EXPLORING HIDDEN STUDENT PERCEPTIONS ABOUT COLLEGE-GOING CULTURE AT HOUSE BILL 400 SCHOOLS IN THE DALLAS FORT WORTH METROPLEX

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Dissertation Prepared for the Degree of

DOCTOR OF PHILOSOPHY

UNIVERSITY OF NORTH TEXAS

December 2011

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Willis II, Roderick C. Exploring Hidden Student Perceptions about College-Going Culture at House Bill 400 Schools in the Dallas Fort Worth Metroplex. Doctor of Philosophy (Higher Education), 142 pp., 15 tables, 17 figures, references, 175 titles.

In accordance with the Texas Higher Education Coordinating Boards’ Closing the Gaps by 2015, this research study analyzed self-reported perceptions about college-going culture from students (n = 151) who attended four House Bill 400 schools serving Latino and African American communities in the Dallas-Fort Worth Metroplex. This study utilized exploratory factor analysis (EFA) with a maximum likelihood extraction technique to identify hidden perceptions (latent factors) that account for common variance among student perceptions about college-going culture. The study also tested the validity and inter-item reliability of the 15-item College-Going Culture Survey used in data collection.

The parallel analysis, EFA, and Cronbach’s α identified two latent factors of Verified College Potential (α = .70) and College Capital Awareness (α = .71) that, together, explained 40.1% of students’ perceptions. The two factors were non-significantly negatively correlated (r = -.495, p = .354). By utilizing the two latent constructs, a 10-item revised College-Going Culture Survey is recommended to improve the inter-item reliability coefficient from α = .46 to α = .77. Descriptive statistics revealed that Latino and African-American students affirmed aspects of the college-going culture at HB 400 schools. However, latent factors suggest the possibility that students who reportedly feel most encouraged to attend college (Verified College Potential) may tend to be least aware of the actual logistics of college such as admissions processes and financial aid (College Capital Awareness) and that, conversely, those with the most logistical knowledge may tend to feel least encouraged.
ACKNOWLEDGEMENTS

God's secret plan has now been revealed to us; it is a plan centered on Christ, designed long ago according to his good pleasure. And this is his plan: At the right time he will bring everything together under the authority of Christ -- everything in heaven and on earth. Furthermore, because of Christ, we have received an inheritance from God, for he chose us from the beginning, and all things happen just as he decided long ago. God's purpose was that we who were the first to trust in Christ should praise our glorious God. And now you also have heard the truth, the Good News that God saves you. And when you believed in Christ, he identified you as his own by giving you the Holy Spirit, whom he promised long ago. The Spirit is God's guarantee that he will give us everything he promised and that he has purchased us to be his own people. This is just one more reason for us to praise our glorious God. (Ephesians 1:9-14 NLT)
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CHAPTER I
INTRODUCTION

Increasing access to postsecondary institutions for first-generation students from urban, low-income schools, serving high proportions of students of color is a national issue with burgeoning local implications (Corwin & Tierney, 2007). By 2040, the Texas population of those aged 18 to 24 years will be 70% Latino or African American (Creusere, Fletcher, & Shook, 2010; Gándara, 2010). According to demographic projections from the Texas State Data Center (2006) these traditionally underrepresented student groups in higher education will grow faster than traditionally represented student groups. Nationally this growth pattern is not mirrored in higher education enrollment. The immediate college enrollment rate in 2007 was 70% for White high school completers, 56% for African American high school completers, and 61% for Latino high school completers (NCES, 2009b). As a result there is an increasing stratification of post-secondary education attainment and earning power between socioeconomic and socio-demographic groups (Texas State Data Center, 2006; Venezia, Kirst, & Antonio, 2003). More recently, Creusere et al. (2010) reported that only 12% of White students identified as economically disadvantaged compared to nearly 60% of Latino students and nearly 50% of African American students. Historically, participation rates in higher education for disadvantaged students have been lower than non-disadvantaged students (Oakes et al., 2006).

With the goal of increasing student achievement, the federal No Child Left Behind Act (NCLB, 2005) was a reauthorization of Lyndon B. Johnson’s 1965 Elementary School Education Act. In concert with NCLB regulations, the Texas Higher Education Coordinating Board (THECB) developed Closing the Gaps by 2015 (CTG) in 2000, and the Roadmap to a College-going Culture outlined the THECB’s strategic plan for increasing participation in higher
education attainment among underrepresented groups (THECB, 2005a, 2005b). The Closing the Gaps by 2015 initiative was enacted with the goal of enrolling 500,000 more traditionally disadvantaged students in higher education by 2015 (THECB, 2005a). Since Texas has three of the largest urban areas in the country (i.e., Dallas-Fort Worth Metroplex, Houston, and San Antonio), the Roadmap to a College-going Culture strategically focused on enrolling 300,000 new students highly unlikely to participate in Texas higher education if participation gaps persisted in these three urban areas (THECB, 2005b). The initiative outlined increasing the access of underrepresented, disadvantaged and first generation students (FGS) in higher education as essential, since Texas policy analysts projected that of the 25 fastest-growing occupations in Texas, 19 require some post-secondary education, with half of those requiring a master’s degree at the minimum (Story, 2006). Gaps in higher educational attainment have persisted from 1972 to 2008 along socioeconomic lines; namely, the lower income families are 20% less likely to attend college (Nation Center for Education Statistics, 2010, para. 2).

In 2001, the Texas legislature passed House Bill 400 that mandates the facilitation of research, policies, and strategic partnerships between universities and low performing high schools in order to increase underrepresented student enrollment in institutions of higher education (TEA, 2001). The bill applies to high schools that “for any two consecutive years during the preceding five years, have been among the lowest 10% of high schools in the state in percentage of students graduating from high school and enrolling for the following academic year in an institution of higher education” (Texas Education Code, 2001, Sec. 29.904,). As a result of these mandated partnerships, in 2008 a group of university researchers conducted a qualitative study on college-going culture in urban high schools (Harris, Tucker, & Willis, 2008). This study’s self-reported student data were used as the database for the present quantitative
study, specifically to further explore hidden perceptions about college-going among students who attend HB 400 high schools.

Problem Statement

While urban and economically disadvantaged students comprise a large proportion of Texas’ primary and secondary public education system, there is an alarming disparity regarding their participation in Texas’ higher education (North Texas Regional P-16 Council, 2007; NCES, 2009; NCES, 2010; Texas State Data Center, 2006). Texas contains three of the largest urban areas in the United States (THECB, 2005b). THECB designated Dallas-Fort Worth for targeted college-going culture promotion since Dallas-Fort Worth is one of the largest urban areas in the country and has one of the lowest higher education participation rates in higher education in Texas (THECB, 2005a, 2005b). If the participation in higher education does not substantially increase among disadvantaged urban students who are unlikely to attend college, severe repercussions are projected to rock Texas’ economy (Gándara, 2010; Haynes, 2009; THECB, 2005a). More specifically, if the goals of Closing the Gaps by 2015 are not met, Texas stands to lose $489 million in annual spending, $194 state product, and 1,023, 281 in permanent jobs by 2030 (Perryman Group, 2007). Maintaining low college-going trends will result in an additional 3% of Texans living in poverty in 2030 and a reduction in annual household earnings by $3,000 per year (THECB, 2005a). The quality of life for Americans is highly correlated with the post-secondary educational attainment of its workforce (White House: Office of the Press Secretary, 2009). Murdock et al. (2002) argued that Texas labor force’s current occupational characteristics show that if current demographic patterns continue among racial and ethnic groups, the labor force of the future will be generally less skilled than today’s labor force.

The problem of low participation among a certain demographic has been shown, and
studies have examined factors leading to this low participation (Azzam, 2004; McDonough, 1997; Oakes, n.d.; Oliva, 2008). Developing a college-going culture in high schools has been viewed by some as one of the key factors to increase participation of the underrepresented students targeted in HB 400 high schools. However, few studies have been conducted with the goal of uncovering perceptions of targeted students about the college-going emphases in HB 400 high schools. That is what this study addressed.

Purpose of the Study

In light of the dearth of quantitative studies on college-going culture on the high schools, particularly HB 400 schools, the purpose of this study is to identify hidden student perceptions about college-going culture at HB 400 schools in Dallas-Fort Worth. This purpose emerged out of the North Texas Regional P-16 Council’s objective to understand and promote college-going culture in DFW, specifically at HB 400 schools (TEA, 2001; THECB, 2005b, n.d.b). Understanding and promoting college-going culture at HB 400 schools is a strategy of the THECBs’ Closing the Gaps by 2015 statewide initiative to increase participation in Texas institutions of higher education by 500,000 by 2015.

Research Questions

The aim of the research was to identify hidden student perceptions of college-going culture at HB 400 schools in Dallas-Fort Worth. The following were the research questions:

1. What are students’ perceptions about the college-going culture at HB 400 schools in the Dallas-Fort Worth Metroplex?
2. What hidden perceptions about college-going culture, if any, exist among HB 400 students?
3. How do hidden perceptions impact observed perceptions about college-going culture?
4. What is the relationship among hidden perceptions?

Definition of Terms

*College-going culture* refers to patterns of paradigmatic expectations and praxis attributed to stakeholders involved in educational processes related to college-going and often affiliated with the ecology of high schools (Conley, 2007; Corwin & Tierney, 2007; McDonough et al., 1998; Oakes, n.d.).

*College-going Culture Survey* (CGCS) is an instrument designed in the course EDUC 2980 to measure the college-going culture of urban high school students. Perceptions about college-going culture are described and identified by use of the CGCS. This survey of college-going culture was based on another college-going culture survey developed by the College Board in 2006.

*College readiness* is a measure of the minimum adequate academic, social, and psychosocial maturation needed for successfully progressing through college without remediation (Conley, 2007).

*Exploratory factor analysis* (EFA) is defined by Research and Statistical Support (2010) as:

- typically used to confirm the latent factor structure for a group of measured variables.
- Latent factors are unobserved variables which typically cannot be directly measured; but, they are assumed to cause the scores we observe on the measured or indicator variables.
- FA is a model based technique. It is concerned with modeling the relationships between measured variables, latent factors, and error. (para. 10)

*Hidden perception* is an underlying perception, attitude, or belief held by an individual or group of individuals. Hidden perceptions are not observed or measured directly but indirectly.
Their existence was explored among a group analyzed via exploratory factor analysis. Statistically speaking, hidden perceptions are latent construct, hidden dimension, or factor structures that are estimated by a linear combination of weighted scores based upon the general linear model which theoretically accounts for the common variance shared by a group of survey items (manifest variables).

*HB 400 school* refers to a public high school that “for any two consecutive years during the preceding five years, have been among the lowest 10% of high schools in the state in percentage of students graduating from high school and enrolling for the following academic year in an institution of higher education” (Texas Education Code, 2001, Sec. 29.904; THECB, n.d.a).

**Significance of the Study**

This study is significant in three ways. First, this study lays the groundwork for schools and families to organize support for students in realizing their academic and vocational goals. In Texas, 40% of all students are economically disadvantaged. Yet 70% of economically disadvantaged Latino high school seniors aspire to attend college, and 69% of economically disadvantaged African American high school seniors aspire to attend college, but 62% of White high school seniors aspire to attend college (Institute for Demographic and Socioeconomic Research, 2007). Understanding hidden perceptions about college-going can illuminate relevant information for closing the participation gaps between non-disadvantaged and disadvantaged groups; lowest socio-economic (SES), FGSs, African Americans, and Latinos as specified in the Closing the Gaps by 2015 (Arcidiacono, Bayer, & Hizmo, 2008; Harper et al., 2009; THECB, 2005b).

Second, this research may enable high school leadership to better understand students
who are expected to comprise growing racial and cultural shifts in education. This is important since the future face of American education is increasing requiring an ability to serve diverse populations. Administrators of urban high schools serving Latino and African American communities desire their schools to be successful. However, too often disadvantaged students have high educational aspirations, but lack the preparation and scaffolding that is available to non-disadvantaged, non-first generation, and non-underrepresented students (Venezia, 2003). Success by schools can be tied to student participation in American higher education. Latino and African American students have traditionally had lower college readiness rates and, as a consequence, underrepresentation persists in higher education. Greene and Forster (2003) note that Latino and African American comprise 31% of 18-year old population but only 18% of the 18-year old college ready population.

Third, the state of Texas has struggled with how race and socio-economic status can coexist in perfect educational equity (Green & Forster, 2003; Oakes, n.d.). A focus of Texas’ CTG initiative is promoting equity and diversity in higher education in large urban areas to achieve state economic goals (Millett & Nettles, 2009; THECB, 2005a). Texas contains three of the largest urban areas in the United States, and the involvement of urban populations in higher education will shape the future of the American workforce (Mikyung, 2009; THECB, 2005a). If Texas’ state education goals are not met by 2015, the economic impacts will have consequences in Texas, including but not limited to brain drain, decreased ability to attract and retain businesses, and millions of dollars lost in tax-generated revenue which will limit future generations from receiving the adequate preparation to propagate individual and state success (Creusere et al., 2010; THECB, 2005a). Understanding the hidden perceptions may prove insightful for addressing barriers known for hindering underrepresented populations from
enrolling into colleges and universities (Gibbons & Borders, 2010).

Since multiple studies have utilized versions of a college-going culture survey, exploring several psychometric properties of the instrument used in the current study was in order. The validation of the instrument was limited to the results of the EFA and Cronbach inter-item reliability coefficients. Several recommendations are provided by exploring the latent factor structure causing observed scores of HB 400 students regarding college-going culture. Additionally an analysis of the reliability of the College-going Culture Survey was conducted. The exploratory factor analysis models unobserved underlying constructs that explain items in the College-going Culture Survey. A recommendation for a revised instrument is provided. In summary, the significance of this study might help schools and students and their families and might address societal implications of demographic shift, might provide information for colleges to readjust to support students, and might offer validation of the instrument.

Limitations

Data were from the College Going Culture in Urban High Schools database that was created through the study College Going Culture in Urban High Schools (Harris et al., 2008). HB 400 schools status is determined by student enrollment in higher education following high school graduation (AEIS, 2007; TEA, 2008; Harris et al., 2009). A limitation is that data were collected in 2007-2008, so it may not reflect more current trends. While demographic information such as grade, gender, and first-generation status were compiled, the data of primary interest were gathered from student self-reported responses to the 15-item College-going Culture Survey. Also, there was unequal respondent participation across demographic categories: Grade 12 respondents at 57.04%, female respondents 62.25%, and Latino respondents 61.58% (see Table 5). This limitation is relevant because the average promotion rate from one grade to the
next among the four HB 400 schools included in the study was 67.3%, and the state average in 2007 was 80%. Therefore, this study’s depiction of the college-going culture with largely influenced by 12th grade, Latino females who demonstrated a level of persistence despite obstacles.

The total population of HB 400 students contained in College Going Culture in Urban High Schools data were analyzed \((n = 151)\). The sample is a small population. To address this limitation of smaller population and increase the ability to generalize findings beyond Dallas-Fort Worth HB 400 high school populations, a parallel analysis was performed. Parallel analysis is a multivariate resampling technique based upon central limit theorem that accurately extracts significant factors and loadings based upon properties of sample that would be identifiable in normally-distributed data (Horn, 1965). The parallel analysis was conducted by simulating random normal data using parameters of the original sample \((n = 151, 15 \text{ variables}, \text{etc.})\). Since exploratory factor analysis (EFA) is optimally performed with larger datasets, the parallel analysis conducted EFAs on all 1,000 datasets. The average of all simulated eigenvalues functions as a baseline for eigenvalue retention in the original data. This facilitates greater accuracy in factor retention and increases generalizability of the retained factor solution (Hayton, Allen, & Scarpello, 2004; Horn, 1965; Watkins, 2006).

Since this research study grew out of the College Going Culture in Urban High Schools study, limitations of this original study are discussed briefly. College Going Culture in Urban High Schools was a qualitative study sponsored by the T.G. Foundation in 2007-2008 (Harris et al., 2008). The study database consists of data collected by Harris et al. (2008). Participating researchers completed National Institutes of Health human subjects training and criminal background checks. The researchers included 18 undergraduate students enrolled in a three-
credit, lower-division course who were assigned to research groups of three to four students. Teams were led by the course instructor and a graduate student assistant.

Undergraduate minority students helped to facilitate the administration of the College-going Culture Survey, the instrument used in this study, to urban students at HB 400 schools. Employment of underrepresented undergraduate student researchers for the purpose of data collection was consistent with the Closing the Gaps by 2015 initiative because it fulfilled the initiatives objective to promote college-going culture at HB 400 schools in the Dallas-Fort Worth Metroplex (THECB, 2005b). However, the age of the student researchers may be seen as a limitation by some.

Locations for data collection were determined by counselors, teachers, and principals, since space was at a premium during school normal school hours. Common venues included but were not limited to hallways, study halls, libraries or classrooms. Typically the respondents answered the survey during normal school hours. Yet many teachers and principals increasingly guarded the students’ schedules during the middle of the semester during the standardized testing season (TAKS and TEKS). Therefore multiple trips had to be scheduled, rescheduled, and pre-agreed upon arrangements were almost always subject to change. Thus, delays were inevitable. The student research teams were instrumental in distributing approximately 400 surveys to high school students attending the four HB 400 schools by coordinating with teachers and working through gatekeepers to gain access to student survey participants. To increase participation as many as seven site visits were made to each respective school. Despite these efforts, only 151 surveys were completed.

All survey respondents under 18 must have obtained written permission from their parents to participate. This was a potential deterrent affecting the sample size and may have
contributed to the unequal distribution of respondents between grades (see Table 5). Many Latino families, while delighted to help, were leery of the official-looking paperwork, technical language, and gathering of personal information, despite the assurances their identities would remain anonymous (Olivas, 2006). Nevertheless, Latino students were the largest ethnic participants in the study (see Table 5). Students who did seem interested in gaining parental consent misplaced the forms in transit between school and home. These were limitations beyond the control of the research teams.

Delimitations

The scope of this study was delimited to four House Bill 400 schools in the Dallas-Fort Worth area that partnered formally with the University of North Texas to increase college-going. The results of the qualitative study of college-going culture in urban schools served as the database for this current study (Harris et al., 2008; TEA, 2008). Under the umbrella of the Closing the Gaps by 2015, the Texas Legislature required poor performing high schools identified by the Texas Education Agency to form partnerships with proximate public universities to increase participation in higher education (THECB, 2005a). Therefore, the study only included schools that for any two consecutive years within a five-year period had the lowest 10% for college-going (AEIS, 2007; TEA, 2008; Harris et al., 2009). The College Board developed a college-going culture survey (College Board, 2006). The College Board’s survey is a student self-report instrument. Harris et al. (2008) revised this survey and used their College-going Culture Survey to study college-going culture among students in urban high schools.

