is like the only one from my --. She’s the only one that went to college, but she --. I don’t know if she -- she came here before graduating and she never went back to complete her last two years or something. My dad, I don’t think he did much. Probably high school maybe, but I don’t know.

Interview Question: Okay. Brothers or sisters?

My sister, she just finished her program at [named a proprietary, training institute]. She did like an eight-month program or something. Pharmacist technician, because she said school wasn’t for her. Like she barely finished, so it was kind of like us pushing her to do something before she got lazy and stuff.

Interview Question (later on in the interview): So, is science going to be part of your future?

Yes. I am --. I’m going to be pre-Med and then I might go --. I’m going to go to medical school. You know, I might be a -- a plastic surgeon. I don’t know; that might be cool. And, or an anesthesiologist. I’m really not sure, but yeah, I’m going to go far in the medical field.

Linguistic Capital

Yosso (2005) acknowledges the advantages associated with bilingualism that many students of color possess.

Linguistic capital reflects the idea that Students of Color arrive at school with multiple language and communication skills. In addition, these children most often have been engaged participants in a storytelling tradition that may include listening to and recounting oral histories, parables, stories (cuentos) and proverbs (dichos). This repertoire of storytelling skills may include memorization, attention to detail, dramatic pauses, comedic timing, facial affect, vocal tone, volume, rhythm, and rhyme. Yosso, 2007, pp. 78-79.

Although born in the United States, Marisol cited how important it was for her to maintain her heritage language, Spanish, as a way to connect herself to her roots.

Interview Question: Do you speak Spanish?

Oh, yes. I want to meet my grandma on my dad’s side, you know, and I want to hear her stories, because my other -- my mom already lost her mother so I want to get there [to Mexico] before -- before, you know.
Navigational Capital

Navigational capital refers to “skills of maneuvering through social institutions” (Yosso, 2005, p. 80). In its broadest context, the focus is on handling the technical aspects of higher education, such as learning how to register for classes and how to purchase textbooks, but it also encompasses becoming familiar and comfortable with the teaching and learning styles typical of higher education. Marisol credited having the opportunity to test out what college would be like before actually enrolling in college as instrumental in her ability to see college in her post-high school future.

*Interview Question: So now that you’ve completed a portion of this BBRS thing, how do you feel about your post-high-school future?*

Well, like now I won’t think like - oh I’m afraid of school. I mean, going to Truman was difficult, but it wasn’t like, I can’t handle this or I don’t want to do this anymore, you know. The lectures, the classes were something we needed to experience.

Other A Priori Concepts of Community Cultural Wealth and Cultural Capital

No information was obtained from this participant relevant to analysis by the a priori concepts of familial capital, social capital, resistant capital, or citizenship capital.

*Analysis by A Priori Components of Validation Theory*

In-Class Academic Validation

Although Marisol often credited BBRS faculty with increasing her belief in her ability to do college work (comments appropriate for “in-class academic validation”) her comments related to “specific actions of an academic nature that occur in class, which help students trust their innate capacity to learn and to acquire confidence in being a college student” (Rendon, 1994, p. 40), better fit under the emergent theme of “Having College Faculty as Teachers.”
Out-of-Class Academic Validation

Rendon (1994) emphasizes that minority students are “validated” when an individual (mentor, teacher, coach, etc.) makes a concerted, pro-active effort to inspire and encourage them. “It appears that nontraditional students do not perceive involvement as them taking the initiative. They perceive it when someone takes an active role in assisting them” (Rendon, 1994, p. 44). In Marisol’s case, it was evident that out-of-class validation was extremely helpful in keeping her invested in the BBRS program.

Interview Question: Who or what has been most helpful in keeping you in the BBRS program?

Mr. Vandermere (pseudonym). Definitely. Even like in the beginning, like, I mean, like fresh out of sophomore year, I was like -- he was like my favorite teacher, honestly. I always felt like I was learning in his class. And then, yeah, we had like a good relationship, and I could count on him for help. He was -- even this year when I’m like, applying for colleges, he was there helping me, giving me letters of recommendation and stuff, helping me through it. And yeah, he’s like what kept me coming back and stuff.

Emergent Theme #1: Having College Faculty as Teachers

Marisol spoke at length about the challenges and rewards of interacting with college faculty.

Interview Question: What were some of the challenges of being in the BBRS program?

There was this one lecture -- it was like, wow; it was like a lot to, you know, absorb it in one sitting, you know. It was like -- but, you know, you get the main idea and stuff and that kind of helps, you know, to extract, and you know, learn to extract the main ideas, but the lecture was complicated, and wow! But that’s what college teachers are like. It’s -- it’s good.

Interview Question: Do you remember which lecture it was?

It was with the college students. It was that day that we were with the students and they were -- they each had to like -- I think it was like their final project or something, and there was a girl talking about, I don’t -- I don’t want to mess it up, but I think it was like about some medication or drugs -- I don’t know. It was mind boggling at the time -- even now.
Interview Question: *But how did you, you, you – how did you feel after that?*

Like -- she gave us her -- like her paper -- copies of her paper. And I was like, wow, it was like a couple sheets long. And then like, you know when she talked, you took down your notes, and from what you heard her say and looking at her paper, you kind of like understood, and then you felt good.

Emergent Theme #2: *Attending Classes on a College Campus*

In addition to being grateful for the opportunity to experience instruction from college faculty, Marisol also credited her interaction with college students as being an outstanding feature of the program.

Interview Question: *Now that you’ve gone through BBRS, how has it affected you?*

Well, during one of my -- the -- my last trips to the college campus, we were with a couple of medical students -- or no. Were they medical students? I think they were. And they were like telling us about their plans and what they were doing. Like one of them was doing research with a guy in -- in Mexico or something and like, other students telling us their stories and their experiences made me like want to be like there with them already, you know?

Interview Question: *Before BBRS, had you ever been in a college or talked to a college student?*

Well, not a college student, but I had been at [a local, public university] before. I was part of some math and science program for Hispanics [went on to name the program]. And that was like my 8th grade and some of my freshman year. But it was like too -- too general -- too broad. I don’t know. But at BBRS we’re always in a college environment. You know, like -- we would do laboratories with professional people, and like they knew what they were talking about when they talked to you.

Throughout the interview, question after question, Marisol consistently mentioned her interactions with college students as being the most challenging yet rewarding aspects of the BBRS program.

**Summary**

This chapter began by providing an overview of the Baccalaureate in the Research Sciences (BBRS) Program and a description of the partner institutions involved. The chapter then presented the methods of data collection and demographic information about the
participants in the study. This information was followed by in-depth explanation of the concepts and theories used to code and analyze the data collected from the interviews, including emerging themes that were discovered during and after the interviews had been conducted. The “heart” of the chapter concluded with the rich, thick description of the participants’ responses to semi-structured interview questions, which helped the researcher identify and understand the factors that contributed to Latino students’ persistence in the first two years of the BBRS 2+2+2 program.
CHAPTER 5: FINDINGS, CONCLUSIONS, AND IMPLICATIONS

Latino students still lag behind their white and African-American counterparts in terms of college completion (Gandara & Contreras, 2009; Pew Hispanic Center, 2009). Creative programs such as 2+2+2 programs, which link these students to the college environment while still early on in their high school years, are needed more than ever in order to bridge this gap.

This study focused on one such program for this population: Bridges to the Baccalaureate in the Research Sciences (BBRS), a partnership between the Chicago Public Schools and Harry S. Truman College, one of the City Colleges of Chicago. The study sought to understand and analyze, from the students’ perspective, the factors that motivated them to enroll in and complete the first two years of this 2+2+2 program. Information gained from this study can assist community colleges in developing high school-to-college bridge programs that effectively engage Latino high school students and create the confidence and knowledge they need to perceive themselves as college bound. In this chapter will be found: a) a brief summary of chapters 1 – 4; b) findings, conclusions, and implications of this study; c) presentation of the King model for the first two years of a 2+2+2 program; and d) recommendations for future research.