This study’s sample size \((n = 151)\) is adequate, but small to moderate in size (Cattell, 1978; Comrey, 1973; MacCullum et al., 1999). While larger sample sizes are preferred, there is no minimum threshold to conduct an EFA, since adequacy of sample size has a much to do with
nature of data as the amount of data (De Winter, Dodou, & Wieringa, 2009). Therefore, strict rules regarding sample size have been all but abandoned (Costello & Osborne, 2005; Fabrigar et al., 2001, Starkweather, 2010). A quality EFA can be conducted with strong data and a sample size of as few as ten cases, since EFA is complex multivariate multi-stage analysis and concerned with correctly modeling relationships between unobserved variables, observed variables, and error (De Winter, Dodou, & Wieringa, 2009; MacCullum et al., 2001).
CHAPTER II
LITERATURE REVIEW

To paint the appropriate backdrop for this study, the literature regarding access to higher education is presented first. The college access literature is comprised of four interactive contexts: (1) individual context, (2) familial contexts, (3) educational contexts, (4) socioeconomic/sociopolitical contexts (Fann, 2004; McDonough, 1997; Perna & Thomas, 2008). Following the review of literature regarding access to higher education, a review of relevant literature about college-going culture is presented. Studies include but are not limited to patterns of thought, worldviews, conceptions, and anticipations of key stakeholders regarding the possible choices and actions related to college choice (Kirst & Venezia, 2004; Manski, 1993; McDonough, 1997; Oakes, n.d.; Harris et al., 2008).

After the literature review of college-going culture, related studies comparing first generation students (FGS) and non-first generation students (NFGS) are discussed (Moises & Vohra-Gupta, 2007; Nunez & Cuccaro-Almin, 1998; Rendon, 1995; Engberg & Wolniak, 2010). Since Latino and African American students comprise the largest segment of FGSs in Texas higher education, sections discussing African American students and Latino students are addressed respectively. Coupling race and socioeconomic status is common practice for studying trends regarding the access of underrepresented students to higher education (Freeman, 1999; Kahrl, 2008; King, 2004). Obstacles to participation in higher education were part of the theoretical framework of bounded rationality, college-going habitus, and social capital theory (Bourdieu, 1977, 1984; Jencks, 1972; Lareau & Horvat, 1999; McClafferty, McDonough, & Fann, 2001; Perna & Titus, 2005; Portes, 1998; Swidler, 1986; Tierney & Jun, 2001; Wolanin, 2005; Yosso, 2005).
Access to Higher Education

Accessing higher education involves successful navigating by a nexus of interactive contexts: (1) individual context, (2) familial contexts, (3) educational contexts, (4) socioeconomic/sociopolitical contexts (Fann, 2004; McDonough, 1997; Perna & Thomas, 2008). Each context, although theoretically correlated, can be explored respectively, so that distinctive insights about how each context influences disadvantaged student’s decisions about higher education (College Board, 2006; Oakes, n.d.). Arguably the most important context is the individual context, namely the attitudes and behaviors associated with each student’s worldview. The internal context governs students’ immediate decision-making processes (Perna & Thomas, 2008; Rossman & Rallis, 2003). These processes include personal educational aspirations about college, academic preparedness, and academic self-efficacy (Harackiewicz, Barron, Tauer, & Elliot, 2002). This context focuses on students’ motivations, goal orientation, and psychological states of mind precipitating college choice (Elliot, McGregor, & Gable, 1999; VandeWelle, Cron, & Slocuom, 2001).

Individual Context

As students anticipate socialization in college, they begin to mirror behavior consistent with the future goals. This college focus is more normative among the highest socioeconomic students, whose parents are highly educated. Consequently, there are gaps between collegiate anticipatory socialization and actual realization of this dream among low-income students whose parents, in many cases, have not had the opportunity to attend college (Striplin, 1999). Unfortunately, many students are unaware of the difference between finishing high school and being college ready (Manski, 1993; Plank & Jordan, 2001).

Tinto (1975) provided, through the student integration model (SIM), a framework to
evaluate why students drop out of or stop out from educational institutions. Tinto’s model was built upon Durkheim’s model of suicide. SIM asserted that academic ability, motivation, and college environment must match for a student to persist. A good university and student match is evident in the student’s academic ability since academic performance is an indicator of how fully a student has been integrated into his university environment. If minority, Latino and African American students attend academically rigorous college preparatory high schools, then they achieve higher academic success and greater levels of persistence than non-minority Caucasian classmates (Fletcher & Tienda, 2010). But students, regardless of race or socioeconomic status, who cannot meet their own academic goals are less likely to persist. High student motivation is an important evidence of persistence (Cabrera, Castaneda, Nora, & Hengstler, 1992).

Low-income students often struggle to embrace a college-going culture because it often entails establishing a new cultural identity that is distinct from their cultural identity (Peterman, 2000; Rendon, 1995). First-generation students often had lower perceptions of their academic ability than students whose parents attended college (Hellmen & Harbeck, 1997). Underrepresented students often have lower grades. Often first-generation students and underrepresented students may be older, have dependents, and require remedial or leveling course work to enter or continue once enrolled in college (Nunez & Cuccaro-Alamin, 1998).

In addition, there is often dissonance between students’ and families’ expectations (Mitchell, 1997). Minority students may be hesitant to embrace a college-going culture that is predominantly Caucasian. If students must leave behind family, siblings, and long standing friendships, they may believe the losses pose a barrier to plunging headlong into the intimidating and unfamiliar White university world. Additional obstacles include family values such as loyalty, absence of mentoring, family loss of income, loss of place, and inadequate academic
preparation which compound their anxieties and contribute non-persistence in higher education (Rendon, 1995).

Familial Context

The second level influencing student access is the familial context. Researchers and policy makers attributed higher educational aspirations, fewer behavioral issues, and greater levels of persistence in high school with greater parental involvement. The family functions as the primary stewards of their children’s academic careers. The level of support that parents/guardians provide students enhances or diminishes their future college aspirations (Conley, 2007; Hossler, Schmit, & Vesper, 1999; Institute for Demographic and Socioeconomic Research, 2005; Pérez & McDonough, 2008). In reference to Conley and Hossler, Bourdieu (1973) postulated that familial involvement functions as social capital in the lives of students resulting in greater scaffolding and supports students’ aspirations of college enrollment. A complimentary view is that parents model their personal educational philosophies to their children, and as a result, students’ anticipatory socialization about college is taught at home, not just taught at school (Hossler et al., 1999; Perna & Thomas, 2008; Ver Ploeg, 2002). These information streams are outlets for larger reservoirs of capital, albeit social, fiscal, or cultural. Coleman et al. (1964) similarly argues social and cultural capital offer streams of information, attitudes, and social networks, which are shared through human interaction within communities. Karen (2002) posits the group that maintains the dominant status in society attempts to preserve its position of superiority through transferring social capital judiciously. Striplin (1999) emphasizes that barriers are intentionally implemented to strengthen those benefitting from the current system. Hence, building relationships is like building bridges into networks and that can otherwise be untapped in terms of cultural capital.
Each person’s habitus or governing worldview which guides ethic, rationale, and decision-making is formulated in the context of social structures a person interacts with (Dumias 2002). An implication is that one must supplement a parent’s educational, physiological, emotional and fiscal needs in order to increase a student’s social capital available (Schleef, 2000). It is not only educational institutions that may serve as a bridge to understanding higher education, but also parents. Minority students are more likely to seek heterophilous interactions with faculty and administrators for the purpose of gaining college knowledge (Freeman, 1997). On the other hand, Caucasian and high SES students customarily rely on homophilous social capital as crucial components to the social networks. Economic barriers, social barriers, cultural barriers, and human barriers prevent access to a variety sources of wealth: economically, socially, culturally, and human capital. The aggregate combination of barriers often creates a deficit of wealth among underrepresented students. Hence, barriers hamper streams of wealth in all their various forms from being fully transferred to students’ intellectual, emotional, educational, familial, and educational accounts.

Students from disrupted home or single parents who have not attended college often are disadvantaged compared to NFGS families (Striplin, 1999). Families of FGS unfamiliar with the financial, procedural, and administrative requirements gain knowledge through agencies, advertisements, and administrators about post-secondary options (Perna & Titus, 2005; Plank & Jordan, 2001; Tierney & June, 2001). Nonetheless, students from highly affluent families with high grades are more likely to enter highly selective institution than any other group (Astin & Oseguera, 2004). All too often students from NFGS families have higher economic status. It is not uncommon for NFGS families to be aware of and avail themselves of private tutoring. NFGS families can seek resources such as informational sessions about college admissions,
including of private counselors, than FGS from single parent families (Creusere et al., 2010; McDonough, Korn, & Yamasaki, 1997).

Parents and families who are highly educated are more tenacious about demand counseling that prepares their child for highly selective universities. On the other hand, parents of middle and low-income students are more interested in their children keeping pace to finish high school well. In other words, parental expectations differ along socioeconomic lines which often impact student expectations about college (Fann, 2004; Perna & Thomas, 2008). Students from families in the highest socioeconomic status venture down college pathways sooner than first generation college goers, who tend to represent the low and middle socioeconomic status students (NCES, 2009).

Alternatively, Bean (1980) used a student attrition model (SAM) to explain student attrition. The basis of the SAM rested on organizational theory, specifically the behavior of employees who ultimately leave their places of work. On the one hand, SAM can be used to acknowledge the importance of collegial relationships, relevant coursework, and institutional ethos shaping students’ beliefs about fit at an educational institution. On the other hand, SAM can show that students form many significant beliefs outside of the educational context. For example, factors such as parental support and support of friends who do not attend the university can have a significant impact on attrition rates. Bean posited that beliefs determine attitudes. Attitudes govern student behavior. On the one hand, Tinto (1975) emphasized factors within the university that contribute to academic success, while Bean emphasized psycho-social beliefs that occur inside and outside the walls of the university (Caberara et al., 1992).

Educational Context

The third level influencing student access to higher education is the educational context.
School characteristics contribute to the student’s overall educational experience. A school’s material culture, namely the environment, the physical building posters, signs, and bulletin boards, can shape the students’ perceptions about a high schools’ value of college. Schools play a critical role for the children of working class students who are navigating this often uncharted territory (Azzam & Sloccom, 2005; Conley, 2007; Fann, 2004; Fletcher & Tienda, 2010). Students are trained to accept the praise and critique of the teachers as a valid measure of their intellectual aptitude and educational aptness. Therefore, negative or non-affirming nonchalance regarding college-going can send a mixed message that college is not for me regardless of the hopes of the teacher (Grodseky & Riegle-Crumb, 2010). Hence, when a teacher hints, insinuates, or outright recommends a vocational track to a student, an unintended consequence may be a self-fulfilling prophecy of simply meeting the expectations of a teacher, which all good students seek to do (Oakes, n.d.).

The complexity of the college-going process entails a collaborative effort among a variety of stakeholders including high school counselors, parents providing financial information, high school administration providing records, letters of recommendations from teachers, students filling out applications, not to mention appropriate grades and standardized test scores. Without scaffolding, this battery of hoops to jump through, even with the best intentions, may discourage students and not allow for personal attention (Conley, 2005; Kavile & Willis, 2009). Expectations of teachers and counselors are determinative to a student’s personal goals. Students are conditioned to take cues from educational authorities who can provide great encouragement or discouragement. Teachers and counselors are encouraged to direct each student to the path of greatest success with academically extensive or vocationally intensive education. State educational policies encourage teachers and counselors to emphasize collegiate
options to those on the advanced academic track and vocational options to those being guided to immediate employment after high school. These types of determinations impact the quantity and quality of information regarding college (Fann, 2004; THECB, 2005b).

Student characteristics intersect with educational systems such that tracking students in vocational careers can diminish exposure to vital college information. Ethnicity also plays a role in students’ schooling. According to Perna and Thomas (2008), the low percentages of disadvantaged students who meet minimum university admissions standards are attributable to a combination of factors. For example, students are often ill advised regarding requisite course sequencing to be competitive for selective and highly selective universities. One factor is the need for more college talk by teachers as common conversation in the class. Unfortunately, overwhelmed teachers sometimes provide preferential attention to the top performing students who are already likely to go to college, such as the top 10%. With diminished school resources, cut state budgets, and results based evaluations, teachers cannot provide the majority of students who have modest or below modest records personalized academic counseling which will help students persist into higher education if they graduate high school.

A student who values the completion of the degree program is deemed motivated. This indicates a good match between the educational institution and student. Also, planning to re-enroll next semester is evidence that student motivation has persisted. A student’s interaction within the environment must be affirming to the initial decision to attend in order for the student to persist. A student who develops multiple meaningful relationships within the college environment is more likely to persist. A good educational institution and student match include positive interaction with university friends and faculty. Each match increases student engagement, which is necessary for resilience. In summary, three key matches must exist for
students to avoid dropping out, namely academic ability, motivation, and robust college-going culture. Students’ personal motivation can be nurtured by a school’s college-going culture and the student can therefore be more likely to persist into college.

Sociopolitical Context

The fourth level influencing students’ access into higher education is socioeconomic and sociopolitical context. Economic capital is familial socio-economic status and includes knowledge of fiscal matters related to expenses and financial aid and a worldview that reflects the monetary costs of living. Human capital is innate academic ability, and it nurtures academic preparation (Perna & Titus, 2005). Also, successful programs have a governance structure that provides for sharing of data between the high school and college as a means of gauging the success of the program.

Cortes (2010) explained that the Texas top 10% plan has negatively impacted the enrollment and persistence of minorities in selective institutions of higher education, concluding that minority students’ postsecondary educational attainment has declined under the top 10% admissions policy. Cortes argued that eliminating affirmative action harmed retention of minorities at flagship universities. Hence, socioeconomic, sociodemographic, and sociopolitical factors are dynamically involved in creating equity or disparity within American higher education participation (Cabrera & La Nasa, 2000; Hossler et al., 1999; Manski, 1993; Perna & Titus, 2005; Venezia, 2003). Currently, a federal initiative known as the American Graduation Initiative aims to reduce persisting gaps in post-secondary attainment by investing $12 billion by 2020 into higher education and educational programs that promote access, remediation, matriculation, innovation, global competitiveness, technology, and university-industry partnerships. President Barak Obama argues that college is critical component creating a
competitive workforce in tomorrow’s global economy (White House, Office of the Press Secretary, 2009, para. 6)

Multiple state and national studies project that minority populations will continue to grow in the United States, yet a battery of obstacles stands between disadvantaged students and their access to higher education (Davis et al., 2004; NCES, 2009; Pascarella & Terenzini, 2005; Texas State Data Center, 2006; U.S. Department of Education, 2005). Texas is ranked 45th in baccalaureate attainment and 6th in poverty (Texas State Data Center, 2006). Approximately 5% of the general population participates in 2-year or 4-year postsecondary education, but this percentage is lower than the national average (North Texas Regional P-16 Council, 2007; THECB, 2005a; Texas State Data Center, 2006).

While the national population is becoming more diverse, public education is becoming more segregated (Fletcher & Tienda, 2010). The connection between the availability of state funding and access to higher education had been explored (Niu, Tienda, & Cortes, 2006). Yet, the role of the state policy has had varying success in eradicating gaps in higher educational attainment along socioeconomic lines. On the one hand, state interventions have had positive results in reducing stratification but failed to eliminate underrepresentation of disadvantaged students in higher education (Heller, 1999; Perna & Titus, 2004; THECB, 2005a). On the other hand, state initiatives have exacerbated the disparity of higher education attainment (Hopwood vs. Texas; Cortes, 2010; Perna, Steela, Woda, & Hibbert, 2005). A consequence is persistent gaps in post-secondary attainment between urban, low-income students of color and a higher SES Caucasian student population (Fletcher & Tienda, 2010). Mikyung (2009) reported that racial/ethnic disparities have slightly increased due to disproportionate rates of improvement. Whites show the highest rate as well as the largest gain, rising from 31% in 1988 to 45% in
2007, but African Americans and Latinos made only smaller gains from 22% as the largest absolute and percent growth rate gains (Mikyung, 2009).

College-going Culture

Extending McDonough’s (1997) argument, Fletcher and Tienda (2010) held that the inception of college expectations begins at home and is reinforced by high school climate organizational habitus (i.e., college-going culture). McDonough proposed that high schools are an external reflection of the socioeconomic standing and educational values of familial and community values. In other words, the behavior of students is reproduced and reinforced through the intermediate organizational habitus already existing and part and parcel to students’ experiences. As a result parents choose high schools that most closely align with their preexisting desires about which social class culture they desire their children to be a part of. With respect to college choice, the school culture is an environment that structures a viewpoint which informs the perceptions about college and vocational options. If high schools emphasize vocational opportunities to the exclusion of college options, the sensitivity of students’ expectations about college may be numbed (Flectcher & Tienda, 2010).

McDonough (1998) defined college-going culture as the high school patterns of thought, worldviews, conceptions and anticipations of key stakeholders within a given academic institution, regarding the possible choices and actions related to college choice. Similarly, Conley (2007) defined college readiness as the “level of preparation a student needs in order to enroll and succeed—without remediation—in a credit-bearing general education course at a postsecondary institution that offers a baccalaureate degree or to transfer to a baccalaureate program” (p. 5). College readiness may entail several components such as time management skills that are necessary to segue from teenager to young adult. Students need to be managing
their finances in a strategic and circumspect way since differing financial aid options result in
different short term and long term consequences. College readiness should involve rigorous
study habits with less instructional supervision. In other words, gaining proficiency and mastery
over subject matter is not a given upon being accepted to college.

Corwin and Tierney (2007) suggested that college culture “in a high school cultivates
aspirations and behaviors conducive to preparing for, applying to and enrolling in college. A
strong college culture is tangible, pervasive and beneficial to students” (p. 3). Emotional and
moral maturity are key components to the long-term success of students, communities,
institutions, and nations. Ethical and moral aspects within high schools are influential on the
college-going culture. Policies and practices by other students, teachers, administrators, and
parents shape and foreshadow the trajectory of students’ values and beliefs about academic
honesty, alcoholism, immorality, vandalism, professionalism, indecency, impropriety, and
lewdness. There are fewer irreversible consequences of a lackluster academic performance than
lackluster moral rectitude. Since the Judeo-Christian ethic is inextricably woven in the fabric of
the origin of the university, character is as important a goal as intelligence regarding the
development of college ready students (Hayen, 1962; Kavile & Willis, 2008).