Brief Summary of Chapters 1 - 4

Chapter 1 introduced the issue under study and its significance to community colleges. The research purpose and driving questions which guided the study were then presented. A brief literature review followed, highlighting the key theories and concepts which framed this research. An overview of the study design was also discussed in order to establish a contextual framework for the research. Definitions of relevant terms were included to provide greater understanding of this research and implications for subsequent research.
Chapter 2 presented a review of relevant literature and explanation of the theoretical and conceptual frameworks used to view and interpret the findings of this study. This review began with an overview of historical models of persistence theory and then focused on persistence theories for Latino students in higher education. The chapter closed with extensive discussion of validation theory (Rendon, 1994) and the concepts of community cultural wealth (Yosso, 2005) and cultural capital development for diverse college students (Aragon & Kose, 2007), which provided the researcher with a lens to interpret and analyze study findings.

Chapter 3 explained the rationale for the research design, identifying it as a qualitative case study situated within the interpretive paradigm. The methodology was described in detail and included the role of researcher, case and participant selection, data collection methods, methods analysis techniques, issues of trustworthiness, ethical considerations, and limitations of the study. Participants selected for this case were seven Latino high school students who had completed the first two years of a 2+2+2 (high school to community college to 4-year institution) program. The primary data collection method was face-to-face semi-structured interviews. In addition, the researcher also engaged in detailed reflexive journaling and took extensive field notes. To enhance transparency of the findings, a thorough description of the methods and techniques employed to ensure trustworthiness of the research and confirmability of the study findings were provided. Consistency within the study design, as well as the data collection and analysis methods was always present throughout this research endeavor, in order to assure the trustworthiness, rigor, and transferability of the study findings.

Chapter 4 began with a discussion of the history, goals, and structure of the 2+2+2 program in which the case participants were involved and gave an in-depth description of the partner institutions. The second part of this chapter presented the methods of data collection and the
demographics of the participants to establish the context of the study. The third section of this chapter defined the concepts and theories used to code and analyze the data collected from all the data sources. The chapter concluded with a presentation of the findings and analysis of the data that were gleaned from the participants in the study, according to the a priori theory and conceptual frameworks derived from the literature review as well as all emergent themes.

**Findings, Conclusions, and Implications**

This section reviews the purpose of this study and summarizes the findings from the four research driving questions. Each of the research driving questions yields implications for community colleges seeking to partner with high schools and implement dual credit programs for Latino students. The findings, conclusions, and implications from this research study inform the development of the King 2 + 2 bridge model to support high school to community college persistence for Latino Students.

**Purpose of the Study**

The purpose of this study is to identify the factors that contribute to Latino students’ enrollment and persistence in the first two years of a 2+2+2 program (high school – community college – university).

**Research Driving Question 1**

*What do these students perceive as factors that have positively affected their persistence in the BBRS program?*

Three primary factors were cited as positively affecting persistence in the Bridges to the Baccalaureate in the Research Sciences (BBRS) Program by the study participants. These factors were: a) having community college courses taught by college faculty; b) a high school teacher serving as a champion of the bridge program; and c) attending college classes on the
community college campus. It was apparent this combination of factors served to enhance the persistence and thus success for all students in the study.

**Having Community College Courses Taught by College Faculty**

Rendon (1994) describes validation as an “enabling, confirming and supportive process initiated by in- and out-of-class agents that fosters academic and interpersonal development (p.44). Throughout the interviews, participants credited individuals such as teachers and family members as being the primary factors that kept them invested in the program. It is of critical importance to note, however, that while many students spoke of a parent or a college-going sibling as having a significant impact on their retention in the program, it is clear that the most important validating agents for these young, not-yet-near-college-going-years students were the college faculty with whom they interacted during their classes on the college campus. These participants spoke at length about how being treated like real college students kept their interest and caused them to stay in the program even when the coursework got tougher or there were other concurrent events in which they could have participated. One of the participants, Julian, made an observation which was echoed many times by other members of the group:

> Like, the method of teaching is very different. I realized that. Like, in college -- college teachers are like, if you understand it, that’s okay; if you don’t, it’s your responsibility to learn. The teacher isn’t going to just tell you the answer. You have to be able to like, contribute to the class and participate, not only just sit and like, “Okay I’m here.” You actually have to work.

Adding yet another dimension to the positive impact of interacting with college faculty, several students mentioned the greater science knowledge of the college faculty as being a factor that kept them coming back for more. Through their comments it was apparent that these study participants were able to see the connection between science and the world beyond the classroom as they witnessed the college faculty’s professional research projects.
A High School Teacher Serving as Champion of the Bridge Program

Closely following the college faculty as the primary validating agents was the high school biology teacher, who served as the liaison between the high school and the BBRS program. Findings revealed that this individual had a major impact on these students’ persistence in the program. The majority of the students mentioned that even when they were no longer in this teacher’s sophomore biology class (while co-enrolled in BBRS) and had gone on to the second year of the 2+2+2 program, this teacher still checked in with them regularly and inquired on their progress in the BBRS program. Many of the participants remarked this individual’s continual steady presence, both at the high school and on the college campus encouraged them to stay in the program even when the coursework got more difficult. One of the participants, Pamela, described this experience, which was common to all of the members of the group:

Mr. Vandermere (pseudonym), he’s just really into it [BBRS]. Like if we do work here [at the college], he asks us, “What did you do? Show me those handouts.” And he tries to apply whatever we do here to our class work.

Attending Classes on the Community College Campus

This research study revealed that while many of these students had a relative or friend who had pursued post-secondary education, none of them had ever been in an actual college setting before enrolling in the BBRS program. The majority of the seven participants cited attending class on a college campus as being a very attractive aspect of the program. This “physical” experience at the community college had two types of positive impact on the students: 1) it enabled them to observe and interact with college students actively engaging in learning; and 2) it afforded them the opportunity to use the laboratory equipment and resources that their high school lacked.
In terms of observing and interacting with college students, many of the participants spoke at length about how motivated they were by seeing students who actually wanted to be in school. This was in stark contrast to the wide range of enthusiasm about learning they were accustomed to seeing at their high school. Several participants also commented on how important they felt when some of the college students would chat with them in the hallways and especially during their final year of the BBRS program where they shadowed a college student who was engaging in research. Also cited by several students was the opportunity to watch college students “present their labs,” a practice which was not done at the high school.

Along with the opportunity to see college students in action, the chance to benefit from the college’s technological resources was another positive factor for these students’ persistence in the program. The majority of the participants noted how rewarding it was to conduct experiments that required equipment or materials that were not available at their inner-city high school. One study participant, Julian, described an experience related to the aspect of resources that only the college can provide:

Well, I remember this one time, we were talking about molarity and stuff like that… but in class, with Mr. Vandermere (pseudonym) -- he can’t actually show us because we don’t have the stuff to do experiments. And so, the next time we came… the time when we came to BBRS they actually showed us and they -- we actually did the experiments, and it was like a totally different thing. Like we actually saw what was going on and we grasped the concept easier.

This point emerged again during the interview.

So like, they [high school teachers] are limited to certain things they can do. And like I’ve seen, I’ve noticed here, like they have almost everything to do whatever project they want.

**Implications of Findings for Community Colleges**

Findings are convincing that being physically present on a college campus and having actual college faculty deliver coursework exacts a higher level of engagement and persistence
from high school students. Although it is known that many community colleges that offer dual credit programs prefer to use high school teachers to deliver college-level coursework and conduct these college-level courses at the high school. This is done for a variety of reasons including an effort to save money by not encumbering more expensive college faculty or monopolizing scarce space on the college campus. However, community colleges that want to establish highly successful 2+2+2 programs should use their own faculty to deliver instruction and offer a substantial portion of the instruction on the college campus rather than at the high school.

Furthermore, the presence of a high school champion, a constant liaison between the high school and the college, is a critical factor for success in the first two years of a 2+2+2 program. It is important that the partnership between the high school and the college be cemented by a grassroots member of the high school team: one of the teachers with whom the students are already acquainted and on whom they can rely. Research shows that for Latino students, whose parents often lack the experience or knowledge to help their children navigate higher education, the role of “another adult,” whether a teacher, coach, counselor, etc., can be of critical importance in helping these students stay motivated to accept academic challenges and stay in school (Aragon & Kose, 2007; Gandara & Contreras, 2009; Rendon, 1994; Roderick, Nagaoka, Coca, & Moeller, 2008; Yosso, 2005).