Walne (2008) suggested that a key to college-readiness entails reciprocity that should
occur between teachers’ preparation and students’ engagement by leveraging appropriate
technology and research skills. College-ready students engage in long-term planning. They
practice visualization techniques. Imagining a career path and using critical thinking skills to
take baby steps toward the goal of attending college is a trait of a college ready student. Students
should be steadily moving beyond the knowledge, understanding, comprehending types of
learning to the disaggregating of information, synthesis, and innovation types of learning.
The model of college readiness developed by Conley (2007) included four facets of college preparation:

(1) key cognitive strategies that enable the learning of content, (2) key academic content knowledge and skills, (3) academic behavior that include self-monitoring and self-control, and (4) contextual skills that represent ‘privileged information’ about how college operates as a system and culture. (p. 17)

Further, a strong college-going culture will help students increase the skill and acquisition of college admissions, requirements, and timelines articulated by Lundell, Higbee and Copeland (2004). They hold that college-ready students may be aware of key sources for revenue related to state and federal funding. For example, tuition payments received from Pell Grants, as well as other state and federal resources, may be the primary sources of funding that keep the doors of the school open. If the college-ready student is the life blood of the university’s fiscal budget, then efficient operations hinge on recruitment, enrollment, retention, and placement of undergraduate students who pursue the bachelor’s degree.

Although Conley’s (2007) model had not been published at the time the initial study of college-going culture in urban schools by Harris et al. (2008) was approved, it was clear that Conley’s focus was on the knowledge of college associated with the fourth facet his model. The assessment of college-going culture in the 2008 study occurred through observation of schools and self-assessment by school representatives and college students of the extent to which their schools provided or supported learning about how to get into and succeed in college.

A model of schools promoting college-going culture for middle class students proposed by UC ACCORD (Oakes, n.d.) includes the attributes of safe and adequate facilities, a college-going culture, rigorous academic curriculum, qualified teachers, intensive academic and social
supports, opportunities to develop a multi-cultural college-going identity, and family-neighborhood-school connections. Oakes defined college-going culture as high expectations by all stakeholders including high school teachers. According to Oakes, high school teachers may believe that the purpose of nurturing college ready students is in partial fulfillment of a personal duty or calling. A college-going culture includes a community of stakeholders such as students, teachers, and parents who strive to cultivate college readiness and high achievement among students. This includes rigorous preparation of students through high expectation of adults in their community. Expectations and persistence are linked. Thus, a robust nexus of adults who challenge students to excel can function as scaffolding. Scaffolding includes the strategic investment of time, tactics, and training resulting in expanding the lifespan of a student’s educational career. Erudition, diligence, dedication, determination, and discipline are championed instead of school-sanctioned vocational tracks that steer students away from the university. Coupling hard-work, interventions, and excellence should be the messages that bombard students’ psyches such that they begin to make these values apart of the core principles they live by from childhood through adulthood. These values will help students prevail against barriers and obstacles stifling their belief that college is only for the elite and not for everyone (Oakes, n.d.). Further, Oakes holds that there is a mutually symbiotic relationship between the offeror (the university) and offeree (the student). The college ready student not only needs the university, but the university needs the student. For without the college ready student, there would be a shortage of eligible attendees who would continue on to pursue graduate study. McDonough (1997) holds college ready student is the foundational consumer of higher education. These students are the foundation upon which progress is hinged. They are typically heavily invested in by their helicopter parents who hover over their children, seeking to enforce
excellent service being provided by the institution.

First-Generation Students

Caberara and LaNasa (2007) take the position that the influx of diversity in postsecondary educational institutions correlates to the increased presence of disadvantaged students. Students who are economically disadvantaged have barriers in their path to enter college (Caberara & La Nasa, 2007). Creusere et al. (2010) predicted that by 2040 over 70% of Texas population between the ages of 24 to 66 years old will be Latino and African American. As a result, economy, infrastructure, and governance are comprised of people groups traditionally had higher levels of poverty and lower levels of representation in higher education.

The definition of disadvantaged students expands from socio-economic status as measured by eligibility to participate in free and reduced lunches. Barriers to higher education may manifest themselves in social, emotional, and professional contexts. For example, disadvantaged students are less likely to be involved in extracurricular activities that can enrich their educational experiences (Moises & Vohra-Gupta, 2007). Despite colleges’ strategic efforts to make retention a priority, college and universities experience an abysmal 40% dropout out rate among all freshmen. Among the leading factors contributing to this phenomenon would be less and mediocre preparation (Burley, Butner, & Cedja, 2001).

Walne (2008) suggested that coupling high standards with student-centered pedagogy promote success among students struggling to meet college readiness standards. Rigorous vertically aligned curriculum which that integrates problem solving and analysis is vital helping at risk students succeed in the global economy. FGSs are often of a lower socio-economic status. Theoretically speaking, FGSs often have less college knowledge regarding policies, processes, and procedures related to admissions, financial aid, and educational degree expectations than
students whose parents have some college education (Moises & Vohra-Gupta, 2007).

Unfortunately, FGSs often experience a greater disequilibrium due to culture shock when engaged in the college admissions process. Even if aspirations for attending college are high, FGSs can reflexively experience self-deprecation because of their internal awareness of their own disorientation, sense of alienation, and low self-efficacy. Once enrolled in college, FGSs are more likely to live off campus, which reduces the availability and use of peer-to-peer mentoring as a valuable human resource (Moises & Vohra-Gupta, 2007). In summary, FGSs unfamiliarity with technical jargon, sequencing, timelines, and mentoring pose significant barriers to transition from high school into higher education which can be perceived as insurmountable obstacles to overcome. In comparison to contemporaries, only 53% of FGS students’ anticipate that they will complete a bachelor’s degree (Choy, 2001).

FGSs are characteristically economically disadvantaged and attended school districts in which teachers were either teaching outside of their field or not certified in their subject. Dawson and Maxwell (2008) found that if economically disadvantaged students comprised 0% to 25% of the study body population, then 20% of teachers were teaching outside of their field. However, if 75.1% to 100% of students were economically disadvantaged, then 48% or more of the teachers were teaching out of their field. If the strongest teachers are not teaching in the areas of greatest need and the teachers teaching FGSs are not teaching in their field, FGSs will have exponentially less academic social capital than non-FSGs. This is not simply due to differences in family income but also due to navigational acuity with respect to post-secondary educational processes. Highly educated parents of non-FGSs are often involved in their children’s educational development. This engagement stimulates a decrease in stress associated with entering a new collegiate environment (Moises & Vohra-Gupta, 2007). Non-FGS students are
more likely to be exposed to the psychosocial mores of the collegiate way or college culture throughout a lifetime of exposure, repetition, and inculcation. This acculturation takes place inside and outside of the home from conception to matriculation. Thus, non-FGSs college choices are the culmination of systematic investments resulting in an ever-increasing sophistication and familiarity with the ethos, culture, and academic expectations at universities and colleges.

AVID, or Advancement Via Individual Determination, is an in-school program producing scaffolding for low-income, ethnic minorities, and first generation college goers. The program targets average high school students and challenges them with high expectations through mentoring, proven study methods, and anticipatory socialization. AVID’s goal is to create a college preparatory paths within public schools. A normative social practice in AVID is mentoring during which underrepresented benefit from smaller student-teacher ratios. The additional accountability reinforces students’ academic proficiencies and college knowledge, resulting in greater college readiness (AVID, n.d.).

African Americans and College-going

*Sociopolitical context.* Understanding African American students’ attitudes about higher education has been the subject of substantial research (Freeman, 1999; Kahril, 2008; King, 2004; Noguera, 2008; Saporito, 2009; Steele, 1999; Toldson, Braithwaite, & Rentie, 2009; Walpole, 2008). Student perceptions about higher education can be in response to a variety of internal and external contexts (Pascarella & Terenzi, 2005; Perna & Thomas, 2008). Historically, the sociopolitical landscape of American education has had a profound impact upon African American student’s perceptions about higher education (Olivia, 2005). U.S. Supreme Court rulings, such as *Brown v. Board of Education of Topeka, Kansas* in 1954, minimized the detrimental psychological effects that segregation had on children due to an earlier ruling known
as *Plessy v. Ferguson* (Olivia, 2005; Perna et al., 2005; Zirkel, 2005). Often pre-existing stereotypes about African American students contributed to the systematic resistance to legislation because integration challenged normative social practices (Rhoades, Saenz, & Carducci, 2005). Despite oppressive segregation, the Civil Rights Act of 1964 laid the groundwork for increasing educational aspirations and attainment for African American (Rhoades et al., 2005).

Following the Higher Education Act of 1965 increased federal financial grants was designated for African American’s student to pursue higher education in order to promote educational aspirations, attainment, and economic opportunity. Federal grants bolstered aspirations of African Americans through the 1970s (Hauser & Anderson, 1991). Even though African American aspirations about higher education have steadily increased, gaps in educational attainment between African Americans and Caucasians have not been eradicated but widen from 1974 to 2003 (Walpole, 2007). However, during 1980s, the public federal grants African American students had been enjoying were largely replaced with the federal student loan program (Hauser & Anderson, 1991). This change in federal support deflated many African Americans student’s college aspirations, because rather than attending college without obligation to pay back grants, they now had to attend college and to plan to pay back all the money they borrowed.

Offering fewer grants and more loans diminished African Americans participation in higher education because African American students often have less accumulated wealth, are less likely to take on educational financial debt, and more susceptible to lay-off during hard economic times (Berzin, 2010; Hauser & Anderson, 1991; Hipple, 2010). These are common factors obstacles in hindering and slowing the realization of African American students’ college
aspirations.

When high school students become disillusioned about attending college societal consequences can include increased truancy, stopping out or dropping out of high school, unemployment, civil unrest, and economic instability, as typified in the 1992 Los Angeles riots (Brown & Rodriguez, 2009; Griffin et al., 2007). To avoid these educational and economic ramifications, states have proactively sought to inspire underrepresented student minorities to attain college and to promote integration through social mobility via higher education (THECB, 2009). Although states realize the value of supporting the college aspirations of African Americans, sputtering political support and economic recessions reversed gains made by affirmative action policy (Rhoads et al., 2005).

For example, California’s Proposition 209 was enacted to ban race as the sole criteria for college admission, despite the Supreme Court’s Grutter v. Boilliger (2003) ruling which permitted race-based admissions policies in public universities based on narrowly defined state educational and economic objectives. Political momentum supporting access to higher education among underrepresented student groups, like African American student populations, has slowed since the passing of race-neutral admissions policies in higher education (Rhoads et al., 2005). In majority minority states like California and Texas, the focus has shifted from emphasis on affirmative action to diversity as a whole (Freeman, 1999; Kahril, 2008; King, 2004; Noguera, 2008; Saporito, 2009; Steele, 1999; Walpole, 2008).

Socioeducational context. In states like Texas, California, and Florida, promoting college-going culture among low-income African American high school students has resulted in student success, persistence, and participation in higher education (THECB, 2005a, 2010). Developing positive perceptions among urban African American high school students has in part
been achieved by promoting African American cultural values (Knight-Diop, 2010; Datnow et al., 2010). Supplemental educational programs such as AVID wed college-knowledge and mentoring relationships, so that students receive additional emotional support, academic accountability, and college capital about their academic, college, and professional careers (THECB, 2005a).

Knight and Diop (2010) make the case that instead of pity, incorporating an “ethic of care” empowers African American students in the following ways: encourages persistence in higher education, inspires social mobility, simulates community activism, fosters high school’s en loco parentis, promotes self-efficacy and reinforces self-respect. Logistically, administrative implementation of an ethic of care in urban schools can involve a cohort having the same counselors for all four years of high school, offering academically rigorous schedule options for both honors track and regular track, promote familial administration where concern for students’ well-being equals their concern for students’ intelligence, and creatively saturate the schools’ material culture with interactive information about college-going (McDonough & Caldrone, 2006).

Interestingly, high achieving African American students in magnet and non-magnet schools desire often desire to attend prestigious college and graduate professional schools in the state and around the country like UCLA (Griffin et al., 2007). Yet UCLA’s entering class had only 2% African Americans, which is the lowest percentage since the 1970s. Though there is some success in increasing African American aspirations to attend college, de facto segregation persists along sociopolitical-economic-geographic lines within and between high schools and colleges (Griffin et al., 2007). Therefore, promoting, developing, and nurturing the higher education aspirations of underrepresented students is important since African Americans’
perceptions about higher education are highly correlated with educational attainment (Toldson, Braithwaite, & Rentie, 2009).

Urban low-income students share many similar attitudes regardless of race, but there are some distinct perceptions, aspirations, and attitudes characteristic of African American students (Knight & Diop, 2010). For instance, African Americans students often perceive financial aid is a more important factor than Caucasian students when planning to attend college (Hauser & Anderson, 1991). African Americans are less likely to take on college loans, compared to Caucasians (McDonough & Caldrone, 2006). African Americans college aspirations persist if they are pursuing vocational certification, because short term goals correspond to immediate employability (St. John, Paulsen, & Carter, 2005). However, long-term goals of graduate school are often delayed in order to meet immediate financial needs (St. John et al., 2005).

A common challenge is providing personalized college counseling services to students. Even in some proactive schools which have a designated college counselor, counselor to student ratios are 1:478 (McDonough & Caldrone, 2006). Often African American students believe that they were more likely to be disappointed in achieving their educational aspirations (Mahoney & Merritt, 1993). Yet comparatively, Caucasian and African American high school students have similar aspirations to attend college. However, differences exist in their plans to attend college, namely more Caucasian students plan to attend college (Hauser & Anderson, 1991; Mahoney & Merritt, 1993). Regardless of race, gender, or ethnicity, parental support was very important to shaping students' desires to attend college (Mahoney & Merritt, 1993). Interestingly African American males who expected to be disappointed in achieving their academic goals often perceived that their parents were not supportive of aspirations to attend college (Mahoney & Merritt, 1993). African American high school seniors had to rely more heavily on high school
counseling resources than Caucasian students who equally rely on familial constellations (Toldson et al., 2009).

African American students tend to internalize their environment and make decisions about their intelligence and self-worth based upon perceptions of school quality, rigor of curriculum, and college-preparedness (Toldson et al., 2009). Whether at a magnet or non-magnet school high achieving minority students aspire to attend nationally recognized universities and graduate programs in their state and across the country (Griffin et al., 2007). Yet high performing minorities who attend non-magnet high schools school often have less exposure to college information but nonetheless are thankful and receptive to the limited college resources available. On the other hand, high performing minority students who attend magnet high schools understand the limitations of the college information provided them even though they have more than non-magnet schools.

High school students who have inter-racial friendships benefit from higher educational aspirations than those students who have only same race friendships (Hallinan & Williams, 1990). Younger non-Caucasian students have higher educational aspirations than Caucasian students. Yet factors such as parental income, parental education, and SES are significant predictors regarding college aspirations. African Americans’ aspirations to attend college are comparable to Caucasians, but African Americans are less likely to enroll into college immediately upon completion of high school (NCES, 1995).

African American students are more likely to encounter a disorderly learning environment compared to Caucasian students, but both groups of high school students share similar perspective about the state of the teaching education in American high schools (NCES, 1995). Further, African American students are just as likely to have parents involved in their
education as their Caucasian peers. African Americans are tend to follow a more rigorous course schedule than in years past, benefit economically from completing high school than students who dropout/stopout of high school (NCES, 1995).

Meritocracy is the belief that high educational aspirations and individual effort are the primary elements for students achieving academic success (Grodsky & Reigle-Crumbe, 2009). The impact of attitudes on educational achievement cannot be underestimated (Pascarella & Terenzini, 2005). Pascarella and Terenzini (2005) argued that attitude is a salient factor in predicting educational attainment among differing socioeconomic groups including African Americans. Interestingly African American students demonstrate the most positive attitudes about schooling and have very high educational aspirations, while paradoxically their positivity does not always result in higher levels of academic achievement when compared to Caucasian and Asian American students (Coleman, 1966; Ogbu, 1991). Comparatively, pro-school attitudes are higher among African Americans than Caucasian students. Yet Caucasian students often outperform African American peers (Morgan, 2005). For some, this is a puzzling paradox. In response, a number of researchers conclude that positive attitudes among African American students stem from uninformed lofty opinions. Mikelson (1990) recommended that pro-school attitudes among African Americans are an anomaly and consequently should not be taken seriously.

Scholars with positions similar to Mikelson’s (1990) have often hypothesized that lack of accurate information about obstacles (i.e., the effect of highly stratified, segregated schooling; historical inequities in educational attainment; inadequate academic preparation) contribute to unrealistic expectations and views of academic success (Farkas, Lleras, & Maczuga, 2002). However, African Americans readily acknowledge obstacles associated with their socioeconomic
status (Hochschild, 1998). Some scholars explained the paradox by contending that African American students might lack the exposure to higher levels of academic rigor customary at college preparatory regarding the implications of their often lower-socioeconomic status, race-based discrimination in the workforce, and the educational achievement gaps between minority populations and majority populations (Frakas et al., 2002; Morgan, 1998). However, Downey et al. (2009) demonstrated that African American pro-school attitudes are not uniquely African American but parallel attitudes held by other minority groups including Asian Americans. Often attending schools that are poor performing can thwart the high expectations of attending college (Condron & Roscigno, 2003). Interestingly, fewer African American students enter college upon graduation, a large percentage graduate when socio-economic status and academic achievement is held constant. (Bennet & Lutz, 2010). Yet while African American high school students often have high educational aspirations, upon entry into higher education they lack self-efficacy regarding expeditious degree attainment (Lucas, 1993).

Latino/as and College-going

Latino students are the fastest growing demographic in the U.S., as evidenced in the shifting demographic profile of the public educational profile of Texas, California, and Florida (Haynes, 2009; Oliva, 2004). At-risk Latinos have traditionally been challenged with overcoming patterns of non-persistence in secondary and post-secondary education (KewalRamani, Gilbertson, Fox, & Provasnik, 2007; THECB, 2000). While the 98% of Latino high school student often perceived college education was valuable, 38% considered barriers such as debt and detracting from working to outweigh benefits of college (Zarate & Pachon, 2006). While Latino students have high college aspirations, 89% value college as important, but only 48% of Latino students persist to complete their goal of attending college (Lopez, 2009).
Of those who do attend college, there is an overrepresentation of Latino students whose participation in post-secondary journey begins and ends in the community college. Far too few transfer to a 4-year university and complete a bachelor’s degree (Solorzano, Villalpando, Oseguera, 2005). Latino students perceive that gaps in educational attainment can be attributed to the following latent factors: family financial responsibilities, sociolinguistic deficiency, discrimination, lack of cultural capital, and unfamiliar with American higher education system (Becerra, 2010).

According to Perryman Group (2007), Texas had an economic interest in reversing the patterns of underrepresentation in Texas higher education because of Latino’s rapid population growth. In fact the solvency of Texas’ future economy is increasingly dependent on successfully narrowing the participation gaps of Latino in Texas higher education (Perryman Group, 2007). Target cities such as Dallas-Fort Worth have been identified in the Closing the Gaps by 2015 for strategic development of college-going culture in Latino/a communities via concerted collaborative partnerships between the Texas Education Agency and Texas Higher Education Coordinating Board (Oliva, 2005; THECB, 2010). Texas State legislation has aimed to help Latino students meet minimums of the high stakes tests (TAKS) Texas Assessment of Knowledge and Skills. Since the inception of the Closing the Gaps by 2015 initiative, test (TAKS) scores increased among minority students, the dropout rate decrease, graduation decreased, and gaps persisted concerning lower ACT and SAT scores (McNeil, 2005; Perryman Group, 2009; THECB, 2000, 2010). Goals for increasing Latino participation in Texas higher education are being steadily met, yet an over emphasis on standardized tests may be a contributing to the closing participation gaps with greater efficiency (Solorzano, Villalpando, & Oseguera, 2005; THECB, 2010).
However, following *Hopwood v. Texas* which forbade race based college admissions, policy that increased underrepresented (i.e., Latino and African American) student participation in higher education had to be creative, effective, and race-neutral (Oliva, 2004; Solorzano et al., 2005). Since Texas schools were *de facto* segregated, Texas top 10% law granted automatic admission to the top 10% of all high school graduates among underrepresented students while avoiding race based admission quotas (Olivia, 2004; Olivia; 2005). Latino students’ knowledge of this top 10% plan increases aspirations for college but does not increase application and enrollment. Yet only 34% of Latino’s have even shown any awareness of the law and its implications in comparison to 64% of Asian American students (Lloyd, Leicht, & Sullivan, 2008). *Bullinger v. Grutter* superseded the *Hopwood v Texas* ruling, making a race a viable criteria in college admissions, yet once adequate saturation of diversity has been achieved affirmative action will no longer be necessary (Solorzazo et al., 2005). Many Latino students are unfamiliar with navigating the application, financial aid, and specifically the differences between school, state and federal laws (Zarate & Pachon, 2006).

*Family responsibilities.* Family expectations about students greatly shape student perceptions and aspirations about college (Pascarella & Terenzini, 2005). The most salient factor affecting Latino students’ pursuits to attend college are the support and encouragement of family specifically parents (Ceja, 2004). Latino students whose parents have some college regardless of the institutions country have greater likelihood to enroll into post-secondary education (Pascarella & Terenzini, 2005). Of young adults ages 16 to 25 years old, 77% of Latino students believed that their parents highly value attaining a college degree (Lopez, 2009). In part a Latino/a conceptualization of their families heritage specifically regarding their families class status continues to impact these students’ ability to cope and engage in accessing
information about college (Yamaura et al., 2010). If students believe they come from a less privileged class, they are less likely to readily maintain a sense of belonging in their socio-educational context (Lopez, 2009). Hence conceptualization about heritage can be a powerful motivator in engaging and persisting into higher education (Ostrove & Long, 2007). Many students desire the benefits of a secure life but have too little information about decisions that have generational consequences (Immerwahr, 2003). Many Latino students’ experiences do not benefit from a long-standing academic mentor relationship wherein strategic guidance can be provided about the student’s specific situation regarding entry into college pending graduation (Zalaquett, 2005).

Latino families often desire to take advantage of external college and financial information sessions provided by schools, churches, and non-profits (Zarate & Pachon, 2006). Latino students who excel in school and also attend high performing schools aspirations are equally ambitious as students regardless of socioeconomic status (Hurtado, 1994). However, college capital is normally relied outside of the home structure rather than within as in Caucasian families (Perez & McDonough, 2008). In other words, unless a family member, like a parent or a sibling, has attended an American institution of higher education, Latino students depend heavily on college information from others who are not a part of their familial nucleus. Yet Latino families who identify themselves of a higher socioeconomic status and higher language English acquisition are more likely to benefit from thick homogenous cultural capital resources (Becerra, 2010; Marquez, 2006). Often Latino students prefer to attend colleges closer to home rather in state or in their region because of responsibilities to family, commitments to siblings, and maintain current employment (Dumka, Roosa, & Jackson, 1997). Therefore, even if Latino students aspire to out of state private colleges, traditional Latino students enroll public
community colleges with the intent to transfer (Ceja, 2004; Yamamura et al., 2010).

Comparatively fewer Latino students pursue out of state colleges with finances being a major barrier (Fry, 2002).

*Typically stereotypical educational barriers.* Latino students often assimilate the stereotypical rhetoric regarding the advantages of a GED’s ability to provide comparable equality of fiscal and career options, as a rigorous college preparatory high school diploma (Vela-Gaude et al., 2009). A commonly held misconception among Latino students is that citizenship is an essential criterion to be eligible for financial aid (Zarate & Pachon, 2006).

Teachers unfamiliar with the Latino students’ socio-cultural and socio-linguistic background can experience a lack of motivation to expend extra energy following up with students who have intermittent class attendance or whose work is consistently mediocre quality. Meanwhile Latino/a students with limited English proficiency may feel a high degree of apprehension and anxiety about their academic performance and without much affirmation students feel that college is for others (Lopez, 2009). Some educators have negative stereotypes about Latino students and their families (Yamaura et al., 2010). With increasing numbers of students, teachers feel overwhelmed because they cannot provide the individual attention each child and family needs (Pew Hispanic Center/ Kaiser Family Foundation, 2004).

In highly populated urban areas, where resources are scarce, even the best public school teachers are more likely to help Latino students who show aptitude and interest. In other words, students who believe their teachers do not care if they succeed are more likely to skip class/miss class or give their best effort. Davison-Aviles et al. (1999) report that Latino students embrace lower educational attainment expectations for themselves, while which is correlated to have the high school dropout rate in the United States. The dropout/stopout rates among Latinos have
been higher than among African Americans, Caucasians, and Asian American students, respectively (Kewal Ramani, Gilbertson, Fox, & Provasnik, 2007).

Fine (2006) attributed these trends among minority students to exporting dissent, namely schools’ attempts to silence, banish, and punish students not assimilating normative social practices within their educational contexts. If students experience progressive disengagement from their schools there may be internal disequilibrium caused by personal attitudes and behaviors that differ from normative schooling practices (Brown & Rodrigez, 2009). According to the structural-culture-agency theory, school culture and student culture are a dynamic web-of interfacing reinforcing, re-informing, and reflexive networks (Datnow, 2002). Latino students who deal with adversity by avoidance can come to a cultural crossroads by being encouraged to embrace a system that seems have little correlation with their home life (Fry, 2002). Native-born Latinos (51%) believe that integrated schools are beneficial to student success, yet only foreign-born Latinos (38%) believe that integrated schools are beneficial for student success (National Survey of Latinos, 2004).

Unfortunately for the students who do enroll in college encounter educators, counselors, and administrators have low expectations. Specifically at the community colleges level many employees report a decreased level of job satisfaction, specifically teaching undergraduate students whose first-language is not English (Hubbard & Stage, 2009). Often the local community college is recognized as Latino high school students preferred postsecondary option because of its geographic proximity, affordability, and affords the option of educational remediation if required (Lendy, 2009).

Ogbu (2004) argued that historical precedence of mistreatment of Latinos may contribute to a reticence to embrace a higher educational process purported by the dominant Caucasian
American culture. While Ogbu did not account for the gaps in educational performance and attainment between Latino and Caucasian majority, Ogbu’s perspective might provide a context for understanding barriers to assimilation into mainstream higher education culture. However, as found by Immerwahr (2000), Latino parents often rely on the school guidance counselors to be the primary informants for the children regarding college financial aid, entrance requirements, and critical testing dates (Immerwahr, 2000).

*Highly acculturated students.* Peers with high college expectations can be a powerful factor in influencing college choices of Latino/a students (Torres & Hernandez, 2007). Many Latino/a students benefit from interracial friendships when ethnic inclusion is valued. Yet highly acculturated Latino students who reflect advanced English proficiency are more likely to perceive discrimination as a barrier to participation in American higher education, than those who Latino students who have less English proficiency (Becerra, 2010). Perhaps greater familiarity with nuances in the English language provide a greater sensitivity to more subtle racists sociolinguistic innuendos (Gill, Wanger, & Vega 2000). However, racist comments can create cognitive dissonance and stifle educational progress (Torres & Hernandez, 2007). Stereotypes may demotivate Latino students who see themselves as unlawfully participants in a very complex and competitive English based American educational system, may not seek out extra help from teachers (Olivia, 2004; Olivia, 2006; Olivia, 2008). Latino students who excel are not those who experience no racist comments but have coping mechanisms or scaffolding to make sense of detracting comments (Solorzano et al., 2005).

Also, Latino students who have attitudinal characteristics such as self-discipline, self efficacy, and motivation are positively correlated with higher standardized test scores and can overcome barriers to persistence such as inefficient communication from schools to parents
(Ceja, 2004). Misinformation and missing information perpetuate patterns lower academic achievement. Academic rigor is a key factor to students’ academic success, but teachers’ assumptions about students’ inability to learn function as inhibitors to assimilation and result in student’s cognitive dissonance. Further, the higher the students’ GPAs the greater the likelihood that they will achieve certificates, associate’s degrees, or bachelor’s degrees (Reason, 2009).

Yet, school performance, first generation status, and teacher experience are nullified once factors such as academic preparation and socioeconomic status considered because most often Latino American students tend to persist into higher education who come from high socioeconomic backgrounds than lower socioeconomic backgrounds (Reason, 2009).

There is no shortage of literature regarding the effects of socioeconomic status on college choice (Cabrera & La Nasa, 2000; Hossler & Gallagher, 1987; Hossler, Schmit, & Vesper, 1998; Jellison Holme, 2002; Kirst & Venezia, 2003; Noguera, 2008; Perna & Thomas, 2008; Wong, 2000). A subfield of college choice studies is college-going culture. Studies focusing on college-going culture often assess community and socioeconomic/familial aspects that influence the ecology of high schools organizational habitus which includes but is not limited to patterns of thought, worldviews, conceptions and anticipations of key stakeholders, within a given academic institution, regarding the possible choices and actions related to college choice (Conley, 2007; Corwin & Tierney, 2007; Grodsky & Reigle-Crumb, 2010; Kirst & Venezia, 2004; Manski, 1993; McDonough, 1997; Oakes, n.d; Harris et al., 2008, 2009; Slocom, & Azzam, 2006; Vargas, 2006). While a number of qualitative studies have been conducted on college-going culture in urban settings, the following quantitative studies identifying factors to minority access into higher education isolate predictors of persistence from high school to college (Perna, 2000; Perna & Thomas, 2008; Strauss & Volkwein, 2004; Ting, 1998).
Coupling race and socioeconomic status is common practice for studying trends regarding the access of underrepresented students to higher education. More specifically, socio-cultural forces among Latino students impacting participation in higher education is an emerging subfield in access research (Immerwahr, 2003; Gandara, 2010; Lendy, 2009; Ogbu, 2004; Oliva, 2008; Perez-Huber, 2009; Vela-Gaude et al., 2009; Zalaquett, 2005; Zarate & Pachon, 2006). While historically Latino students often face unique sociolinguistic challenges that contribute to their being at-risk or high risk for non-persistence into higher education, African American students are often a part of the conversation when discussing racial groups which at-risk for non-persistence in higher education. Much literature describes obstacles facing African American students who are potential college goers. Regarding African American obstacles to participation in higher education include but are not limited to stereotypes, educational inequity and lack of robust scaffolding (Freeman, 1999; Kahrl, 2008; King, 2004; Noguera, 2001; Noguera, 2008; Saporito, 2009; Steele, 1999; Walpole, 2008).

Studies on first-generation students often reveal that FGS face unique barriers to college readiness. More often than not FGSs make decisions on misinformation, little information, or no information about college policies, processes, and procedures related to admissions, and financial aid. As a result educational expectations for FGSs are different than NFGSs whose parents have had a least some college education (Koehler & Burke, 1996; Moises & Vohra-Gupta, 2007; Nunez & Cuccaro-Almin, 1998; Rendon, 1995; Wolniak & Engberg, 2010).

Researchers have commonly utilized social capital, cultural capital, and family frameworks to explain barriers to aspirations and attainment of higher education among underrepresented populations in higher education such as first-generation students, Latino and African American students (Bourdieu, 1977; Bourdieu, 1984; Griffin et al., 2007; Jencks, 1972;
Lareau & Horvat, 1999; McClafferty, McDonough, & Fann, 2001; Perna & Titus, 2005; Portes, 1998; Swidler, 1986; Tierney & Jun, 2001; Ver Ploeg, 2002; Wolanin, 2005; Yosso, 2005; Yosso & Solorzano, 2006). The effect of barriers on low socioeconomic, first-generation Latino/a and African American students’ perceptions about college-going culture cannot be underestimated in terms of the influence of these perceptions on educational aspirations (Ehrenreich, 2008; Kim, 2004; Leventhal, Brooks-Gunn, & Kamerman, 1997; Levine & Nidiffer, 1996; Pascarella & Terinzini, 2005; Paulsen & St. John, 2002; Tierney & Jun, 2001; Venegas, 2007; Venezia et al., 2006; Walpole, 2003; Zarate & Pachon, 2006). Understanding educational aspirations of low-income students can be used to design programming to overcome barriers to persistence in urban schooling and challenges to increasing participation in higher education which often viewed as two sides of the same coin (Goldrick-Rab & Shaw, 2005; Lucas, 1993; Marti, 2008; McSwain & Davis, 2007; Oakes et al., 2006; Tierney, 1999; Tinto, 1975; Walpole, 2007). For this reason Bourdieu (1977) bounded rationality, McDonough’s (1997) college-going habitus, and Perna and Thomas’ (2008) capital theory were integral aspects of this study’s theoretical framework.

Theoretical Framework

Bourdieu’s (1977) bounded rationality can be helpful in explaining attitudes and cultural and educational aspirations about college-going among high school students. Bounded rationality is a student’s personal assessment of realistic options based on his/her context in light of his/her personal epistemology (Bourdieu, 1977). Attitudes are formed within an individual’s sociohistorical context, since context functions as the parameter in which pathways to success can be reasonably chosen. Hence, perception is limited by what exists within the context (Griffin et al., 2007). As applied to education, bounded rationality refers to student attitudes,
values, and action plans to pursue higher education formed within their culture of their home and school. The bounded rationality of students attending a college preparatory high school presents options that may not be included in the context of a poor performing comprehensive high school (Griffin et al., 2007).

Initially the bounded rationality of students is cultivated within the context of the family (Bourdieu, 1984). This reproductionist model of social stratification influences the trajectory of educational attainment, McDonough (1997) argued that college-going culture at high schools may propel or frustrate the momentum of student desire to enroll into college. On the one hand, affluent students assume they will attend college. This is reinforced at the earliest ages, resulting in a non-choice to engage actively in college-going behavior (Swidler, 1986). On the other hand, most low-income students aggressively pursue the assimilation of attitudes, values, and skills consistent with success at the collegiate level (Grodsky & Riegle-Crumb, 2010). Perpetuation of this voluntary segregation among residential communities homogenizes the respective differences in college-going habitus among SES groups (Qian & Lichter, 2007). Consequently the benefits of a battle-tested college-going habitus does not permeate many work-class communities. It is a common normative social practice for working-class families to desire college for their children, even though many parents have not attended college themselves. Thus while educational aspirations are high, regardless of social background, there is a divide between students’ strategic action plans ensuring attainment of expressed educational goals (Swidler, 1986). Regardless of SES, students can equally benefit from strong college-going cultures within high schools (Grodsky & Reigle-Crumb, 2010). College-going habitus of social origin is not the only factor in attaining college. The college-going culture functions as a greenhouse that grows values extant in the students and community (McDonough, 1997).
This research elucidated and evaluated student perceptions of college-going culture in the context of inequities of access to higher education in light of bounded rationality, college-going habitus, and social capital theory (Bourdieu & Passeron, 1973; Tierney & Jun, 2001; McDonough, 1997). Social capital theory is a class and race-based axiology that paradigmatically accounts for the manner and methods in which the dominant culture transmits societal values for the purpose of perpetuating gain (Bourdieu & Passeron, 1973; Perna & Thomas, 2008). Based upon Bourdieu and Passeron’s social capital theory, many scholars hold that college aspirations are reproduced based upon social origin. As applied to higher education, inequitable policies have been part of American higher education resulting in participation gaps among underrepresented populations (Coleman et. al., 1964; Harper et al., 2009; McDonough, 1997). A consequence is the stabilization of class along generational lines by the systemic use of power, policy, and paternal prerogatives with the result that those underprivileged may have difficulty accessing the knowledge necessary for upward social mobility (Rallis & Rossman, 2003; St. John & Paulsen, 2000). Haberman (1971) asserted that the critical theory could help unshackle those dominated by a society’s oppressive normative social practices through interpersonal communication and self-reflection. This study aligns itself with mainstream critical humanist’s objectives by advocating “that society needs researchers to leverage research for emancipatory ends . . . . [consistent with] many of the most notable feminists, advance political agendas on the basis of the assumptions of this paradigm” (Rossman & Rallis, 2003, p. 47).

Perna’s (2000) longitudinal study integrated Bourdieu and Passeron’s (1973) social capital theory resulting in a robust portrait detailing the demographic landscape of the African American and Latino populations. Social capital is ethnicity, socioeconomic status, and
academic preparation serving as robust predictors for college enrollment. Researchers and policy makers correlated higher educational aspirations, fewer behavioral issues, and greater levels of persistence in high schools with greater parental involvement (St. John et al., 2005). Bourdieu and Passeron’s theory of social capital has been applied to educational contexts to facilitate explanation of differences in participation and student success (Perna & Titus, 2005). Social capital attributes advantage and disadvantages in the lives of students based upon familial involvement resulting in greater scaffolding that supports student aspirations of college enrollment (Bourdieu & Passeron, 1973). Social capital and cultural capital are streams of information, attitudes, and social networks which shared through human interaction within communities, particularly families (Dumias, 2002). These streams are outlets to larger reservoirs of capital, albeit social, fiscal, or cultural. The group that maintains the dominant status in society attempts to preserve the position of superiority through transferring social capital judiciously (Paulsen & St. John, 2002; Perna & Titus, 2005). A result is persistent of cross-generation values primarily through the pipeline of familial and socioeconomic socialization (Karen, 2002; Schleef, 2000).

Also, aspects of critical race theory (CRT) are helpful in elucidating relationships. CRT is a methodological strategy often employed when social justice is an objective of research conducted (Harper et al., 2008). This latter theory use was key to the Harris et al (2009) study. However, it is a combination of these theories that helped to frame the discussion and implications presented in this study.

Literature Summary

It is clear that there is no lack of literature on the influence of socioeconomic status, first-generation status, race, attitudes, values, and beliefs’ on college choice among underrepresented
students in higher education. However, there is a vacuum of research on hidden student perceptions about college-going culture, more specifically at Texas HB 400 schools (THECB, 2005a; North Texas Regional P-16 Council, 2007; NCES, 2009; Texas State Data Center, 2006).