Research Driving Question 2

Are there patterns of similarity or difference among the factors identified by the group of students who have persisted in the program?

It is evident there are more similarities than differences among the factors identified by this group of students who have persisted in the 2+2 program. Two distinct patterns of similarity were identified by the participants: 1) perception of readiness for college but concern about cost;
and 2) satisfaction with college faculty and the college environment. In addition, a third pattern of similarity emerged from the data: the empowering effect of early contact with college faculty on these students’ college choices.

**Perception of Readiness for College but Concern about Cost**

The most consistent similarity among these study participants is the perception of readiness for college. All seven of the participants had clear goals for post-secondary education, and, at the time the interviews were conducted, had already been accepted into a college or university. It is interesting to note, however, that along with being committed to pursuing higher education came the major concern regarding their ability to pay for college. All study participants remarked on what a great benefit it was to have already earned some college credits through the 2+2+2 program, free of charge, while still in high school. Without a doubt, they were aware of the financial challenges that awaited them once enrolled in college. The majority of these students indicated their post-secondary choices were largely based on how far their financial aid would go at a given institution or whether or not the school had offered them a scholarship. A few also intimated that they may not be eligible for any type of government aid and would therefore need to work and/or have their family pay for their studies.

This case study confirms what other research has shown: a large percentage of Latino students have challenges when it comes to paying for college (Cabrera & La Nasa, 200b; Gandara & Conrreras, 2009). Gandara and Conrreras (2009) cite financial constraint as a major barrier in Latino students’ road to college.

Research on who goes to college shows without a doubt that money matters – a lot. For example, one major study using national data found that high-ability low-income students were less likely to go to college than those with low ability but high family income. Latino families have an average median income that is only 69 percent of white families and 59 percent of Asian families. The far more limited income that Latino students and their families have to allocate for higher education is probably one important reason why
approximately 50 percent of Latinos choose to attend a two-year rather than a four-year college (p. 242).

In this particular case study, the program began with funding from four sources: (a) the four-year institution (the destination school of the last two years of the 2+2+2 program), (b) the P-16 grant from the state of Illinois, (c) the community college partner, and (d) the high school partner. However, by the second year of the 2+2+2 program, the funding source was reduced to two: the community college and the high school, as the university was forced to discontinue support due to fiscal constraints and the termination of the state of Illinois P-16 program.

**Satisfaction with College Faculty and the College Environment**

Reconfirming a strong commonality was students’ satisfaction associated with their interactions with college faculty and being on a college campus at an early stage in their high school education. The students overwhelmingly cited their class time with college faculty was a factor that kept them “coming back for more.” One participant, Marisol, remarked on how this affected the group:

I mean, having college professors was difficult -- like a challenge -- but something I needed. Something that I think we all need; like a lot of kids in our school would benefit from this, but we were the lucky ones.

In addition, participants consistently remarked about the benefits afforded to them by being on the college campus and in the college environment. When asked what they liked most about the BBRS program, each one of them mentioned the ability to conduct “real” experiments, with equipment and chemicals not available in their high school setting. In addition, six out of seven of the participants remarked how being among actual college students motivated them to complete the first two years of this program. Araceli, one of the students interviewed, expressed a feeling that was common to many of her peers in this group:
When I started the BBRS program, I started noticing that there were so many students and professionals around me, people with degrees. I was never exposed to that environment. My family is not people who went to college, but I learned -- like -- what being in this kind of world is.

Therefore, community colleges should dedicate members of their faculty and physical resources to the first two years of any 2+2+2 program.

**Empowering Effect of Early Contact with College Faculty on Students’ College Choices**

Although where study participants were planning to attend college was not an interview question, it was discovered the majority chose to attend a four-year institution, rather than a community college, after high school. This was striking as the program they had been exposed to was the 2+2+2 program and they had taken courses at the community college. Interestingly, many of them credited aspects of the BBRS program, such as exposure to the teaching styles of college faculty and fulfillment of gaps in their academic knowledge, with empowering them with the confidence and understanding of a wider number of options after graduating from high school.

The 2+2+2 programs for high school students are often regarded as a way to boost future community college enrollment two years down the road. But community colleges should not enter into these partnerships assuming that this will occur. While community colleges should strive to structure students’ seamless transition from the partner high school to the host community college, the two-year institution should recognize that even if this does not happen, it has still fulfilled an important aspect of its mission. Providing first-generation-college-going high school students with early college exposure and enabling them to have greater post-secondary choices is yet another way that community colleges can assist the Latino community at large.
Implications of Findings for Community Colleges

Findings from this study suggest that community colleges should consider the following, when developing the first two years of the 2+2+2 program: a) assure all tuition, fees, and materials are paid for by program; b) have college faculty deliver instruction; and c) hold classes on the college campus.

Therefore, it is strongly advised that community colleges who undertake 2+2+2 programs for this population assume that while these students are still in high school and taking community college courses, neither they nor their parents have the ability to pay for the college credits or related costs (such as textbooks, lab materials, transportation) associated with these programs. Community colleges must subsidize all costs associated with these credit courses for Latino students in 2+2+2 programs. It is important to note that the community college higher education partner, the university, may not be willing to assist with any of the program costs. Some states offer tuition assistance for high school students who seek to enroll in dual credit or dual enrollment programs, and the federal government also has grants and programs that can defray expenses. In addition, the high school partner may be able to underwrite some costs associated with the program.

Consequently, it is important the community college partner begin the program with a clear idea of what costs are involved (such as tuition, college faculty salary, textbooks, lab materials, transportation for students), funding sources for these costs (such as a university partner, state or federal grants, the high school partner, and the community college itself), and a contingency plan if one or more of the funding sources cannot continue to participate.

In order to help these students visualize themselves as being successful in post-secondary education, it is essential that these high school students experience what it is like to be taught by
college faculty. In addition, attending courses on the community college campus facilitates the opportunity for high school students to interact with students who are already in college. Therefore, this opportunity should be made available as early as possible for high school students, preferably in their sophomore year.

However, community college administrators of these types of bridge programs must realize that these students may or may not wish to consequently attend their college. These students, as a result of the confidence they acquire from early exposure to college coursework, may wish to enroll at a university rather than a community college once the high school portion of the 2+2+2 program has ended.

**Research Driving Question 3**

*Do these students, at this early point in their academic careers, already perceive themselves as “college-bound”?*

All seven of the participants indicated they would be attending college immediately after graduating from high school. As these study participants were already at the end of the first “2” of the 2+2+2 program and graduating from high school, the chances of their being “college-bound” were much greater. Most of the students indicated that a major factor in perceiving themselves as “college-bound” was this early exposure to college. It was their enrollment in the BBRS program in the summer of their post-freshman year of high school and their continued participation through to their senior year which provided this positive personal perspective. They consistently commented on three outcomes of their continuous involvement with the college which assisted with their readiness for college: 1) development of content knowledge; 2) abandonment of negative stereotypes and creation of confidence; and 3) learning what the college environment is like.
Development of Content Knowledge

While this research in no way implies that the science education these students received in their non-BBRS high school curriculum was substandard, many of the students commented on the advanced level science content they had received in BBRS. They strongly believed if it had not been for this program, they would not have felt as prepared to go on to college. Comments made by Pamela, one of the participants, are representative of many other members of this group:

BBRS gave us something more than we learned in high school. Like when we got back to school in biology class [after the post-freshman year summer experience in BBRS], I’d be like, ‘Oh, we already did that over the summer’ because we had done college labs and I was familiar with the equipment.

In this particular science-centered 2+2+2 program, the students began their college coursework during their sophomore year of high school, in order to synchronize the biology courses (2nd year of high school) and the chemistry courses (3rd year of high school) with those provided by the community college, their partner. In the analysis of the findings, the students’ awareness of the college-level content they had learned and in the college-level ways they had learned it was a major contributor to their perception as being “college bound” early on in their high school years.

Abandonment of Negative Stereotypes and Creation of Confidence

Findings showed that participation in the BBRS program played a significant role in these students’ self-perception as college-goers. These findings are very important within the larger context of the challenges that urban Latino high school students face when considering life beyond high school. Research shows that the influence of friends has a great impact of whether or not teenagers choose to go to college (Gandara & Gibson, 2004; McDonough, 1997). In their study of low-income students from an inner-city high school, Gandara and Contreras (2009)
found that only a small percentage of the Latino students spent much time talking with friends about college. This information was echoed in the findings of this case study.