Much research has utilized Astin’s Input-Environment-Output theory (1993) to discuss characteristics such as socioeconomic, race, and parental education affect perceptions and persistence in higher education (Pascarella & Terenzini, 2005). Yet Tinto (1975) emphasizes that educational expectations must be affirmed within the educational environment for students to persist. However, Bourdieu (1977) extends the discussion about socioeconomic status influence on educational aspirations by attributing students’ perceptions about college choice as a by-product of “bounded rationality”. Astin, Tinto, and Bourdieu’s theory converge in McDonough’s (1997) exploration of college-going culture. Her qualitative research explores mediating effects of organizational habitus on students’ “bounded rationality” with respect to college-going culture among underrepresented students in higher education. For this reason, Bourdieu bounded rationality (1977), McDonough’s college-going habitus (1997), and the Perna and Thomas (2008) capital theory were integral aspects of this studies theoretical framework.
CHAPTER III

METHODOLOGY

This quantitative, non-experimental research used data from the qualitative College-going Culture in Urban Schools study (Harris et al., 2008). The present empirical study employed multivariate techniques, such as exploratory factor analysis (EFA), to analyze self-reported urban student perceptions about college-going culture. EFA is appropriate for exposing hidden attitudes and constructs that cause student perceptions about college-going culture. The original data were collected from students who attended four comprehensive urban high schools identified as among the lowest 10% for college-going by the Texas Education Agency’s 2007-2008 Academic Excellence Indicator System (AEIS) as argued by HB 400 students.

Database Population

The following is an overview of the original study’s (Harris et al., 2008) population. Student participants were from four comprehensive HB 400 urban high schools. The schools designated as HB 400 must have been in the lowest 10% of high schools performance-wise in the state for college-going for two consecutive years during a five-year period or have had an average of 26 students in their graduating class.

Four high schools were selected from two school districts within the Dallas-Fort Worth Metroplex: Dallas Independent School District and Fort Worth Independent School District. These two school districts were among the largest in the state. All schools served predominantly Latino and African American communities. Pseudonyms were assigned to the four comprehensive high schools selected for study: Seed (see Table 1), Field (see Table 2), Wheat (see Table 3), and Harvest (see Table 4). Each comprehensive high school enrolled Grades 9 through 12. The four schools had a combined student population of 4,709. The individual and
collective high school student demographic profiles of the study schools mirror future population projections for the state of Texas (Texas State Data Center, 2009).

Schools Represented in the Database

Seed is a public secondary high school located in Fort Worth, Texas with just under 1000 high school students (Academic Excellence Indicator System, 2007). Table 1 indicates the ethnic distribution of students. Seventy-eight percent were Latino, 11.40% were White, 6.10% were African American, 4.5% were Asian/Pacific Islander, and 0% were Native American. Over 74.1% of the students were economically disadvantaged, and 66.5% were at-risk in accordance with the AEIS 2006-2007 campus performance report. Approximately 72% of the high school students at Seed qualified for free and reduced lunches because of their designation as low socioeconomic status (Texas Education Agency, 2007a). Approximately 83.6% of Seed High School students graduated to the next grade level. This is slightly above the state average, but the school also had a dropout of 14.4% which was below the state average (AEIS, 2007).

Table 1

<table>
<thead>
<tr>
<th>Ethnic Distribution</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latino</td>
<td>78.0</td>
</tr>
<tr>
<td>African American</td>
<td>6.1</td>
</tr>
<tr>
<td>Caucasian</td>
<td>11.4</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>4.5</td>
</tr>
<tr>
<td>Native American</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Field High School is located in the Dallas Independent School District. It enrolled over 1,000 students from 9th through 12th grades. As indicated in Table 2, the ethnic distribution of
the student body was 63.1% Latino, 35% African American, 8% White, 3% Asian/Pacific Islander, and 2% Native American. Over 76% of the students were economically disadvantaged, and 66.5% were at risk in accordance with the AIES 2006-2007 campus performance report.

Over 44% of the students were eligible for free and reduced lunch (Public Schools Report, 2007a). Field High School graduated 46.1% of Grades 9 through 12 students to the next grade level, compared to 80% students graduated to the next grade level statewide. Field High School had a 38.4% drop out rate (Texas Education Agency, 2007b).

Table 2

*Field High School*

<table>
<thead>
<tr>
<th>Ethnic Distribution</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latino</td>
<td>63.1</td>
</tr>
<tr>
<td>African American</td>
<td>35.0</td>
</tr>
<tr>
<td>Caucasian</td>
<td>0.80</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>0.30</td>
</tr>
<tr>
<td>Native American</td>
<td>0.20</td>
</tr>
</tbody>
</table>

Wheat High School is located in Fort Worth, Texas enrolling over 1,000 students in Grades 9 through 12. As indicated in Table 3, the ethnic distribution was Latino at 32%, African American at 63.4%, White at 4%, Asian/Pacific Islander at 4%, and Native American at 0.2%.

Over 67.5% of the students were economically disadvantaged, and 73.5% were at-risk in accordance with the AIES 2006-2007 campus performance report. Over 44% students were eligible for free and reduced lunch. In 2006-07 Wheat High School graduated 76.3% of students to the next grade level, which was just slightly below the state average of 80%. Wheat High School showed a dropout rate of 14.6% from Grades 9 through 12 (Texas Education Agency, 2007c).
Table 3

*Wheat High School*

<table>
<thead>
<tr>
<th>Ethnic Distribution</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latino</td>
<td>32.0</td>
</tr>
<tr>
<td>African American</td>
<td>63.4</td>
</tr>
<tr>
<td>Caucasian</td>
<td>4.0</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>0.40</td>
</tr>
<tr>
<td>Native American</td>
<td>0.20</td>
</tr>
</tbody>
</table>

Harvest High School is in Dallas Independent School district in North Texas. It served approximately 1,500 students from Grades 9 through 12. As indicated in Table 4, the ethnic distribution of the high school student body was Latino at 94.4%, African American at 4.4%, White at 4%, Asian/Pacific Islander at .2% and Native American at 0%. Over 85.4% of the students were economically disadvantaged, and 83.5% were at-risk in accordance with the AEIS report for 2006-2007 campus performance report. Over 84.5% students were eligible for free and reduced lunch (Public Schools Report, 2007b). Harvest High School graduated 63.3% of its students to the next grade level with a dropout rate of 24.3% over four years, which was below state average. The attrition was palpable when comparing the size of the entering freshmen class 547 to that of the senior class 243 (Texas Education Agency, 2007d).
Table 4

*Harvest High School*

<table>
<thead>
<tr>
<th>Ethnic Distribution</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Latino</td>
<td>94.4</td>
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<td>Caucasian</td>
<td>0.90</td>
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<td>Asian/Pacific Islander</td>
<td>0.20</td>
</tr>
<tr>
<td>Native American</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Instrumentation for Database Development

The Locke High School studies on college-going culture conducted at UCLA (Azzam, 2004) were helpful in conceptualizing aspects of college-going culture. The Locke High Schools studies, Texas Education Agency, and the College Next websites functioned as the community of discourse regarding the conceptualization of barriers facing urban students (Central Valley Higher Education Consortium, 2010). The College Next Website provided insights into college knowledge and a college-going culture (Slocum & Azzam, 2006). Slocum and Azzam’s research led to the adoption of their Creating a College-going Culture Guide.

The student researchers of EDUC 2980: The Study of College Going Cultures in Urban High Schools’ course leveraged their experiences as graduates of urban high schools into research concerning urban and low-performing schools to assist in generating additional research questions for consideration. The final questions were analyzed by student researchers individually and collectively to increase clarity. This dialectic of synthesis and analysis between community of discourse and community of practice promoted “reciprocity necessary for successful analysis, writing, and research” (Rossman & Rallis, 2003, p. 35).
The final College-going Culture Survey for Students contained 15 Likert-type closed-ended questions, one open-ended questions, and demographic information. The anchored 5-item scale, an attitudinal Likert-scale, indicated the following levels of agreement or disagreement for each item’s response options: Very true of me = 1, True of me = 2, Neither true nor untrue of me = 3, Not very true about me = 4, Not at all true about me = 5 (Hinkin, 1995; Likert, 1932; Schuyler, 2008). See the appendix.

Data Collection for the Database

The College Going Culture in Urban High Schools database consists of the data collected from the College Going Culture in Urban High Schools study conducted by Harris et al. (2008). Undergraduate student researchers participated in the collection in research teams. Demographic characteristics of student research teams included African American (n = 13), Latino (n = 14), and Caucasian (n = 2) students. These student data collection research teams included: 13 first generation college goers, 8 University of North Texas Emerald Eagle Scholars, and 2 Ronald McNair Program participants. Interestingly, several student researchers graduated from HB 400 schools.

The research teams conducted at least one focus group interview with 10 to 20 high schools students and administered surveys, similar to those recommended by the College Board (2006), with high school students, teachers, and parents and community members. Over a 4-month period from January 2008 to April 2008, research teams made two to seven site visits per school to administer the surveys and collect data. Key informants included high school counselors and AVID counselors who functioned as liaisons between high school students and research teams. Since surveys were administered during normal school hours, multiple visits were required. Scheduling researchers, students, teachers, and counselors were logistically
complicated since students did not control their own schedules. Research teams provided branded college paraphernalia (i.e., hats, sweat shirts, t-shirts, pencils, pens, pennants, mugs, trinkets, college planning guides, etc.) to study participants following completion of the survey. Before surveys were administered, participants were briefed regarding involvement in the study of college-going culture in urban high schools. Research teams explained the purpose of the research to potential participants. Respondents received written explanations of purposes, procedures, and privacy policy. The identities of participants were protected and masked to ensure confidentiality of individual information, even though demographic information was solicited.

Participation in the study was voluntary. Student participants were reassured that no penalty or punitive repercussions would negatively impact their family or academic standing at the school if any parent or student participant declined to participate in the study at any time. The students and parent or guardian received a consent form explicating details of their rights, the study procedures, and the benefits and risks.

A time for questions was provided. The participants were asked to complete a questionnaire, which took approximately 10 minutes of their time. The locations for data were determined by counselors, teachers, and principals since space was at a premium during school normal school hours. Common venues included hallways, study halls, libraries or class rooms. The questionnaire included demographic information Likert-scale items, and an optional semi-structured question for comments. It was communicated that a follow up interview might be in order. This took approximately 30 minutes of their time. Further, the subjects were informed that school leaders, collegiate stakeholders, and students would be sharing this information for the purpose of future planning. Participants were also notified of their eligibility to participate in
an all-expense paid overnight college immersion experience at the University of North Texas designed to promote anticipatory socialization and college-going in accordance with HB 400 directives.

The student research teams were instrumental in distributing approximately 400 College-going Culture Surveys to high school students attending the four HB 400 schools. To increase participation, as many as seven visits were made to each respective school. Only 151 complete surveys were completed and returned. The following tally represents the number of completed surveys from the four high schools: $n = 42$ for Seed High School (S), $n = 33$ for Field High School (F), $n = 46$ for Wheat High School (W), $n = 30$ for Harvest High School (H). Figure 1 displays the pie chart of the distribution of surveys by school.

![Figure 1. Pie chart of distribution of survey participation by school: Seed High School (S), Field High School (F), Wheat High School (W), and Harvest High School (H).](image)

Demographic Characteristics of the Database

As indicated in Table 5, the College-going Culture Survey captured the following demographic information: school, gender, ethnicity, grade, and first generation status. A high
number of female respondents completed the survey compared to males (62.5% versus 31.78%). Latino or African American students comprised 92.04% of respondents. As previously noted, the HB 400 schools served predominantly Latino and African American students. The ethnic distribution (n = 151) of the sample sufficiently reflected the ethnic distribution of the student population. Nearly half of all respondents (47.01%) identified themselves as first generation college goers. Twelfth graders comprised 57.04% of the respondents. Twelfth graders who were at least 18 years old could participate in the study without parental consent. However, written parental consent was required for minors under the age of 18 (i.e., Grade 9 through 12 students). This situation potentially explained the large percentage of 12th grade respondents.

Database Screening

To check the characteristics of the databases’ number of missing values, a summary of descriptive statistics is listed by variable. For the missing cases analysis, see Table 6. There was only one missing case for each of the following variables: Q3 “I have not thought about college for myself” and Q15 “I can make money if I have a college degree.” There were two missing cases for each of the following variables: Q6 “I know what the SAT and ACT are”; Q8 “I am challenged in my classes”; Q11 “My family cannot afford college”; Q13 “I wish our school had more information about college”; Q14 “I will be well prepared in high school for college.” There were three missing cases for the Q7 “My counselor has talked with me about my future after high school.”
Table 5

Demographic Characteristics of Survey Respondents \((n = 151)\)

<table>
<thead>
<tr>
<th>Category</th>
<th>(n)</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Participants by High School</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seed</td>
<td>42</td>
<td>27.81</td>
</tr>
<tr>
<td>Field</td>
<td>33</td>
<td>21.85</td>
</tr>
<tr>
<td>Wheat</td>
<td>46</td>
<td>30.46</td>
</tr>
<tr>
<td>Harvest</td>
<td>30</td>
<td>19.86</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>48</td>
<td>31.78</td>
</tr>
<tr>
<td>Female</td>
<td>94</td>
<td>62.25</td>
</tr>
<tr>
<td>Unknown</td>
<td>9</td>
<td>5.96</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>1</td>
<td>0.66</td>
</tr>
<tr>
<td>African American</td>
<td>46</td>
<td>30.46</td>
</tr>
<tr>
<td>Latino</td>
<td>93</td>
<td>61.58</td>
</tr>
<tr>
<td>Caucasian</td>
<td>7</td>
<td>4.63</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0.66</td>
</tr>
<tr>
<td>Unknown</td>
<td>3</td>
<td>1.98</td>
</tr>
<tr>
<td><strong>Grade</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>1.34</td>
</tr>
<tr>
<td>10</td>
<td>42</td>
<td>28.18</td>
</tr>
<tr>
<td>11</td>
<td>20</td>
<td>13.42</td>
</tr>
<tr>
<td>12</td>
<td>85</td>
<td>57.04</td>
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<tr>
<td>Unknown</td>
<td>2</td>
<td>1.34</td>
</tr>
<tr>
<td><strong>First Generation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>71</td>
<td>47.01</td>
</tr>
<tr>
<td>No</td>
<td>71</td>
<td>47.01</td>
</tr>
<tr>
<td>Unknown</td>
<td>9</td>
<td>5.96</td>
</tr>
</tbody>
</table>

Among the first 10 variables in the survey, there were only three missing cases, but among the last 10 variables of the CGC survey (Q6 “I know what the SAT and ACT are” through Q15 “I can make money if I have a college degree”), there were 14 missing cases. This could be an indication of survey fatigue, since fewer missing cases were extant in the first half the survey data than in the latter half of the survey data. Motivation may have waned as more
than four times the number of missing cases were missing among the last half of the survey.

With 151 respondents and 20 variables there were 3,003 extant cases and only 17 missing cases. Therefore, 99.5% of the survey was completed, but 0.5% of the survey was unanswered.

Table 6

*Missing Cases Analysis*

<table>
<thead>
<tr>
<th>Variable</th>
<th>n missing</th>
<th>n total</th>
<th>IRMI for n missing</th>
<th>n total for IRMI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School</td>
<td>0</td>
<td>151</td>
<td>--</td>
<td>151</td>
</tr>
<tr>
<td>Grade</td>
<td>2</td>
<td>149</td>
<td>--</td>
<td>151</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>0</td>
<td>151</td>
<td>--</td>
<td>151</td>
</tr>
<tr>
<td>Gender</td>
<td>0</td>
<td>151</td>
<td>--</td>
<td>151</td>
</tr>
<tr>
<td>First Generation</td>
<td>0</td>
<td>151</td>
<td>--</td>
<td>151</td>
</tr>
<tr>
<td><strong>Items</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1 I plan to go to college after high school graduation</td>
<td>0</td>
<td>151</td>
<td>0</td>
<td>151</td>
</tr>
<tr>
<td>Q2 I do not think I CAN go to college after graduating</td>
<td>0</td>
<td>151</td>
<td>0</td>
<td>151</td>
</tr>
<tr>
<td>Q3 I have not thought about college for myself</td>
<td>1</td>
<td>150</td>
<td>0</td>
<td>151</td>
</tr>
<tr>
<td>Q4 My teachers believe I can succeed in college.</td>
<td>0</td>
<td>151</td>
<td>0</td>
<td>151</td>
</tr>
<tr>
<td>Q5 My teachers talk about college issues like requirements &amp; majors</td>
<td>0</td>
<td>151</td>
<td>0</td>
<td>151</td>
</tr>
<tr>
<td>Q6 I know what the SAT and ACT are</td>
<td>2</td>
<td>149</td>
<td>0</td>
<td>151</td>
</tr>
<tr>
<td>Q7 My counselor has talked with me about my future after high school</td>
<td>3</td>
<td>148</td>
<td>0</td>
<td>151</td>
</tr>
<tr>
<td>Q8 I am challenged in my classes</td>
<td>2</td>
<td>149</td>
<td>0</td>
<td>151</td>
</tr>
<tr>
<td>Q9 My parents expect me to go to college</td>
<td>0</td>
<td>151</td>
<td>0</td>
<td>151</td>
</tr>
<tr>
<td>Q10 I know at least five people who graduate from college</td>
<td>0</td>
<td>151</td>
<td>0</td>
<td>151</td>
</tr>
<tr>
<td>Q11 My family cannot afford college</td>
<td>2</td>
<td>149</td>
<td>0</td>
<td>151</td>
</tr>
<tr>
<td>Q12I know about financial aid for college</td>
<td>0</td>
<td>151</td>
<td>0</td>
<td>151</td>
</tr>
<tr>
<td>Q13 I wish our school had more information about college</td>
<td>2</td>
<td>149</td>
<td>0</td>
<td>151</td>
</tr>
<tr>
<td>Q14 I will be well prepared in high school for college</td>
<td>2</td>
<td>149</td>
<td>0</td>
<td>151</td>
</tr>
<tr>
<td>Q15 I can make money if I have a college degree</td>
<td>1</td>
<td>150</td>
<td>0</td>
<td>151</td>
</tr>
</tbody>
</table>

*Note.* IRMI = Iterative Robust Model-based Imputation analysis for each of the items.

Researchers who delete variables containing missing cases reduce their sample size and lose appreciable power in the analysis. This can bias the results (Little & Rubin, 1987). To clean
data items Q1 to Q15 the Visualization of Missing Values (VMV) package was installed successfully in the R software to facilitate the management of missing cases. VMV package contains an Iterative Robust Model-based Imputation (IRMI) program. IRMI simulates multiple datasets, approximately five, by creating multiple values via a regression analysis and inserts scores in place of the missing data. Then these multiple values are iteratively analyzed, averaged, and imputed in place of the missing data. Often this method of simulating data provides robust estimates even when classical parametric assumptions are violated (Starkweather, 2010). An advantage was that the study’s power was maintained, and bias was averted in EFA. Only survey items Q1 “I plan to go to college after high school graduation” through Q15 “I can make money if I have a college degree” received IRMI. The data set was missing 15 cases which comprised 0.6% of the total dataset, so extant respondent cases ($n = 2,250$) comprised 99.4% data for the study (see Table 6). The sample of 2,250 cases and the 15 missing cases accounted for 100% ($n = 2,265$) of the cases from the 151 respondents of Q1 “I plan to go to college after high school graduation” through Q15 “I can make money if I have a college degree” (see Table 6).