Many of the BBRS students explained that while some friends in their “immediate circle” were going to college, a significant percentage of the Latino students in their high school and surrounding community had no aspiration to go beyond high school. They also explained how their high school and surrounding community had a reputation for being “rough” and not an environment in which post-secondary education was considered a norm.

However, these study participants discussed that by being part of the BBRS program, they came to see themselves as being able to “beat these odds” and go on to college. Several of the students commented that presenting their lab experiment findings, during periodic “poster sessions” open to the community college at-large, was a key element in making them feel confident in their ability to handle college-level coursework. Furthermore, all of the students spoke at length about how consistently being treated like “real college students” and engaging in learning activities that “college students did” made them feel like they could succeed in college.

Confidence can also be provided by “out-of-class validating agents,” such as guidance counselors, coaches, and teachers (Rendon, 1994). In this particular study, findings show that one individual, a high school teacher, consistently fulfilled this role of providing student validation outside of the classroom. Although some of the students cited other high school teachers as being important in helping them see their “college potential,” it was Mr. Vandermere (pseudonym), the biology teacher and liaison between the high school and the community college, whom they said consistently kept them focused and on-track throughout the years of their BBRS experience.
Learning What the College System Is Like

Studies show that Latino students are less likely to be able to rely on their parents and other family members for information about college than their Caucasian or African-American counterparts (Gandara & Contreras, 2009; Roderick, Nagaoka, Coca, & Moeller, 2008). While Latino parents may have aspirations for their children to go to college, the absence of a history of college-going in the family and unfamiliarity with the U.S. higher education system prevent them from providing assistance (Gandara & Contreras, 2009; Roderick, Nagaoka, Coca, & Moeller, 2008; Valdez, 1996). This information is consistent with the findings in this study. Most of the study participants explained that the BBRS partnership between their high school and the community college was their sole source for learning what attending college was like. Yosso (2005) refers to this as “navigational capital: the skills of maneuvering through social institutions” (p. 80). Pamela, a study participant, made comments which represented a key finding in how the BBRS program aided students’ acquisition of navigational capital for college:

It’s college life. I mean, just being in a college -- really. I mean, it may not be like a university or anything. It’s a community college, but just getting to know how to register for classes and how the teachers are in college and what they expect from you -- the type of vocabulary they use -- that’s important. And I mean, just seeing like -- whoa -- I’d be going to school with people like this, different types of people. It’s like --. It’s actually making me look forward to college and getting to meet these people that have different majors and different interests.

Research also confirms that students who have little or no contact with education beyond high school need as many outside sources as possible to help them find a pathway to higher education (see Gandara & Contreras, 2009; Rendon, 1994; Roderick, Nagaoka, Coca, & Moeller, 2008). Rendon (2009) asserts, “It is important, particularly for low-income, first-generation students of color, to be perceived as academically capable” (p. 128). Gandara and Contreras
(2009), however, present the disappointing reality that these students face, in the absence of such individuals.

The overwhelming majority of Latino students, who are from immigrant and low-income homes, have parents with no knowledge of the higher education system. These students do not come to the attention of the few counselors in their school as “college material” because their test scores and academic performance do not compare well with those of their more advantaged peers, and issues of poverty and social advantage place inordinate hurdles in their paths to academic success. These are the students who most desperately need counseling and guidance, but they are the least likely to receive it (Gandara & Contreras, 2009, p. 196).

Implications for Community Colleges

When designing 2+2+2 programs specifically for Latino students, community college administrators and faculty must make every effort to assure that these students see their “college readiness” as early and frequently as possible. Yet, while early and consistent involvement with the college environment is an essential ingredient, students must be old enough to understand and take advantage of an opportunity like this. Findings from this study conclude that sophomore high school students are just too young to handle the rigors of college coursework, and starting the dual credit/dual enrollment component of these bridge programs with junior students would provide a much better chance at being successful.

Brown Lerner & Brand (2006) commend high-school-college partnerships that “identify potential candidates at younger ages and provide intensive academic support or opportunities to take remedial coursework or preparatory programs on the college campus” (p. xii) so that these students may then have a chance to meet the same admissions criteria as regular college students who take the college-credit-bearing courses. Therefore, community colleges should take the following steps to achieve a successful bridge program: a) align curriculum between high school and community college; b) appeal to the learning styles of Latino students; c) create multiple
ways of instilling confidence; and d) provide navigational capital to students and their families in a culturally sensitive way.

**Align Curriculum between High School and Community College**

Curriculum alignment between the high school and the community college is an essential part of the curriculum design. Community colleges engaged in 2+2+2 partnerships with high schools must design their program with the assurance that the high school participants are being exposed to the same course content and student expectations as those of the regular college courses for which these students are receiving college credit. In the first step of curriculum alignment, the high school instructors (aided by the high school liaison) and the community college faculty must compare their respective courses and review the content, student learning outcomes, student learning activities, and the assessment criteria. Similarities, differences and gaps between the courses must be identified and reconciled.

**Appeal to the Learning Styles of Latino Students**

Along with the alignment of curriculum, the community college partner should also consider incorporating teaching and learning strategies that are effective with Latino students. While avoiding the portrayal of Latinos as a monolithic group and seeking not to make generalizations about their learning styles, evidence from this research study strongly corroborates published findings about the types of activities that are effective with this population. Latino students tend to thrive in a collaborative environment, as opposed to a competitive one, due to its similarity to the Latino tradition of family cooperation and unity (Uekawa, Borman & Lee, 2007; Wortham & Conteras, 2002; Yair, 2000). The findings from the BBRS research study corroborate these findings. One of the participants, Araceli, made comments that were echoed by the majority of the group:
Working with the labs [laboratory experiments done in small groups] I’ve learned so much. At first, I didn’t know any, anything about labs before, but here it’s, how do you say, hands-on, hands-on projects that we do together. At first, I felt the labs were hard and I couldn’t follow, but in the group, we help each other out.

BBRS college faculty made a special effort to provide ample collaborative hands-on activities that kept students engaged while exposing them to higher level academic content. For example, during a college chemistry class session, the students participated in a “dancing molecules” activity, where they donned different color hats and danced around in a circle in order to simulate a scientific process. In another session, students participated in the measurement of Scoville units (a measurement used in food chemistry) for a variety of chile sauces commonly used in their heritage culture. These findings from the BBRS program may provide valuable insights for other community colleges seeking to offer college credit courses to high-school-age Latino students.

Create Multiple Ways of Instilling Confidence

It takes a unique type of teacher to assist high school students in their first exposure to college-level coursework in a college environment. Consequently, community colleges must take great care when selecting faculty to deliver the instruction during these first two years of the 2+2+2 program. Faculty selected must be patient and willing to work with learners who are still in the developing stages of maturity and self-awareness.

Community colleges must be aware of the delicate balance between challenging high school students with college-level coursework and affirming their confidence in the ability to successfully perform college work. Rendon (1994) concurs and stresses that positive reinforcement must occur both in and out of the classroom. While in the classroom, these faculty members must incorporate teaching and learning activities that enable the students to see their academic potential, gain confidence, and view each other as valuable resources in the learning
process. Rendon’s model of in-class academic validation (1994) can serve as a guide for how community colleges can select faculty and create a confidence-building environment for students within the first two years of a 2+2+2 program. Table 12 illustrates how key aspects of Rendon’s validating model, suggestions gleaned from the literature review and the study findings, can be implemented in the classroom for Latino students in the first “2” of the 2+2+2 program.