Research Design

Data for the present study were aggregated from the database developed by Harris et al. (2008). While demographic information such as grade, gender, and first generation status was compiled, the data of primary interest were students’ self-reported responses to the 15-item survey.

Included is a brief summary of the study’s quantitative methodological delimitations; however, a discussion of this study’s methodology is provided in Chapter III. Exploratory factor analysis (EFA) was selected to evaluate the common factors instead of principal components.
analysis (PCA), because EFA identifies hidden dimensions while PCA is primarily a data reduction technique. The factor extraction technique selected for the study was maximum likelihood (ML) instead of principal axis factoring (PAF) or principal components (PC), because ML extracts factors most generalizable to the population.

Analysis of Data

The data were analyzed by research question. Each question required a different methodological approach.

Research Question 1

The first research question described perceptions about college-going culture among the population being studied: What are students’ overall perceptions about the college-going culture at HB 400 schools in the Dallas-Fort Worth Metroplex? Utilizing an omnibus approach, descriptive statistics were calculated on items comprising the retained factor structure of hidden student perceptions about college-going culture. R software was used to calculate the mean response and standard deviation of each item (Crawley, 2005; Crawley, 2007). These summary statistics described the relative agreement of students’ overall perceptions about college-going culture at HB 400 schools. The College-going Culture Survey is presented in the appendix.

Research Question 2

Research Question 2 was: What hidden perceptions about college-going culture, if any, exist among HB 400 students? The second research question was concerned with identifying hidden perceptions about college-going culture among HB 400 students. Identifying hidden perceptions was related to understanding motivations causing student perceptions about college culture. Correctly modeling the number and nature of hidden perceptions was important to
understanding HB 400 students’ internal context, which is the heart of the underrepresented student’s college choice process. Thus, greater knowledge of student motivation was expected to allow educators to design interventions to promote college-going among students unlikely to attend college.

EFA was used to identify hidden student perceptions of college-going culture at HB 400 schools in Dallas-Fort Worth. The goal was to determine the best model of student perceptions about college-going culture at HB 400 schools. Multiple EFA models were created and analyzed to determine the appropriate factor structure of hidden dimensions among a larger number of variables to account for the greatest amount of common variance shared by these variables (Crawley, 2005; Crawley, 2007; Stevens, 2002). Characteristics of a strong model include parsimony, accounting for the most variance, significant loadings/structure coefficients, rotation, stable factors, reliable factors, and contributing to the overall reliability of the instrument.

To identify an initial number of latent factors (hidden perceptions) parallel analysis was conducted using R software via the fa.parallel program from the Pysch package (Revelle, n.d.; Crawley, 2007). The most underutilized but most accurate of factor retention criteria is parallel analysis. Here, Principal Components Analysis (PCA) and EFA were conducted on original and simulated data as presented in the results. To facilitate greater accuracy of latent factor retention, scree plots of original and simulated eigenvalues are depicted for PCA and EFA (Hayton, Allen, & Scarpello, 2004; Horn, 1965; O’Conners, 2000; Revelle, n.d.; Watkins, 2006).

Eigenvalues based on real data were compared to simulated eigenvalues. Factors based on real data were retained when they were greater than the corresponding simulated eigenvalues. This method was the most accurate of all factor extraction methods available. It is advisable to
utilize multiple criteria for determining the appropriate number of the factors to retain based on purposes of the research.

This study utilized multiple retention criteria to create EFA models of hidden student perceptions. Central to creating the high quality EFA model is factor retention criteria. The retention criteria utilized in this study are briefly discussed as K1, scree test, parallel analysis, and the internal-item reliability coefficient. Three criteria utilized were K1 (Eigenvalue > 1.0), Catell scree test, and parallel analysis and each played a fundamental role in factor extraction and factor retention decisions (Huck, 2008; Patil, Singh, Mishra, & Donavan, 2008). The internal item reliability coefficient of extracted factors spoke to the stability and reliability of the retained factors. Labels were assigned to the retained factors with adequate reliability.

**Factor Retention Criteria.** The most popular factor retention criterion of K1 (Laher, 2010) was used. After EFA, the retention of factors were determined by the magnitude of the eigenvalue (i.e., the sum of the rows of squared loadings) which represented the variance accounted for statistic. This was the total of initial pre-rotated factor solution. Several tests were available for determining the number of factors to retain. Kaiser > 1, or K1, is the most recognizable test for factor retention. Here, the eigenvalues of the pre-rotated factor solutions are retained. This criteria tends often to lead to the retention of too many factors.

The second most common factor retention criterion was Catell’s scree test (Henson & Roberts, 2006) as the graphical depiction of the factors, specifically the eigenvalues. Each point in the scree plot or histogram represents a corresponding eigenvalue. Each point (or eigenvalue) should be retained until the point of the elbow of the scree plot levels off into a lower plateau. This criterion is more accurate than using K1, but ultimately, factor retention decisions are influenced by researchers’ interpretations of the generated scree plots.
Rotation Strategy. To increase the interpretability of the results, a brief discussion of orthogonal and oblique rotation strategies is provided. The orthogonal (i.e., varimax) rotation strategy requires the assumption that the factors are perfectly uncorrelated. Orthogonal rotation strategies attempt to maximize the variance accounted for and minimize error by forcing factors to be 90 degrees apart from each other in a multidimensional factor space (Fabrigar et al., 1999; Kieffer, 2004). The goal of orthogonal strategies is simple structure. Factors are not allowed to correlate and lend results toward being more replicable but forcibly ideal (Kieffer, 2004). Varimax is the most popular orthogonal rotation, perhaps because it is the default rotation setting most software packages including SPSS (Fabrigar et al., 1999; Stewart, 1981).

The oblique rotation (i.e., promax) strategy differs from orthogonal strategy because factors are allowed to correlate. Oblique rotation strategy most likely represents a real state of affairs in the actual data, since factors are allowed to correlate. Specifically, the promax rotation strategy involves the following five steps: (a) create parsimonious factors; (b) rotate orthogonally; (c) raise factors exponentially creating a target matrix; (d) relax orthogonality of target matrix allowing factors to correlate; (e) fit original matrix to target matrix. The result produces replicable solutions of orthogonal rotation but accurate depiction of the real world in which factors are often correlated in the oblique rotation. For this reason, if solutions are comparable, the oblique (promax) rotation is preferred.

Research Question 3

Research Question 3 was a natural extension of the first two questions and was used to identify the role of hidden perceptions on student perceptions of college-going culture. Specifically, Research Question 3 was: How do hidden perceptions impact observed perceptions about college-going culture? Taking into account the magnitude of each significant loading and
structure coefficient, the pattern and structure coefficient matrices were analyzed. Each retained post-rotated latent factor had a loading of student perceptions of college-going culture at HB 400 schools. Communality coefficients were discussed to describe the items contributing to the overall latent factor structure.

In order to elaborate on the underlying motivations of HB 400 students’ perceptions about college-going culture, knowledge of the connection between hidden perceptions was a prerequisite (Costello & Osborne, 2005; Fabrigar et al., 1999; Perna & Thomas, 2008).

Research Question 4

Research Question 4 was: What is the relationship among hidden perceptions? A factor matrix was analyzed. The factor correlation matrix highlighted the correlational relationship between hidden student perceptions about college-going culture. The relationship of factors was influenced by rotation strategy of the model analyzed in the factor matrix. While both orthogonal (varimax) and oblique (promax) rotation strategies were employed with factor scores for individuals being created via the regression method, only the strongest model was reported. A Cronbach α coefficient was reported for each hidden perception. This internal-item reliability coefficient was reported for the original instrument and the revised survey resulting from this investigation. Finally a Pearson product moment correlational will be calculate from rotated, retained the latent variables.
CHAPTER IV
RESULTS

This chapter presents the results of this study. The chapter is organized into four sections to address each research question respectively. The first section addresses Research Question 1: What are students’ overall perceptions about the college-going culture at HB 400 schools in the Dallas-Fort Worth Metroplex? The second section concerns itself with presenting the findings of Research Question 2: What hidden perceptions about college-going culture, if any, exist among HB 400 students? The third section presents the results of Research Question 3: How do hidden perceptions impact observed perceptions about college-going culture? The fourth section presents the findings of the Research Question 4: What is the relationship among hidden perceptions? Tables and figures are provided throughout the chapter when appropriate.

Research Question 1

To test the first research question, descriptive statistics were required. Here the frequency count for each item is presented as a pie chart. Also, the means and standard deviations are presented in Table 7. In order to facilitate the interpretation of the variables’ means and standard deviations, the 5-point Likert scale is reviewed as: 1 = very true about me, 2 = somewhat true about me, 3 = neither true nor untrue about me, 4 = not very true about me, 5 = not at all true about me. Consistent with prior literature regarding high educational aspirations of Latino and African American high school students, the lowest mean (i.e., 1.19) and standard deviation (i.e., .62) occurred for Q15 “I can make money if I have a college degree.” This variable revealed that most students share a very strong perception about making money if they have a college degree. However, Q10 “I know at least five people who graduated from college.” had the highest mean (2.76) and standard deviation (1.53). This variable indicated that it was
neither true nor untrue that the respondents knew five people who graduated from college. This finding was consistent with the literature that low SES Latino American and African students often lacked strong prolonged one-on-one mentoring from family, guidance counselors, teachers, mentors, and parents regarding college.

Table 7

Means, Standard Deviations, and ns of Items Analysis (n = 151)

<table>
<thead>
<tr>
<th>Item</th>
<th>n</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 I plan to go to college after high school graduation</td>
<td>151</td>
<td>1.43</td>
<td>0.92</td>
</tr>
<tr>
<td>Q2 I do not think I CAN go to college after graduating</td>
<td>151</td>
<td>1.92</td>
<td>1.36</td>
</tr>
<tr>
<td>Q3 I have not thought about college for myself</td>
<td>151</td>
<td>1.65</td>
<td>1.24</td>
</tr>
<tr>
<td>Q4 My teachers believe I can succeed in college.</td>
<td>151</td>
<td>1.56</td>
<td>0.92</td>
</tr>
<tr>
<td>Q5 My teachers talk about college issues like requirements &amp; majors</td>
<td>151</td>
<td>2.08</td>
<td>1.27</td>
</tr>
<tr>
<td>Q6 I know what the SAT and ACT are</td>
<td>151</td>
<td>1.61</td>
<td>0.97</td>
</tr>
<tr>
<td>Q7 My counselor has talked with me about my future after high school</td>
<td>151</td>
<td>2.29</td>
<td>1.34</td>
</tr>
<tr>
<td>Q8 I am challenged in my classes</td>
<td>151</td>
<td>2.43</td>
<td>1.12</td>
</tr>
<tr>
<td>Q9 My parents expect me to go to college</td>
<td>151</td>
<td>1.7</td>
<td>1.19</td>
</tr>
<tr>
<td>Q10 I know at least five people who graduate from college</td>
<td>151</td>
<td>2.76</td>
<td>1.53</td>
</tr>
<tr>
<td>Q11 My family cannot afford college</td>
<td>151</td>
<td>2.6</td>
<td>1.26</td>
</tr>
<tr>
<td>Q12I know about financial aid for college</td>
<td>151</td>
<td>2.19</td>
<td>1.23</td>
</tr>
<tr>
<td>Q13 I wish our school had more information about college</td>
<td>151</td>
<td>2.21</td>
<td>1.18</td>
</tr>
<tr>
<td>Q14 I will be well prepared in high school for college</td>
<td>151</td>
<td>2.28</td>
<td>1.08</td>
</tr>
<tr>
<td>Q15 I can make money if I have a college degree</td>
<td>151</td>
<td>1.19</td>
<td>0.62</td>
</tr>
</tbody>
</table>

Note. The College Going Culture Survey has a 5-point Likert scale response format: 1 = very true of me, 2 = true of me, 3 = neither true nor untrue of me, 4 = not true of me, and 5 = not very true of me. Q2, Q3, and Q11 were reverse scores, which accounted for response bias often associated with negatively worded items.
The vast majority of underrepresented urban students attending HB 400 schools in Texas and 90% of respondents indicated that it was very true or somewhat true about them that they plan to go to college after high school graduation. See Figure 2.

*Figure 2.* Q1 “I plan to go to college after high school graduation” (n = 151).
Figure 3. Q2 “I do not think I CAN go to college after high school” (n = 151).

Figure 4. Q3 “I have not thought about college for myself” (n = 151).
Figure 5. Q4 “My teachers believe I can succeed in college” (n = 151).

Figure 6. Q5 “My teachers talk about college issues like requirements and majors” (n = 151).
Figure 7. Q6 “I know what the SAT and ACT are” ($n = 151$).

Figure 8. Q7 “My counselor has talked with me about my future after high school with college as a goal” ($n = 151$).
Figure 9. Q8 “I am challenged in my classes” ($n = 151$).

Figure 10. Q9 “My parents expect me to go to college” ($n = 151$).
Figure 11. Q10 “I know at least five people who graduated from college” \((n = 151)\).

Figure 12. Q11 “My family cannot afford college” \((n = 151)\).
Figure 13. Q12 “I know about financial aid for college” (n = 151).

Figure 14. Q13 “I wish our school had more information about college” (n = 151).
Figure 15. Q14 “I will be well prepared in high school for college” ($n = 151$).

Figure 16. Q15 “I can make more money if I have a college degree” ($n = 151$).
Research Question 2

This research question was: “What hidden perceptions about college-going culture, if any, exist among HB 400 students?” Parallel analysis was used to analyze the data and answer this question.

As seen in Figure 17 and Table 8, the parallel analysis revealed a four factor model. The parallel analysis created actual eigenvalues and simulated eigenvalues. All the eigenvalues from the actual data were greater than the simulated eigenvalues for the factor analysis (FA). Yet only three actual principal component (PC) eigenvalues were larger than the simulated PC eigenvalues. Due to the proximity of PC simulated eigenvalue as 1.25 and PC eigenvalue actual as 1.2, further analysis was necessary in order to completely rule out a four component PC model.

*Figure 17. Parallel analysis scree plots.*
Table 8

Parallel Analysis with Four Factor Model: A Monte Carlo Simulation

<table>
<thead>
<tr>
<th>Exploratory Factor Analysis Eigenvalues</th>
<th>Principal Components Eigenvalues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor</td>
<td>Actual</td>
</tr>
<tr>
<td>1</td>
<td>3.02</td>
</tr>
<tr>
<td>2</td>
<td>0.88</td>
</tr>
<tr>
<td>3</td>
<td>0.52</td>
</tr>
<tr>
<td>4</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Since FA parallel analysis recommended four latent factors and PC parallel analysis recommended three components, the exact number and nature of the latent factors causing student perceptions of college-going culture needs to be determined. To this end, the stability and reliability of the factors were considered exclusively, since EFA is a model-based technique used to confirm the latent factor structure causing observed scores (O’Rourke, Hatcher, & Stepanski, 2005). In Table 9, multiple EFA models are presented. Both orthogonal (varimax) and oblique (promax) rotation strategies are employed for four factor models, three factors models, two factor models, and one factor models (see Table 9). The goal was to identify the model that explained the most information (i.e., largest trace) but also had the highest reliability (i.e., Cronbach α).

The parallel analysis recommended an EFA of four factors, and Table 10 displays that a four factor model which accounts for 51.8% (Model 7) and 52.3% (Model 8) variance accounted for by the variables’ relationships. Yet the orthogonal (Model 7) model had a weak inter-item
reliability coefficient for Factor 4 (.48). The oblique (Model 8) encountered two ultra Heywood cases in Factors 3 and 4 which indicated instability.

The three factor solutions (Models 5 and 6) were more stable than the four factor solutions (Models 7 and 8). See Table 10, for the trace and eigenvalues values for Models 5 and 6 which represent three factor solutions. However, the two factor solutions (Models 3 and 4) held higher the Cronbach $\alpha$ values but had lower variance accounted for than the two factor models with three items each (Models 5 and 6). While the one factor solution (Models 1 and 2) had the highest Cronbach $\alpha$ at .77, both had lower variance accounted for at 27.1%, which means 62.9% of information could not be explained by the model.

Therefore, Models 3 and 4 have comparable internal item consistency. Factor 1 of Model 3 and Model 4 had the equal reliability $\alpha = 0.7$. Yet, Factor 2 of Model 3 and Model 4 slightly differed. The Cronbach $\alpha$ of Factor 2 ($\alpha = 0.73$) of Model 3 was slightly higher than the Cronbach $\alpha$ of Factor 4 ($\alpha = 0.71$). Model 3 had slightly higher reliability than Model 4.

Also, Models 3 and 4 explained similar amounts of variance. Factor 3 was orthogonal (varimax), explaining 37.3% of trace. But Model 4 was oblique (promax) explaining 40.1% of trace. While Models 3 and 4 were similar mathematically, they were not identical conceptually. For example, Model 3 assumed Factors 1 and 2 were completely uncorrelated. On the other hand, Model 4 assumed Model 4’s Factors 1 and 2 correlated with each other. While the orthogonal Model 3 represented a simpler factor solution that was more easily interpretable, the oblique Model 4 more accurately depicted the reality in that the latent factors shared some sort of bivariate relationship. For these reasons, Model 4 was the strongest of all models considered and was preferred even over the comparable Model 3. Model 4 is utilized exclusively for the
remainder of the study to discuss students’ hidden perceptions of college-going culture in HB 400 schools in Dallas Fort Worth.

In summary, Research Question 2 explored the question: What hidden perceptions about college-going culture, if any, exist among HB 400 students? In the results, two hidden perceptions (latent factors) were identified, **Verified College Potential** and **College Capital Awareness**, among HB 400 students about college-going culture, as explored by parallel analysis, maximum likelihood factor extraction, rotation (orthogonal and oblique), generation multiple models, and Cronbach α reliability coefficients. Specifically, the two hidden perceptions were defined by Model 4 from an oblique two factor solution which explained 40.1% of the data’s variance, while maintaining .70 and .71 for Factors 1 and 2, respectively (see Table 9).