Table 12. *Combination of Classroom Suggestions Pertinent to Latino Students in the First “2” of 2+2+2 Programs*

<table>
<thead>
<tr>
<th>Key Aspects of the Academic Validating Model</th>
<th>Implications for Classroom</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Students bring a rich reservoir of experience and are motivated to believe they are capable of learning.</td>
<td>College faculty and high school teachers should work together so that the college-level material is previewed and reviewed in the high school classroom and carefully scaffolded in the college classroom. While in the college classroom, the college faculty member should capitalize on students’ existing strengths and incrementally add more challenging material to the curriculum. While in the college classroom, faculty should engage students in activities that encourage them to think critically, solve problems, and arrive at answers on their own.</td>
</tr>
<tr>
<td>• Faculty structure learning so that students are able to see themselves as powerful learners.</td>
<td>Faculty should maintain a balance among lecture, small group, and hands-on activities. Faculty in science courses should have students write-up and present their lab findings via “poster sessions” which are open to the entire student body at the community college.</td>
</tr>
<tr>
<td>• Faculty employ active learning techniques such as collaborative learning, demonstrations, simulations, field trips, etc.</td>
<td></td>
</tr>
<tr>
<td>• Students are allowed to have a public voice and share their ideas openly.</td>
<td></td>
</tr>
<tr>
<td>• Students work together in teams and are encouraged to share information.</td>
<td></td>
</tr>
<tr>
<td>• Learning standards are designed in collaboration with students and students are allowed to re-do assignments until they master them.</td>
<td>Faculty should provide multiple ways to help high school students grasp college-level concepts and anticipate that internalization of material may take longer than it does with students already in college.</td>
</tr>
</tbody>
</table>
A climate of success is fostered by faculty and students. Faculty should consistently praise these younger learners for accepting the challenges of doing college-level work while still in high school.

In addition, community colleges who seek to enter into a 2+2+2 partnership with a high school should encourage that high school’s administration to secure a high school champion, who can give students consistent and continuous support, reassurance and validation throughout the first part of this 2+2+2 program. The study participants unanimously cited their high school biology teacher, who also served as the liaison between the high school and the community college, as a major force in seeing them through completion of the high school years of this bridge program.

**Provide Navigational Capital to Students and Their Families in a Culturally Sensitive Way**

Study participants credited BBRS with orienting them as well as their families to college life. Community colleges involved in 2+2+2 programs for students coming from groups that have had limited experience with post-secondary education must recognize that they are not only providing students with course content and college credits but also providing students with navigational capital (Aragon & Kose, 2007; Yosso, 2005). Navigational capital are the skills one needs to know in order to move and maneuver within a higher education situation. Young high school Latinos’ navigational capital is enhanced by introducing students and their families to the environment and system of higher education. This is especially significant for Latinos, as research shows that a high percentage of students in this group come from families with lower incomes and less prevalence of a college-going history in the family, as compared to other groups (Gandara & Contreras, 2009).
However, community colleges must also recognize that it is equally important for them to honor, respect, and maintain the parents’ position as role models, authorities, and providers of emotional support. It is well documented that Latino parents are generally seen as being supportive of their children’s intentions to go to college, and research suggests that when Hispanic parents feel that they are able to contribute meaningfully to their children’s pursuit of higher education, these students gain increased confidence and wish to continue their education (Lozano-Rodriguez et al., 2000). Latino parents are often viewed as the guiding force when their children are young, but issues such as language difference, lack of familiarity with the U.S. system of education, and a propensity to regard teachers as all-knowing can often diminish this role as their children attain higher levels of education (Delgado-Gaitan, 2004; Gandara & Contreras, 2009; Gonzalez-Mena, 2008; Good, Masewicz, and Vogel, 2010; Perea, 2004; Valdez, 1996).

Studies have found that cultural clashes may occur when the Hispanic values of “family first” and the interconnectedness of relationships are juxtaposed with those of the mainstream U.S. educational system, in which “individualism, self-reliance, and academic achievement are held in high regard” (Good, Masewicz, & Vogel, 2010, p. 322). Community college partners involved in 2+2+2 programs for Latino youth should be sensitive to this and take steps to honor and capitalize on the strong family ties that connect these students to their heritage culture.

Consequently, in order to close this gap, community colleges seeking to build effective yet culturally sensitive 2+2+2 programs for Latino students should incorporate parent involvement from the beginning and maintain it throughout the program. In the BBRS program, for example, after the high school identified students who had potential for the program, the
community college took its official first step by introducing it to students and their parents at the same time. In an informational open-house setting, conducted in both English and Spanish, Faculty from the college answered parents’ questions and also asked parents for suggestions on what they would like to see as part of the program. As students progressed throughout the program, their parents were invited to participate in the students’ poster sessions and other science-related events.

**Research Driving Question 4**

*How can community colleges be responsive to the factors affecting persistence (identified by these students) and ultimately develop more effective 2+2+2 programs?*

Findings from the research make abundantly clear how community colleges can be responsive to the factors these students have identified as positively affecting their persistence in the first two years of a 2+2+2 program. It is by incorporating this valuable information that improvements can be made to ultimately develop more effective 2+2+2 programs. The key areas community colleges should consider incorporating to improve the success of their 2+2+2 programs are the following: 1) having college faculty deliver instruction; 2) holding classes on the college campus; 3) identifying a high school teacher as champion; and 4) assuring that high school students and/or their families do not pay for any portion of the cost.

**Implications for Community Colleges**

Findings from this research study present four suggestions for community colleges wishing to design effective bridge programs for first-generation-college-going Latino students: 1) have college faculty deliver instruction; 2) hold classes on the college campus; 3) identify a high school teacher as champion, and 4) assure that students and/or heir families do not pay for any portion of the cost.
Have College Faculty Deliver Instruction

This study finds that the overwhelming, most consistently cited factor in students’ satisfaction with this program was the opportunity to interact with college faculty in the classroom. Analysis of this finding through the a priori concepts of validation theory (Rendon, 1994), community cultural wealth (Yosso, 2005), and cultural capital (Aragon & Kose, 2007) as well as emergent themes confirms the importance for these high school students, with little or no prior exposure to college, to experience the teaching styles of college faculty and be treated like college students. Consequently, community colleges should invest in having college faculty provide instruction during the high school years of the 2+2+2 program.

Hold Classes on the College Campus

It is evident from this study that face-to-face interaction with college faculty and students on the college campus is another major factor in helping students from this population gain self-confidence and navigational capital. Findings reveal the contact these high school students had with college students, via pre-arranged meetings as well as informal encounters in the hallways or cafeteria, provided valuable experiences that would not have occurred if not for the program taking place at the college itself. Therefore, community colleges who wish to tailor 2+2+2 programs for Latino students should consider using their campus for the delivery of instruction during the high school portion of this 2+2+2 program.

Identify a High School Teacher as Champion

Clearly, the third strongest positive factor cited by these students was the steady presence of one high school teacher, who served as a continual motivator, confidante, tutor, go-between, cheerleader, and champion throughout their high school foray into higher education. Consequently, when establishing a partnership with a high school, community colleges must
make sure that the high school identifies a liaison for these students, preferably one of their teachers, who can provide a stabilizing force for the duration of the high school portion of the 2+2+2 program.

**Assure That Students and/or Their Families Do Not Pay for Any Portion of the Cost**

These findings indicate that while it is highly important for a 2+2+2 program to expose Latino students to college faculty and the college environment, fostered by a steady presence of a member from their high school staff, cost is a significant factor. If the cost of this program had not been absorbed by the college, there is no doubt it would have been the primary factor in deciding whether or not these students would enroll and persist in a 2+2+2 program. With this in mind, community colleges must assume that these students will not be financially responsible for any aspect of the program, whether it be tuition, textbooks, lab materials, transportation, or any other related cost.

**Conclusion**

A great deal of previous research has been done from a programmatic viewpoint regarding high-school-to-college bridge programs for students from populations that have traditionally had a limited history of attending college, but there remains a prominent gap in the literature from the students’ perspective. The findings from this study, which bring forth the voices of these young Latino students, highlight the following factors that were important to them as they persisted through completion of the first two years of a 2+2+2 program. These factors are: a) having community college faculty as instructors; b) spending time on the college campus; c) having a high school teacher as champion; and d) receiving this portion of the program free of charge.
Through analysis of these findings, it is evident that these four factors enabled these students to see themselves as college bound. An additional finding in this study, which emerged during analysis of the data, suggests that the early college involvement provided by the BBRS program resulted in these students feeling like they had options for postsecondary education that extend beyond the community college.