Table 9

*Exploratory Factor Analysis Model Comparison: Alphas and Eigenvalues*

<table>
<thead>
<tr>
<th>Model</th>
<th>Rotation</th>
<th>No. of Factors</th>
<th>Factors</th>
<th>% of Total Variance Explained</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Orthogonal</td>
<td>1</td>
<td>0.770</td>
<td>--</td>
</tr>
<tr>
<td>2</td>
<td>Oblique</td>
<td>1</td>
<td>0.770</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td>Orthogonal</td>
<td>2</td>
<td>0.700</td>
<td>0.730</td>
</tr>
<tr>
<td>4</td>
<td>Oblique</td>
<td>2</td>
<td>0.700</td>
<td>0.710</td>
</tr>
<tr>
<td>5</td>
<td>Orthogonal</td>
<td>3</td>
<td>0.700</td>
<td>0.696 0.639</td>
</tr>
<tr>
<td>6</td>
<td>Oblique</td>
<td>3</td>
<td>0.673</td>
<td>0.696 0.576</td>
</tr>
<tr>
<td>7</td>
<td>Orthogonal</td>
<td>4</td>
<td>0.709</td>
<td>0.664 0.634 0.480</td>
</tr>
<tr>
<td>8</td>
<td>Oblique</td>
<td>4</td>
<td>0.673</td>
<td>0.664 0.576 0.527</td>
</tr>
</tbody>
</table>

*Note.* †Ultra Heywood case.
Research Question 3

This question was the following: How do hidden perceptions impact observed perceptions about college-going culture? An exploratory factor analysis (EFA) was conducted. A correlation matrix was utilized in achieving an approximately simple structure of Model 4, an oblique two factor solution representing HB 400 students’ hidden perceptions of college-going culture. The purpose of conducting and EFA was to measure the relationship of latent factors’ (hidden perceptions) relationship to observed perceptions about college-going culture at HB 400 schools (Sass & Schmitt, 2010). The maximum likelihood extraction method was selected to extract factors most likely to be extant in the population when the sample reflects assumption of multivariate normal distribution. The rotated factor solutions were analyzed and interpreted. Here loadings larger than or equal to an absolute value of .30 were considered significant. Utilizing the K1 and scree plot, a two factor solution was detected and obliquely rotated utilizing a promax rotation in R software.

This increased the interpretability because the two extracted factors solution were permitted to correlate, which represented a more realistic depiction of the factors in the real world. In Table 10, the promax rotated factor pattern matrix shows that Factor 1 is comprised of six items. Factor 1 was labeled Verified College Potential because items tended to reveal students’ perceptions about how stakeholders affirm their plans and potential to succeed in college. Verified College Potential explained 20.98% of the variance. The largest loading of Verified College Potential was .831 which explained 69% of the variance of Q1 “I plan to go to college after high school graduation.” Verified College Potential accounted for 44.8% of the variance of Q9 “My parents expect me to go to college.” Verified College Potential accounted for 33% of the variance of Q15 “I can make more money if I have a college degree.” Verified
College Potential accounted for 29% of Q14 “I will be well prepared for college.” Verified College Potential accounted for 11.4% of Q2 “I do not think I CAN go to college after graduation.” Of the six items contributing to Verified College Potential, the lowest loading was .321 which explained 10.3% of Q4 “My teachers believe I can succeed in college.” Of note, this same question was the only cross-loading shared item between Verified College Potential and the College Capital Awareness factor (Factor 2, see below).

Table 10

Heuristic Factor Pattern Matric, Structure Matrix, Trace, and Communalities for CGCS to the Promax Criterion

<table>
<thead>
<tr>
<th>Measured Variables</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$P$</td>
<td>$S$</td>
</tr>
<tr>
<td>Q1 I plan to go to college after high school graduation</td>
<td>0.831</td>
<td>0.810</td>
</tr>
<tr>
<td>Q9 My parents expect me to go to college</td>
<td>0.680</td>
<td>0.670</td>
</tr>
<tr>
<td>Q15 I can make more money if I have a college degree</td>
<td>0.575</td>
<td>0.560</td>
</tr>
<tr>
<td>Q14 I will be well prepared in high school for college</td>
<td>0.539</td>
<td>0.530</td>
</tr>
<tr>
<td>Q2* I do not think I CAN go to college after graduating</td>
<td>0.339</td>
<td>0.330</td>
</tr>
<tr>
<td>Q4 My teachers believe I can succeed in college</td>
<td>0.321</td>
<td>0.315</td>
</tr>
<tr>
<td>Q12 I know about financial aid for college</td>
<td>-0.266</td>
<td>-0.260</td>
</tr>
<tr>
<td>Q6 I know what the SAT and ACT are</td>
<td>--</td>
<td>-0.060</td>
</tr>
<tr>
<td>Q3* I have not thought about college for myself</td>
<td>--</td>
<td>-0.079</td>
</tr>
<tr>
<td>Q7 My counselor has talked with me about my future after high school</td>
<td>0.106</td>
<td>0.100</td>
</tr>
<tr>
<td>Trace</td>
<td>2.098</td>
<td>--</td>
</tr>
<tr>
<td>% of Variance</td>
<td>20.98</td>
<td>--</td>
</tr>
</tbody>
</table>

Note. *Indicates item was reverse scored.
The largest structure coefficient of Factor 1 was .81 on Q1 “I plan to go to college after high school graduation,” which explained 65% of the shared variance. Yet, the lowest structure coefficient for Factor 1 was .315 on Q4 “My teachers believe I can succeed in college,” which explained 9.9% of the shared variance.

Factor 2 explained 19.12% of the variance and was comprised of 5 items. Factor 2 was labeled College Capital Awareness (see Table 10). The loadings from the factor pattern matrix for Factor 2 were moderate to high with one lower valued item cross-loading with Factor 1 as explained earlier. The largest loading of College Capital Awareness was .857 from Q12 “I know about financial aid for college,” which explained 73% of the shared variance. College Capital Awareness explained 47% of Q6 “I know what the SAT and ACT”; 25.4% of Q3 “I have not thought about college for myself”; and 22.65% of Q7 “My counselor has talked with me about my future after high school.” College Capital Awareness’ lowest loading item was .318 from Q4 “My teachers believe I can succeed in college,” which explained 10.1% of College Capital Awareness.

Research Question 4

This research question was the following: What is the relationship among hidden perceptions? Specifically, Research Question 4 provided information about the reliability and validity of the College-going Culture Survey. The higher internal consistency of a survey, the more reliable it is. The College-going Culture Survey Revised is preferred because it has a higher inter-item correlational coefficient than the College-going Culture Survey. The recommendations for the College-going Culture Survey Revised are based upon Cronbach α inter-item reliability coefficient analysis and the EFA with promax rotation via maximum likelihood extraction. The original College-going Culture Survey demonstrated an overall
unstandardized Cronbach $\alpha$ of .48 and a standardized Cronbach of .56 (see Table 14). These values represented very low reliability. An accepted minimum threshold for the acceptability of the reliability of an instrument for exploratory research purposes is .70.

Based upon the constructs identified in the EFA using maximum likelihood extraction technique, parallel analysis, scree test, and a minimum $\geq \alpha = 0.70$, the following 10 items were retained for future use due to comprising the two latent factors of Verified College Potential and College Capital Awareness:

- Q1 “I plan to go to college after high school graduation”
- Q2 “I do not think I CAN go to college after high school”
- Q3 “I have not thought about college for myself”
- Q4 “My teachers believe I can succeed in college”
- Q6 “I know what the SAT and ACT are”
- Q7 “My counselor has talked with me about my future after high school with college as a goal”
- Q9 “My parents expect me to go to college”
- Q12 “I know about financial aid for college”
- Q14 “I will be well prepared in high school for college”
- Q15 “I can make more money if I have a college degree”

The 10 items listed above have an overall unstandardized Cronbach $\alpha$ of .77 and a standardized Cronbach $\alpha$ of .78 (see Table 15). Therefore, the internal item reliability coefficient of the College-going Culture Survey Revised increased from .48 to .77 by removing the following five items: Q5 “My teachers talk about college issues like requirements and majors”; Q8 “I am challenged in my classes”; Q10 “I know at least five people who graduated from
college”; Q11 “My family cannot afford college”; Q13 “I wish our school had more information about college.” These items while informative about college-going culture in their own right did contribute to the overall reliability of all items in the instrument. Further, in the EFA, items Q5, Q8, Q10, Q11, and Q13 had loadings below .30 and so did contribute to either latent factors Verified College Potential and College Capital Awareness.

The 10-item survey would contain the two constructs uncovered in this study. Using EFA with promax rotation via maximum likelihood extraction, items Q1, Q2, Q4, Q9, Q14, and Q15 were combined using a linear equation to create the synthetic, unobserved latent variable Verified College Potential, yet the unstandardized Cronbach α for Factor 1’s Verified College Potential is .709 and the standardized Cronbach α is .738 (see Table 11). Verified College Potential standardized and unstandardized α meet and slightly exceed the .70 minimum threshold recommended for internal consistency in social science exploratory research.

Items Q3, Q4, Q6, Q7, and Q12 were combined using a linear equation to create the synthetic, unobserved latent variable of Capital Awareness, using EFA with promax rotation via maximum likelihood extraction. College Capital Awareness was Factor 2 of the two factor model in the College-going Culture Survey Revised for high students. The unstandardized Cronbach α for Factor 2, College Capital Awareness was .712, and the standardized Cronbach α was .72 (see Table 12). Even though College Capital Awareness’ internal reliability was slightly more internally consistent than that of Verified College Potential, the standardized and unstandardized α of College Capital Awareness modestly exceeded the minimum threshold of .70 recommended for internally consistency in exploratory research. Therefore, the recommendation for latent Factor 1 of Verified College Potential and for latent Factor 2 of College Capital Awareness, respectively, was to have an internal item reliability that met or
exceeded minimum threshold for reliability .70. Moreover, when measured simultaneously, the Cronbach α improved the reliability to .77.

The correlational relationship between hidden perception Verified College Potential and College Capital Awareness was negative and moderate in strength. (see Table 14). The two factors were non-significantly negatively correlated ($r = -0.495, p = 0.354$). Verified College Potential and College Capital Awareness have a coefficient of determination ($r^2$) of .249.

The communality coefficients for Factor 1 range from .56 to .24 (see Table 11). The largest communality coefficient ($h^2$) is Q1 “I plan to go to college after high school graduation.” Within Factor 1, the item with the lowest $h^2$ was Q14 “I will be well prepared in high school for college.” In general communality coefficients of Factor 1 have moderately low communality coefficients. Yet the undstandardized Cronbach α for Factor 1, Verified College Potential was .709 and the standardized Cronbach α was .738 (see Table 12). While the $h^2$ of Verified College Potential was moderately low, the α met and slightly exceeded the minimum threshold for recommended internally consistency.

The communality coefficients for Factor 2 range from .54 to .3 (see Table 10). The largest communality coefficient ($h^2$) was for Q12 “I know about financial aid for college.” Within Factor 1, the item with the lowest $h^2$ was Q7 “I will be well prepared in high school for college.” The range of $h^2$ for College Capital Awareness was low to moderate. Comparatively, the communality coefficients $h^2$ of Factor 2: College Capital Awareness explained more information than the communality coefficients of Factor 1: Verified College Potential.

The undstandardized Cronbach α for Factor 2, College Capital Awareness was .712 and the standardized Cronbach α was .72 (see Table 12). Even though College Capital Awareness internal reliability is slightly more internally consistent than Verified College Potential, College
Capital Awareness just modestly exceeds the minimum threshold for recommended internally consistency.

The College-going Culture Survey had an overall unstandardized Cronbach $\alpha$ of .48 and a standardized Cronbach $\alpha$ of .56 (see Table 14.) The College-going Culture Survey Revised was comprised of Verified College Potential and College Capital Awareness and showed an overall unstandardized Cronbach $\alpha$ of .77 and standardized Cronbach $\alpha$ of .78 (see Table 15).

Table 11

*Cronbach Alpha Values for Factor 1: Verified College Potential*

<table>
<thead>
<tr>
<th>Items</th>
<th>$\alpha$</th>
<th>Std. $\alpha$</th>
<th>$r$ (item, total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 I plan to go to college after high school graduation</td>
<td>0.627</td>
<td>0.665</td>
<td>0.595</td>
</tr>
<tr>
<td>Q2 I do NOT think I CAN go to college after graduating</td>
<td>0.704</td>
<td>0.722</td>
<td>0.382</td>
</tr>
<tr>
<td>Q4 My teachers believe I can succeed in college</td>
<td>0.669</td>
<td>0.706</td>
<td>0.448</td>
</tr>
<tr>
<td>Q9 My parents expect me to go to college</td>
<td>0.665</td>
<td>0.699</td>
<td>0.460</td>
</tr>
<tr>
<td>Q14 I will be well prepared in high school for college</td>
<td>0.685</td>
<td>0.722</td>
<td>0.393</td>
</tr>
<tr>
<td>Q 15 I can make money if I have a college degree</td>
<td>0.671</td>
<td>0.688</td>
<td>0.513</td>
</tr>
<tr>
<td>Factor 1: Verified College Potential</td>
<td>0.709</td>
<td>0.738</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* The six items included in this factor were derived using a linear equation to create the synthetic unobserved latent Factor 1 using exploratory factor analysis with Promax rotation via maximum likelihood extraction.
Table 12

*Cronbach Alpha Values for Factor 2: College Capital Awareness*

<table>
<thead>
<tr>
<th>Items</th>
<th>α</th>
<th>Std. α</th>
<th>r (item, total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3 I have not though about college for myself</td>
<td>0.667</td>
<td>0.676</td>
<td>0.467</td>
</tr>
<tr>
<td>Q4 My teachers believe I can succeed in college</td>
<td>0.689</td>
<td>0.699</td>
<td>0.410</td>
</tr>
<tr>
<td>Q6 I know what the SAT and ACT are</td>
<td>0.647</td>
<td>0.651</td>
<td>0.533</td>
</tr>
<tr>
<td>Q7 My counselor has talked with me about my future after high school</td>
<td>0.677</td>
<td>0.683</td>
<td>0.451</td>
</tr>
<tr>
<td>Q12 I know about financial aid for college</td>
<td>0.641</td>
<td>0.650</td>
<td>0.524</td>
</tr>
<tr>
<td>Factor 2: College Capital Awareness</td>
<td>0.712</td>
<td>0.720</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* The five items included in this factor were derived using a linear equation to create the synthetic unobserved latent Factor 1 using exploratory factor analysis with promax rotation via maximum likelihood extraction. Q3 is a reverse scored item.

Table 13

*Factor Correlation Matrix for Exploratory Factor Analysis with Promax Rotation of College Going Culture Survey*

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1: Verified College Potential</th>
<th>Factor 2: College Capital Awareness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1: Verified College Potential</td>
<td>1</td>
<td>-0.496</td>
</tr>
<tr>
<td>Factor 2: College Capital Awareness</td>
<td>-0.496</td>
<td>1</td>
</tr>
</tbody>
</table>

*Note.* $\chi^2 = 28.1$, $df = 26$, $p = 0.354$. 
<table>
<thead>
<tr>
<th>Item</th>
<th>α</th>
<th>Std. α</th>
<th>r (item, total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 I plan to go to college after high school graduation</td>
<td>0.416</td>
<td>0.492</td>
<td>0.403</td>
</tr>
<tr>
<td>Q2 I do not think I CAN go to college after graduating</td>
<td>0.588</td>
<td>0.640</td>
<td>-0.335</td>
</tr>
<tr>
<td>Q3 I have not thought about college for myself</td>
<td>0.586</td>
<td>0.645</td>
<td>-0.371</td>
</tr>
<tr>
<td>Q4 My teachers believe I can succeed in college.</td>
<td>0.416</td>
<td>0.495</td>
<td>0.407</td>
</tr>
<tr>
<td>Q5 My teachers talk about college issues like requirements &amp; majors</td>
<td>0.422</td>
<td>0.518</td>
<td>0.314</td>
</tr>
<tr>
<td>Q6 I know what the SAT and ACT are</td>
<td>0.432</td>
<td>0.515</td>
<td>0.317</td>
</tr>
<tr>
<td>Q7 My counselor has talked with me about my future after high school</td>
<td>0.420</td>
<td>0.514</td>
<td>0.315</td>
</tr>
<tr>
<td>Q8 I am challenged in my classes</td>
<td>0.438</td>
<td>0.533</td>
<td>0.269</td>
</tr>
<tr>
<td>Q9 My parents expect me to go to college</td>
<td>0.400</td>
<td>0.493</td>
<td>0.406</td>
</tr>
<tr>
<td>Q10 I know at least five people who graduate from college</td>
<td>0.488</td>
<td>0.565</td>
<td>0.088</td>
</tr>
<tr>
<td>Q11 My family cannot afford college</td>
<td>0.441</td>
<td>0.530</td>
<td>0.248</td>
</tr>
<tr>
<td>Q12I know about financial aid for college</td>
<td>0.474</td>
<td>0.554</td>
<td>0.115</td>
</tr>
<tr>
<td>Q13 I wish our school had more information about college</td>
<td>0.474</td>
<td>0.554</td>
<td>0.115</td>
</tr>
<tr>
<td>Q14 I will be well prepared in high school for college</td>
<td>0.409</td>
<td>0.501</td>
<td>0.394</td>
</tr>
<tr>
<td>Q15 I can make money if I have a college degree</td>
<td>0.443</td>
<td>0.504</td>
<td>0.351</td>
</tr>
<tr>
<td>College Going Culture Survey</td>
<td>0.480</td>
<td>0.560</td>
<td></td>
</tr>
</tbody>
</table>
Table 15

*Inter-item Reliability Coefficient for College Going Culture Survey Revised*

<table>
<thead>
<tr>
<th>Item</th>
<th>α</th>
<th>Std. α</th>
<th>r (item, total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 I plan to go to college after high school graduation</td>
<td>0.744</td>
<td>0.757</td>
<td>0.498</td>
</tr>
<tr>
<td>Q2* I do not think I CAN go to college after graduating</td>
<td>0.747</td>
<td>0.764</td>
<td>0.464</td>
</tr>
<tr>
<td>Q3* I have not thought about college for myself</td>
<td>0.744</td>
<td>0.764</td>
<td>0.474</td>
</tr>
<tr>
<td>Q4 My teachers believe I can succeed in college.</td>
<td>0.742</td>
<td>0.757</td>
<td>0.509</td>
</tr>
<tr>
<td>Q6 I know what the SAT and ACT are</td>
<td>0.749</td>
<td>0.766</td>
<td>0.446</td>
</tr>
<tr>
<td>Q7 My counselor has talked with me about my future after high school</td>
<td>0.746</td>
<td>0.764</td>
<td>0.468</td>
</tr>
<tr>
<td>Q9 My parents expect me to go to college</td>
<td>0.758</td>
<td>0.771</td>
<td>0.376</td>
</tr>
<tr>
<td>Q12 I know about financial aid for college</td>
<td>0.754</td>
<td>0.772</td>
<td>0.410</td>
</tr>
<tr>
<td>Q14 I will be well prepared in high school for college</td>
<td>0.762</td>
<td>0.778</td>
<td>0.338</td>
</tr>
<tr>
<td>Q15 I can make money if I have a college degree</td>
<td>0.752</td>
<td>0.759</td>
<td>0.491</td>
</tr>
<tr>
<td>College Going Culture Survey: Revised</td>
<td>0.770</td>
<td>0.780</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* *Item was reverse scored.*
CHAPTER V
DISCUSSION

Context

THECB designated the Dallas-Fort Worth Metroplex for targeted college-going culture promotion since the Dallas-Fort Worth Metroplex is one of the largest urban areas in the country and has one of the lowest higher education participation rates in higher education in Texas (THECB, 2005b). The problem of low participation among a certain demographic has been shown, and factors leading to this low participation have been examined. Developing a college-going culture in high schools has been viewed by some as one of the key factors for increasing participation by underrepresented students targeted in House Bill (HB) 400. However, few studies have been conducted with the goal of uncovering hidden perceptions of targeted students about the college-going emphases in HB 400 schools high schools. That is what this study addressed.