Of benefit to many universities, colleges, high schools and students would be a model incorporating this study’s findings in order to create similar types of successful 2+2+2 programs. This model would assist those involved in designing, developing, and implementing these types of programs for Latino students throughout the country. Therefore, The King 2+2 bridge model to support high school to community college persistence for Latino Students was created by the researcher to guide the crafting of the high school phase of a 2+2+2 program for Latino students.

The King 2 + 2 Bridge Model to Support High School to Community College Persistence for Latino Students

To increase understanding of how community colleges can design academically challenging yet accessible bridge programs for Latino students, Latino students who had successfully completed the first phase of a particular 2+2+2 program in the research sciences were interviewed and their responses were interpreted via a priori concepts and emergent themes. The King model for the high school phase of a 2+2+2 program for Latino students is an approach which can be used for community colleges who want to increase their contact and effectiveness with this student population. To arrive at a sound approach, relevant concepts from literature, empirical knowledge derived from practice, and the findings emerging from the study were integrated into a final model. Findings from this study provided important guidance to what is needed to assist Latino students as they enroll in post-secondary institutions.
Some models for delivering dual credit coursework to high school students do exist. However, the King model for the high school phase of a 2+2+2 program for Latino students is based on research that overwhelmingly points to the importance of exposing these young learners to authentic college experiences in an affordable, supportive, and family-inclusive way. The King model identifies six essential elements for implementing a successful dual credit bridge program for Latino students:

1) keep the cost negligible or nothing for students and parents;

2) decide which courses to teach and align high school curriculum and community college credit courses;

3) start the program from the post-freshman summer, to establish student engagement with college and involve their parents from the beginning;

4) identify a high school teacher as champion for the students and liaison between the high school and community college partners;

5) have community college faculty teach the courses; and

6) hold classes on the community college campus.

First and foremost, participation in a bridge program must never be predicated upon students’ and/or parents’ ability to pay. Therefore, the primary foundational component of the King model is keeping the cost negligible or nothing for students and parents. A second core component is deciding which college courses will be offered to the high school students and aligning the high school and college curricula. Both the high school and community college partner must work together closely to assure that students meet the prerequisites and have the greatest chance of meeting the established student learning outcomes for the college courses.
The third element of the King model involves establishing student engagement and parent involvement early on by offering programming from the post-freshman summer through the sophomore year. During this period, students are exposed to college via non-credit activities and/or developmental coursework that strengthen their basic skills and also give them a preview of the dual credit courses in their junior and senior years. Parental involvement also begins in this phase. Community colleges that want to reach Latino students must do so in a culturally sensitive way and the Latino family is a key component.

The fourth element of the King model is identifying a high school teacher who serves as the students’ champion. While many of the bridge team members (faculty, staff, and administrators from the high school and community college partners) may cycle on and off, a key element is the steady presence of one individual from the high school whom the students trust and respect and who believes in the dual credit program.

The fifth and sixth elements are the hallmark of the King model for the high school phase of a 2+2+2 program for Latino students: community college faculty teach the courses and classes are held on the community college campus. A successful bridge program for Latino students must provide much more than the banking of college credit. It should enable these young learners to see themselves as college-bound and college-ready, and having students interact directly with college faculty on the college campus is the best way to achieve this.

Along with these six elements is the importance of assessment for improvement. In order to evaluate how well a program is embodying its purpose and achieving its goals, systematic assessment, both qualitative and quantitative, is an essential feature of the model.

Figure 2 illustrates the six elements of cost, course selection and curriculum alignment, early (post-freshman) student engagement and parent involvement, high school champion,
college faculty, and college campus, as well as the importance of assessment for improvement, comprising the King 2+2 bridge model to support high school to community college persistence for Latino Students.
King Model Element 1: Explore Financial Avenues

Keep the cost negligible or nothing for students and parents. Latino students often come from families with limited financial resources and higher education may be viewed as an expensive luxury. Consequently, it is important that neither these students nor their parents be burdened with paying for tuition, materials, lab fees, etc. The community college partner must explore numerous avenues for financing, such as (a) securing state subsidies for dual credit tuition, (b) asking the high school partner to cover some of the costs, (c) requesting a contribution from the destination four-year institution, and/or (d) allowing community college faculty to teach these courses as part of their regular load. By removing cost from the equation, community college partners will help reduce the number of barriers these students encounter along their pathway to higher education.

King Model Element 2: Align High School Curriculum and College Credit Courses

Decide which courses to teach and align high school curriculum and community college credit courses. All community colleges that offer dual credit courses must work within the parameters of the guidelines set by their institution, district, and/or state. However, despite regulation of dual credit programs in many states throughout the USA, controversy still exists regarding their academic caliber (Heggen, 2008; Brown Lerner & Brand, 2006; Speroni, 2011). Along with the wide range of dual-credit program models (from those that serve high-achieving high school students to those targeted for low-performing and/or academically at-risk students) comes the issue of whether the college-credit courses offered to these students are as rigorous as regular college courses. In Illinois, the Dual Credit Quality Act (Illinois General Assembly, 2010) charges the Illinois Community College Board with oversight of dual credit programs, to assure that all institutions offering dual credit courses meet the same standards for course
outcomes, assessment procedures, instructor credentials, and student eligibility, as those in
regular college courses. Consequently, it is mandatory that all students, high school or college,
are held to the same prerequisites and student learning outcomes found in any college course for
which high school students earn college credit. Community colleges that develop dual credit
courses and/or bridge programs for first-generation college-going Latino high school students
should work closely with the high school partner to achieve alignment of the high school
curriculum and the college courses the students will be taking.

In the King model, the first step of curriculum alignment is to decide which college
courses will be offered to the high school students and how those courses complement the high
school courses students have already taken, or are concurrently taking, at the time the dual credit
courses begin. In the second step, high school and college faculty must compare the selected
courses and reconcile the goals, objectives, student learning outcomes, and assessment methods.
The third step of curriculum alignment involves flexibility of scheduling and collaboration on
teaching and learning strategies. While the goals, objectives, outcomes, and assessment methods
for these dual credit courses must be identical to regular college courses, an effective bridge
program may consider alternatives to scheduling and instructional methods. For example, a
bridge program may consider a *stretch* schedule, where a semester-long college course is spread
out along an entire high school academic year so that the students experience less intrusion into
their regular high school course load, yet the requirements for the college course are still met.
With this type of alternative scheduling, however, the community college partner must be ready
to address how its state’s regulations for reimbursement will be affected, as well as the issue of
recording students’ end-of-semester grades for a course that is on an extended schedule.
Furthermore, the high school and community college faculty partners may collaborate on providing bridge students with scaffolding and reinforcement of college content before, during, and after the college classroom sessions. Many high school teachers have insight on how to attract and engage the attention of younger learners, and many community college faculty incorporate challenging learning activities that often utilize technology and resources typically not found in the high school. The King model’s emphasis on reciprocity between the high school and community college faculty is informed by Brown-Lerner and Brand (2006):

When secondary and post-secondary faculties collaborate to create a classroom experience that combines college content and supportive instructional techniques, students are able to benefit from the best of both worlds. The postsecondary faculty partner delivers content material covered in traditional college classrooms, ensuring the integrity of the courses. The secondary faculty provides insight on managing younger students and effective instructional strategies. Students’ exposure to college-level courses and rigor, with support on homework, testing, and projects, creates a true transitional experience to blend the familiar and the new (p. 123).

The high school and community college partners must dedicate time and energy to engage in these aspects of curriculum alignment in order to design a bridge program uniquely tailored to meet the students’ needs,

King Model Element 3: Establish Student Engagement and Parental Involvement

Start the program from the post-freshman summer, to establish student engagement and parental involvement in college. The King bridge model asserts that the earlier Latino students are exposed to higher education, the greater their chances of successful transition to college. Thus, the third element of this model has students begin the bridge experience from their post-freshman summer through their sophomore year, a time when students receive initial exposure to college by participating in enrichment activities. For example, during the post-freshman summer, the high school students might visit the college campus for an intensive week-long camp-like experience, where they participate in high-interest, hands-on learning activities.
During the sophomore year of high school, this engagement might include a range of offerings to strengthen students’ basic skills and in a sense serve to *prime the pump* for their interest in the dual credit courses to follow. Activities might include periodic visits to the college campus for workshops, tutoring, and lab activities, or even enrollment in developmental math, reading, and/or writing courses, in order to strengthen students’ performance on the college placement tests required for dual credit coursework in the junior and senior years.

The strong family ties prevalent in the Latino community provide a rich source of confidence and moral support for these young students and the community college partner should honor and capitalize on this wealth. The King model suggests that soon after students are identified (by the high school partner) as potential candidates for the program, both students and parents be invited to attend an informational open house, conducted in both English and Spanish, where parents can ask questions, voice their concerns, and make suggestions.

Involving parents at the program’s inception provides a base for continued parent-college faculty communication throughout the entire program. Once students transition from the initial engagement in the post-freshman summer and sophomore year to the dual credit phase in the junior and senior years, parents should be invited to activities such as students’ poster sessions or other types of presentations. Community college partners may also contemplate offering avenues to enhance the parents’ educational advancement, by providing opportunities such as free adult education courses or continuing education classes at a discounted rate.

**King Model Element 4: Identify High School Liaison**

Identify a high school teacher as champion for the students and liaison between high school and community college partners. Although the high school and community college partners have a high degree of involvement with the students, the King model confirms the
effectiveness of one consistent “go-to” person on the high school side: a champion, who strongly believes in the bridge program and to whom students can turn for continual reinforcement, clarification, and motivation. This research study recognized the presence of one high school biology teacher as a major contributor to students’ persistence in the BBRS program. This instructor served as the glue that bonded this student cohort together and kept them continuously invested in the program. It is also important to note that this person’s duties involve more than simply providing consistent support to students in the program. S/he also serves as the primary liaison between the high school and community college and is the consistent go-to person regarding curricular and logistical issues on the high school side of the program. Consequently, it is important to identify early on, one key high school teacher who will provide continuity and support to these students and this program, from the pre-design phase through completion of the students’ senior year.

**King Model Element 5: Hire College Faculty to Teach Courses**

Have community college faculty teach the college courses. Latino students moving from high school to community college need first-hand exposure to college in order to begin seeing themselves as college-bound. Multiple outsiders, such as counselors, teachers, and other non-familial mentors play a critical role in helping these students build confidence, but it is the college faculty, themselves, who provide these students with the strongest connection to their college-going aspirations. When high school students take college courses taught by college faculty, rather than high school teachers who have been vetted by community colleges, they experience the teaching styles and atmosphere of learning fostered by post-secondary educators. By directly interacting with college faculty, these high school students have the opportunity to rise to the occasion and are impelled to display a higher level of maturity, which might not occur
if the course material is delivered by a teacher with whom they are already familiar at the high school.

While it is important that high school students experience what it is like to learn from real college faculty, it is essential that these students feel confident and secure in this challenging new situation. Consequently, a critical concern for community college developers of bridge programs is selecting the right faculty to teach these dual credit courses. The community college partner should exercise utmost care to identify faculty who are flexible, patient, and eager to address the cognitive capabilities and social development of younger learners.

There is much more to dual credit programming than exposure to college-level course content. When high school students interact with community college faculty as their instructors, besides acquiring course content, there is added value of gaining navigational capital. Since community college faculty are immersed in the environment of higher education, they can serve as a rich source of information for these students and answer questions on issues such as selecting a major and the difference between general education courses and major-related courses. This student/faculty interaction also gives students a glimpse of a possible career path or profession. For example, when high school students assist a faculty member with his/her research project or use a textbook that a particular faculty member has authored, they experience first-hand the activities of individuals immersed in academe. If one of the goals of the bridge program is to provide high school students with a college-going experience that is as authentic as possible, the first and foremost element is to have college faculty conduct bridge students’ college courses.
King Model Element 6: Hold Classes on College Campus

Hold college classes on the community college campus. One of the most effective ways to help high school students learn about college is to maximize their time spent on the college campus. It is already a step in the direction to have college faculty deliver instruction to students while in the high school phase of the program, but the effect is even more powerful when this instruction takes place in the college setting. When high school students are surrounded by college students, they are immediately immersed in the atmosphere of higher learning – a place where students are there by choice! There is no running in the halls, no loud talking, no culture of hall monitors or bells ringing. The college environment provides these young learners with an authentic purpose for adopting a level of comportment that might not have otherwise bloomed at this point in their lives.

In addition to enabling younger learners to absorb the social atmosphere of higher learning, holding classes on the community college campus provides them with yet another type of navigational capital. Students see, first-hand, how college looks, in a more protracted period of time beyond the occasional tour. For students who may be the first in their families to consider going to college, spending time in the college library, computer labs, science labs, study areas, and cafeteria is a valuable experience that may serve as a blueprint for the future.

Importance of Assessment for Improvement

Data collection and assessment are essential components for the evaluation and continued improvement of any program. The King 2+2 bridge model to support high school to community college persistence for Latino Students recognizes the value of both qualitative and quantitative assessment to maintain the quality of the program. Qualitative assessment might include student surveys at the pre- and post-phases of the program, regarding their attitudes towards pursuing
college after high school, choices of major, and type of college. High school and community college faculty might also be surveyed regarding their perceptions of student engagement and which types of instructional strategies are most effective for this student population.

Quantitative assessment might compare bridge program students’ high school grades and GPAs with students who are not enrolled in the bridge program, as well as compare course grades of regular college students versus bridge high school students who are enrolled in separate sections of the same college course. In addition, high school standardized tests can offer another venue for comparative statistical analysis as to the success of the program. Longitudinal studies tracking students’ post-bridge college careers would also provide valuable feedback for program evaluation and improvement. As in all programs, multiple measures of assessment must be built into the model in order to maintain the high quality of the program.

As this study sought to understand and analyze the factors that motivated Latino high school students to enroll in and complete a high-school-to-community-college bridge program, the King 2 + 2 bridge model to support high school to community college persistence for Latino students may assist other community colleges with this complex yet rewarding endeavor. The six elements of the King model, along with a comprehensive plan for assessment and improvement, may serve as a blueprint on which other institutions can build and expand.

**Recommendations for Future Research**

There is such variation among bridge programs and relatively little research on programs specifically for Latino students to cause community colleges to inquire more deeply into the questions of design, practice, and assessment. While this research study provided some insight from the students’ perspective on factors contributing to their enrollment in and completion of a high-school-to-community-college bridge program, the researcher recognizes other areas for
future study, which can be divided into three categories: 1) curriculum alignment and student preparedness; 2) characteristics of high school teacher champions of bridge programs, and 3) long-term outcomes for students who complete bridge programs.

Curriculum alignment, especially the decision of which college courses should be in the program, is often considered the backbone of any bridge program and thus deserves focused research. Study might include a review how high school and community college partners select which college courses should be taught when and how they interface with the sequencing of high school curriculum. Additionally, student preparedness for college courses is another area for further research. There is quite a range of criteria for student eligibility for dual credit/dual enrollment programs, yet there is a significant gap in the literature regarding what level of academic preparedness assures the best opportunity for student success and the best tools for assessing this readiness.

The characteristics of instructors who participate in bridge programs is another area in which little or no research has been done. This study identified the importance of having a high school teacher as champion for the students and the program, and it creates the question of what ingredients go into the recipe for this person’s long-term investment in the program. Just as research has been done on the traits and styles of effective community college faculty and administrators, studies should be conducted on this key participant in the high-school-community-college bridge program.

The third and perhaps most important area for future research is the long-term impact of high-school-to-community-college bridge programs, particularly for Latino students. Although much research has been done on what influences Latino students’ choices and persistence in post-secondary education (Cabrera & La Nasa, 2003; Gonzalez, Stoner, & Jovel, 2003; Perna,
2000), there is a significant lack of data on how participation in these bridge programs and the accumulation of college credit before graduating from high school longitudinally affects these students.
REFERENCES


Rendon, L.I. (1994). Validating culturally diverse students: Toward a new model of


APPENDIX A

Parental or Legal Guardian Consent Form

I am asking your child to be in a research study because I am trying to learn more about programs designed to help Latino high school students continue their educations through the community college and university levels. Your child is invited to participate in this study because she/he is participating in the “bridges to the baccalaureate in the research sciences (BBRS) program, which is a partnership among Foster High School (pseudonym), Harry S. Truman College, and Illinois State University.

Thank you for agreeing to allow your child to participate in this study, which will take place in June 2008. This research study is conducted by Ana King, a doctoral student at National-Louis University, located in Chicago, Illinois.

This parental/legal guardian consent form outlines the purpose of the study and provides a description of your child’s involvement and rights as a participant.

This study is entitled Asking Latino Students: Strategies to Improve Dual Credit High School – Community College Bridge Programs. The purpose of this study is to identify the factors that contribute to Latino students’ enrollment and persistence in the first two years of a 2+2+2 program (high school – community college – university).

I understand that my child’s participation will consist of audio-taped interviews lasting 45 minutes to one hour in length with a possible second follow-up interview lasting 45 minutes to one hour in length. I understand that my child’s participation may also consist of one or two focus group meetings, along with the other participants in this study, which will last 1-2 hours in length. These interviews and focus groups will take place at Foster High School (pseudonym), immediately after classes have ended for the day.

I understand that my child’s participation is voluntary and can be discontinued at any time. Also, even if I give permission, my child may decide that she/he does not want to be in this study, and that is fine.

I understand that only the researcher, Ana King, will have access to a secured file cabinet in which will be kept all transcripts, taped recordings, and field notes from the interview(s) in which my child participated.

I understand that the results of this study may be published. However, in no way will this study include information that will identify my child.

I understand that there are no anticipated risks or benefits to my child, no greater than that encountered in daily life. Further, the information gained from this study could be useful to helping community colleges design better programs for high school students.
I understand that in the event I have questions or require additional information, I may contact the researcher: Ana King. Phone (773) 907-4432, or e-mail: aking@ccc.edu.

If you have any questions or questions before or during participation that you feel have not been addressed by the researcher, you may contract my Primary Advisor and Dissertation Chair: Dr. Rebecca Lake, Associate Professor, National-Louis University (Chicago Campus), 122 S. Michigan Avenue, Chicago, IL, 60603. Phone (312) 621-9650, or e-mail: RLake@nl.edu.

Parent or Legal Guardian’s Signature: ___________________________________________
Date: ______________________________

Researcher’s Signature: _______________________________________________________
Date: ______________________________

---

**Forma de Consentimiento del Padre de Familia o Guardian Legal**

Por medio de la presente, le estoy pidiendo a su hijo/hija participar en este estudio porque estoy tratando de aprender más acerca de los programas diseñados para ayudar a estudiantes latinos de preparatoria en la continuación de su preparación en colegios comunitarios y universidades. Su hijo/hija ha sido invitado a participar en este estudio porque está participando en el programa titulado “‘bridges to the baccalaureate in the research sciences (BBRS), el cuales es una cooperación entre la Foster High School (seudónimo), Harry S. Truman College y Illinois State University.

Gracias por aceptar que su hijo/hija participe en este estudio que ocurra en el junio de 2008. Este estudio será llevado a cabo por la Profesora Ana King, como parte de su investigación para obtener el grado de doctor otorgado por la National-Louis University de Chicago, Illinois.

Esta forma de consentimiento detalla el propósito de este estudio así como la descripción del papel que el estudiante tendrá y sus derechos legales.

Este estudio se llamará *Asking Latino Students: Strategies to Improve Dual Credit High School – Community College Bridge Programs*. El propósito de este estudio es la identificación de factores que contribuyen a la permanencia de estudiantes latinos en programas de preparatoria-a-colegio-comunitario-a-universidad.

Estoy consciente de que la participación de mi hijo/hija consistirá en una entrevista grabada, con la duración de 45 a 60 minutos, seguida por otra similar. También doy permiso de que mi hijo/hija participe en uno o dos grupos de investigación (focus groups) con una duración de 60 minutos. Las entrevistas y grupos de investigación tendrán lugar en la Foster High School (seudónimo, después de las clases.)
Estoy consciente de que solo la investigadora, Ana King, tendrá acceso al material resultante de la investigación, el cual será guardado en un lugar seguro. Este material incluirá grabaciones, transcripciones y entrevistas.

Estoy consciente de que los resultados de este estudio pueden ser publicados, siempre y cuando la identidad de mi hijo/hija se mantenga en forma confidencial.

Estoy consciente de que no se anticipan riesgos o beneficios más allá de los encontrados en la vida diaria. De igual manera, la información recopilada en estos estudios puede beneficiar a ayudar a los colegios comunitarios a desarrollar programas mejores para los estudiantes de la preparatoria.

Estoy consciente de que si tuviera alguna pregunta o si se requiriera información adicional, puedo ponerme en contacto con la investigadora responsable: Ana King. Teléfono (773) 907-4432, email aking@ccc.edu. Si tiene preguntas o objeciones acerca de la investigación y estas no han sido satisfactoriamente tratadas por la investigadora, puede ponerse en contacto con la asesora de tesis de la investigadora: Dra. Rebecca Lake, Associate Professor, National-Louis University (Chicago Campus), 122 S. Michigan Ave., Chicago, IL, 60603. Teléfono: (312) 621-9650. Email rlake@nl.edu.

Firma del Padre de Familia o del Guardian Legal: __________________________
Fecha: __________________________

Firma de la Investigadora: __________________________
Fecha: __________________________

Thank you for agreeing to participate in this study that will take place from October 2007 through May 2009. This form outlines the purpose of the study and provides a description of your involvement and rights as a participant.

I consent to participate in a research project conducted by Ana King, a doctoral student at National-Louis University located in Chicago, Illinois.

I understand that this study is entitled "Asking Latino Students: Strategies to Improve Dual Credit High School – Community College Bridge Programs." The purpose of this study is to identify the factors that contribute to Latino students’ enrollment and persistence in the first two years of a 2+2+2 program (high school – community college – university). These interviews and focus groups will take place at Foster High School (pseudonym), immediately after classes have ended for the day.

I understand that my participation is voluntary and can be discontinued at any time without prejudice until the completion of the dissertation.

I understand that my participation will consist of one interview lasting 45 minutes to one hour in length with a possible second follow-up interview lasting 45 minutes to one hour in length. I understand that only the researcher, Ana King, will have access to a secured file cabinet in which will be kept all transcripts, taped recordings, and field notes from the interview(s) in which my child participated.

I understand that I will receive a copy of my transcribed interview, at which time I may clarify information.

I understand that there are no anticipated risks or benefits no greater than that encountered in daily life.

I understand that in the event I have questions or require additional information, I may contact the researcher: Ana King. Phone (773) 907-4432, or e-mail: aking@ccc.edu.

If you have any questions or concerns before or during participation that you feel have not been addressed by the researcher, you may contact my Primary Advisor and Dissertation Chair: Dr. Rebecca Lake, Associate Professor, National-Louis University (Chicago Campus), 122 S. Michigan Avenue, Chicago, IL, 60603. Phone (312) 621-9650, or e-mail: RLake@nl.edu.

Participant’s Signature: ______________________________________
Date: ______________________________

Researcher’s Signature: ______________________________________
Date: ______________________________
APPENDIX C

INTERVIEW QUESTIONS

Demographic Information for Research Participants

1. Sex: Male Female

2. Age:

3: Ethnicity: ___________________

4. Country of Birth:

5. (If born outside the USA) Age at time of arrival in the USA:

6. Have either of your parents or any of your siblings attended or graduated from college? If yes, please specify family relationship and length of time in college.

7. Do you work in addition to attending high school? If yes, please specify type of job and number of hours worked per week.

Interview Questions

1. When did you first become interested in science?

2. Who and/or what has been helpful in keeping you in the “Bridges to the Baccalaureate in the Research Sciences (BBRS) program?

3. Of all these helpful aspects, which has been the greatest help?

4. Have there been any difficulties associated with staying in the BBRS program? If yes, please explain what they are and how you overcame them.

5. What did you like most about the BBRS program?

6. What did you like least about the BBRS program?

7. Having completed a portion of the BBRS program while still in high school, how do you feel about your post-high-school options?

8. How do you envision these post-high-school options?
APPENDIX D

FIELD NOTES GRID

<table>
<thead>
<tr>
<th>Student</th>
<th>Date</th>
<th>Time</th>
<th>Physical Proximity of Student to Researcher</th>
<th>Student’s Non-verbal Communication</th>
<th>Student’s Demeanor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>