The purpose of this study is to identify hidden student perceptions about college-going culture at a HB 400 schools in Dallas-Fort Worth. This purpose emerged out of the North Texas Regional P-16 Council’s objective to understand and promote college-going culture in DFW, specifically at HB 400 schools (TEA, 2001; THECB, 2005b). Understanding and promoting a college-going culture at HB 400 schools is a strategy of the Texas Higher Education Coordinating Boards’ Closing the Gaps by 2015 (CTG) statewide initiative to increase participation in Texas institutions of higher education by 500,000 students by 2015.

This study was significant in three ways. First, this study laid the groundwork for schools and families to organize support for students in realizing their academic and vocational goals. Understanding hidden attitudes about college-going attitudes has illuminated relevant
information for closing the participation gaps between non-disadvantaged and disadvantaged groups: lowest socio-economic status (SES), first generation students, African Americans, and Latinos as specified in the Closing the Gaps by 2015 (Arcidiacono, Bayer, & Hizmo, 2008; Harper et al., 2009; THECB, 2005a).

Second, this research has enabled the racial and cultural shifts in educated leadership necessary to better serve the future’s more diverse population. Administrators of urban high schools serving Latino and African American communities desire their schools to be successful. However, too often disadvantaged students have high educational aspirations, but lack the preparation and scaffolding available to non-disadvantaged, non-first generation, and non-underrepresented students (Venezia, 2003).

Third, the state of Texas has struggled with how race and socio-economic status can coexist in perfect educational equity (Green & Forster, 2003; Oakes, n.d). A focus of Texas’ Closing the Gaps by 2015 initiative is promoting equity and diversity in higher education in large urban areas to achieve state economic goals (Millett & Nettles, 2009; THECB, 2005a). Understanding the hidden perceptions might prove insightful to stakeholders for addressing barriers known for hindering underrepresented populations from enrolling into colleges and universities (Gibbons & Borders, 2010).

Four research questions were created to analyze perceptions of urban students at HB 400 schools in the Dallas-Fort Worth Metroplex. Of particular interest was probing the relationships of hidden perceptions about college-going culture among at-risk Latino and African American students who had to overcome obstacles to persist into higher education. A quantitative analysis was necessary to explore the number and nature of hidden student perceptions. Research Question 1 was answered through descriptive statistics to identify student perceptions. Research
Question 2 through Research Question 4 required exploratory factor analysis to model hidden student responses to the College-going Culture Survey Revised’s Likert-scaled items. Each conclusion corresponds to the respective results of each research question in Chapter IV.

Research Question 1

This first research question was the following: What are students’ overall perceptions about the college-going culture at HB 400 schools in the Dallas-Fort Worth Metroplex? As reported in Chapter IV regarding the College-going Culture Survey items Q1, Q2, and Q3, HB 400 student respondents have high aspirations to attend college, since 90% of the students indicated that it was very true about or somewhat true about themselves that they planned to attend college after high school (see Figure 2). In Figure 3 approximately 73% of the respondents stated that it was not at all true or not very true about themselves that they did not think they could go to college after high school, and in figure 4 approximately 81% of students responded that it was not at all true or not very true about themselves that they had not thought about college for themselves. These findings were consistent with the literature reviewed about Latino and African American high school students who generally have very high college aspirations (Tierney & Jun, 2001; THECB, 2005b; Venegas, 2007; Venezia et al., 2006; Walpole, 2003; Zarate & Pachon, 2006).

Approximately 87% of HB 400 student respondents reported that it was very true or somewhat true that teachers thought they could be successful in college (see Figure 5). However, 75% of the HB 400 students thought it was very true or somewhat true that teachers talked with them about college issues like majors (see Figure 6). Therefore, students indicated a difference between their perceptions of teacher’s beliefs about their success in college and actual interaction with a teacher about college. This conclusion was based upon the 12% difference in
aggregated responses (very true and somewhat true). There is a .52 mean difference in total responses between Q4 “My teachers believe I can succeed in college” and Q5 “My teachers talk about college issues like requirements and majors” (see Table 7). In others words, the students did not think their teachers believed they could not make it in college, but fewer students reported having conversations with teachers about getting to college.

Only 49% of students stated that it was not at all true or not very true about themselves that their parents could not afford college (see Figure 12). As indicated in Table 7, Q11 “My family cannot afford college” was reverse coded. The purpose of reverse coding negatively worded questions is to avoid bias. As a result Q11 “My family cannot afford college,” produced a mean score of 2.6 and a standard deviation of 1.3 (see Table 7). The mode of this question was the response of neither true nor untrue of them which comprised 28% of all responses.

At least 70% of students know about financial aid for college (see Figure 13). The mean score for Q12 “I know about financial aid for college” was 2.19 (see Table 7). The mode for this item was somewhat true and accounted for 36% of all responses. The literature showed that while Latino and African American students could benefit from more information about financial aid for college many Latino students assumed they would not qualify (O’Connor, Hammack, & Floyd, 2009). A deficit of social cultural capital contributes to missing information about minimum eligibility requirements for urban students in poor performing schools (Zarate & Pachon, 2006). Therefore, the results of the item regarding knowing about financial aid for college confirmed that students generally have some knowledge about financial aid, but only 34% responded very true of themselves regarding knowledge about financial aid for college (see Figure 13).
Approximately 60% of HB 400 student respondents selected “neither true nor untrue of me” and “somewhat true of me” to Q8 “I feel challenged in my classes” (see Figure 9). The mean score for this item was 2.43, representing “somewhat true” (see Table 7). The mode for item Q8 “I feel challenged in my classes” was 2, which represents the choice “somewhat true of me” and accounts for 35% of all responses. The literature suggested that students tend to internalize their environments and make decisions about their intelligence and self-worth based upon their perceptions of school quality, rigor of curriculum, and college-preparedness (McDonough, 1997; Toldson, Braithwaite, & Rentie, 2009). Since students internalize their school’s college-going habitus while externalizing their internal context, the findings of this item affirmed that the low levels of perceived rigor could produce low levels of college attainment at HB 400 schools. In Figure 9, only 22% of HB 400 students’ responded very true to Q8 “I feel challenged in my classes”; this finding might explain why these high schools fell into the bottom 10% of college-going high schools in Texas for 2 consecutive years.

In Figure 15, 62% of students responded very true or somewhat true of themselves to Q14 “I will be well prepared in high school for college.” The mean score of Q14 “I will be well prepared in high school for college” was 2.28 and the mode was 2, representing somewhat true and accounting for 36% of all responses (see Table 7 and Figure 15). Paradoxically in the literature, most minority students generally hold high aspirations for college (Coleman, 1966; Ogbu, 1991). Perhaps, limited exposure to college preparatory rigor may govern students’ perceptions of their preparation at under performing schools. At times, student perceptions of their college readiness might not correlate highly with college’s entrance requirements (Frakas et al., 2002; Morgan, 1998). Yet at HB 400 schools, only 26% of the students reported “very true of me” for Q14 “I will be well prepared in high school for college,” which seemed to suggest
that students at HB 400 schools are realistic about the adequacy of their preparation for college (see Figure 15). Perhaps the 26% who indicated very true of themselves to Q14 “I will be well prepared in high school for college” corresponded to the same school’s top 25% socioeconomic status, though additional research must be done to test hypothesis. Additionally, 24% responded not at all true about themselves to Q11 “My family cannot afford college” (see Figure 12). This 24% represented student perceptions of family wealth. The Q11 “My family cannot afford college” response distribution provided a glimpse into students’ perceptions about the extent that their families’ finances could impede their access to college (see Figure 12). Roderick, Nagaoka, & Coca (2009) are among the numerous authors verifying that higher socioeconomic status correlates to increased academic performance (Cabrera & La Nasa, 2000; Hossler & Gallagher, 1987; Hossler, Schmit, & Vesper, 1989; Jellison Holme, 2002; Kirst & Venezia, 2003; Noguera, 2008; Perna & Thomas, 2008; Roderick, Nagaoka, & Coca, 2009; Wong, 2000).

Perhaps the HB 400 students who most perceived their being most prepared for college could most afford college (see Figures 12 and 15). This hypothesis corroborates Bourdieu’s (1977) social capital theory concerning the ability of social capital, which includes fiscal capital, to bind the rationality of the students’ own perceptions and ultimately shape students’ perceptions about college preparedness and their families’ fiscal capacity (Bourdieu, 1977; Griffin et al., 2007; McDonough, 1997; Perna & Thomas, 2008). Further testing is in order.

Bourdieu (1973) postulated that familial involvement, as social capital, functions like scaffolding in the lives of students. Families who are involved in their students’ high school academics, generally support student aspirations to enroll in college. Social and cultural capital offer streams of information, attitudes, and social networks which are shared through human interaction within communities (Coleman et al., 1964). Parents model their personal educational
philosophies to their children, and as a result, students’ anticipatory socialization about college. By default, college readiness is taught at home, and not just taught at school (Hossler et al., 1999; Perna & Thomas, 2008; Ver Ploeg, 2002). These information streams are outlets for larger reservoirs of capital, albeit social, fiscal, or cultural.

In light of high aspirations of students who are unlikely to attend college, HB 400 students in the Dallas-Fort Worth Metroplex welcome improving the quality and quantity of communication about college during high school (see Figure 14). The mean score of Q13 “I wish our high school had more information about college” is 2.21 and the mode was 2, representing somewhat true and accounting for 36% of all responses (see Table 7 and Figure 14). A school’s material culture, namely the environment, the physical building, posters, signs, and bulletin boards, can shape students’ perceptions about a value of college as promoted by the high school (Azzam & Sloccom, 2005; Conley, 2007; Fann, 2004; Fletcher & Tienda, 2010). Further, 68% of students responded very true and somewhat true of themselves to Q13 “I wish our high school had more information about college. Even though 68% of students wanted more information about college during high school (see Figure 14), 75% responded very true and somewhat true of themselves to Q5 “My teachers talk about college issues like requirements and majors” (see Figure 6), while just two-thirds of the students responded similarly to Q7 “My counselor has talked with me about my future after high school with college as a goal” (see Figure 8). HB 400 students acknowledged that most teachers and counselors were communicating with them about college, but the majority of the students wanted more dialogue about college majors, admissions requirements, and opportunities for connecting the dots about how to attend college and establish their future career paths. Since students tend to be conditioned to dialogue with teachers and counselors as important indicators of their college
readiness (Grodseky & Riegle-Crumb, 2010), it is likely they value conversations with teachers and counselors as helpful to achieving their personal goals for attending college.

Student perceptions of high school counselors’ expectations influence student decisions about college (Conley, 2007). Students are conditioned to take cues from counselors’ expectations about their college aspirations (THECB, 2005b). Approximately 64% of HB 400 students have had at least some contact with a high school guidance counselor about college and their future after high school (see Figure 8). The mean score of Q7 “My counselor has talked with me about my future after high school with college as a goal” was 2.29 and the mode was 1, or very true of themselves, and accounted for 37% of all responses (see Table 7 and Figure 8). Counselors need to direct each student to the path of greatest success with academically extensive or vocationally intensive education (McDonough, 1997). State educational policies encourage counselors to emphasize collegiate options to those on the advanced academic track and vocational options to those being guided to immediate employment after high school. These types of determinations regulate the quantity and quality of information disseminated to students about college (Fann, 2004; THECB, 2005a). Only 37% of students responded “very true about me” to Q7 “My counselor has talked with me about my future after high school with college as a goal.” This level of report meant that 63% of students need to rely on other avenues of social capital as primary sources of information about college attendance (see Figure 8). Yet, comparatively, Latino and African American communities typically have to rely on heterogeneous sources of social capital regarding college. If 63% of students find it somewhat true or not true that they have had conversations about college with counselors, then this finding explains why HB 400 students’ college-going rates fall into the bottom 10% of Texas college-going statistics for two consecutive years. If counselors talk to students about college, perhaps
only the top 10%, 20%, and 30% of students receive intentional efforts of counselors to invest in the promising students, while the rest of the students draw only some focus or no focus at all. Unfortunately, overwhelmed counselors and teachers sometimes provide preferential attention to the top performing students who are already likely to go to college, such as the top 10% of students in their schools (McDonough, 2005).

Texas State legislation has aimed to help Latino American and African American students meet minimally acceptable scores on the high stakes tests (THECB, 2005). Approximately 89% of HB 400 students had at least some knowledge about the ACT and SAT college entrance tests (see Figure 7). The mean score of Q6 “I know what the SAT and ACT are” was 1.61 and the mode was 1 (“very true of me”) which accounted for 60% of all responses (see Table 7 and Figure 7). Since the inception of the Closing the Gaps by 2015 test (i.e., TAKS) scores have increased among minority students, and the dropout rate has decreased. However, graduation rates also decreased and gaps persisted for ACT and SAT scores (McNeil, 2005; Perryman Group, 2009; THECB, 2000, 2010). HB 400 students’ knowledge of ACT and SAT testing implies an awareness of the connection between the ACT, SAT, and entering college, since 90% of students indicated that it is very true or somewhat true about themselves that they planned to attend college after high school (see Figure 2). Awareness about the SAT and ACT and high college aspirations are important aspects of college-going culture. However, awareness about the ACT and SAT should not be equated to students’ perceptions of proficiency on the SAT’s and ACT’s content.

If participation and success goals outlined Closing the Gaps by 2015 are met, Texas stands to gain over one-million permanent jobs by 2030 (Perryman Group, 2007). However, maintaining low college-going trends will result in an additional 3% of Texans living in poverty
in 2030 and a reduction in annual household earnings by $3,000 per year (THECB, 2005a). HB 400 students are aware that attending college will help them earn more money. Nearly all students (96%) believed it somewhat true or very true that they can make money with a college degree (see Figure 16). The mean score on Q15 “I can make more money if I have a college degree” was 1.19 (“very true of me”) with a standard deviation of .62 (see Table 7). Students have a clear understanding that college will be helpful in achieving higher wages and improving their future earning power. The mode for Q15 “I can make more money if I have a college degree” was 1 (“very true of me”) and accounted for 88% of all responses (see Figure 16). The quality of life for Americans is highly correlated with the post-secondary educational attainment of its workforce (White House: Office of the Press Secretary, 2009). HB 400 students seemed to be acutely aware of having a college degree as a financial benefit to themselves and their families.

The family functions as the primary steward of their children’s academic careers. The level of support that parents/guardians provide students enhances or diminishes their future college aspirations (Conley, 2007; Hossler, Schmit, & Vesper, 1999; Institute for Demographic and Socioeconomic Research, 2005; Perez, 1999). Bourdieu (1973) students’ aspirations of college enrollment are supported by familial involvement which is a form of social capital. Approximately 82% of HB 400 students believe it to be at least somewhat true or very true that their parents expect them to attend college (see Figure 10).

The mean score of Q9 “My parents expect me to go to college” was 1.7 with a standard deviation of 1.19 (see Table 7). Social and cultural capital offer streams of information, attitudes, and social networks which are shared through human interaction within family (Coleman et al., 1964). The mode for Q9 “My parents expect me to go to college” was 1 (“very
true of me”) and accounted for 66% of all responses (see Figure 10). Parents model their personal educational philosophies to their children, and as a result, students’ anticipatory socialization about college is taught at home, not just at school (Hossler et al., 1999; Perna & Thomas, 2008; Ver Ploeg, 2002).

The group that maintains the dominant status in society attempts to preserve its position of superiority through transferring social capital judiciously (Karen, 2002). Hence, building relationships with people who have attended college is like building bridges into networks that will otherwise be untapped in terms of cultural capital (Striplin, 1999). Only 48% of students have any knowledge of five people who graduated from college and the mean score of Q10 “I know at least five people who graduated from college” was 2.76 with a standard deviation of 1.53 (see Table 7). The mode for Q10 “I know at least five people who graduated from college” was 1 (“very true of me”) and accounted for 32% of all responses to the item (see Figure 11). Students had so little personal contact or conversation with adults about college that there was no distinct impression about whether the adults or teachers in their lives attended college or not. This is consistent with HB 400 schools being the in the bottom 10% of college-going for Texas. If HB 400 students are unaware of five college graduates, then students seems to have no distinct impression that all teachers, administrators, and counselors are college graduates. College alumni are information streams that function as reservoirs of college capital, albeit social, fiscal, or cultural. Hence, barriers are intentionally implemented to strengthen those benefitting from the current system.

Research Question 2

The following was this second question: What hidden perceptions about college-going culture, if any, exist among HB 400 students? Using parallel analysis, two latent factors (hidden
perceptions) were identified about college-going culture among HB 400 students. In parallel analysis, actual latent factors are compared to simulated latent factors. Initially parallel analysis revealed the discovery of four latent factors. The parallel analysis also revealed three principal components were in the principal component analysis (PCA) as discussed in Chapter IV. While producing similar results, PCA and factor analysis serve different purposes (Henson & Roberts, 2006). PCA is primarily used to reduce a larger number of items into its essential components. Factor analysis models the causal structure of the relationship between common factors and manifest variables. Many researchers choose PCA because results tend to be slightly higher, since PCA accounts for all variance included common variance, error and uniqueness (O’Rourke, Hatcher, & Stephanski, 2005). However, EFA accounts for common variance among variables, which means the results tend to be comparatively more conservative and more accurate (Fabrigar et al., 1999). Since identifying the common hidden perceptions which influence students’ perceptions was the purpose of the study, the results from the EFA were explored exclusively.

Multiple latent factor models were created to identify the most reliable hidden perceptions that account for the most variance. A balancing act was required in accounting for the most variance and achieving the highest level of internal consistency of the factors. As seen in Chapter IV, the more information the model explained, the less internally consistent the model might be, but the more internally consistent a model was, the less information it explained. EFA represented part of the general linear model in which the goal was to minimize error and maximize variance explained. Ideally, a parsimonious model encompasses the most amount of variance with the fewest number of factors in which the factors individually and the entire model have an adequate level reliability (Henson & Roberts, 2006).
For this reason the two factor oblique (promax rotation) model was used. This model accounted for 40.1% of common variance (see Figure 10). The Cronbach $\alpha$ of .7 was considered adequate for the research. Regarding internal consistency, Factor 1 had an $\alpha = .7$, and Factor 2 had an $\alpha = .71$ (see Tables 11 and 12). In sum, there were two hidden perceptions about college-going culture among HB 400 students.

Research Question 3

The third research question was the following: How do hidden perceptions impact observed perceptions about college-going culture? An EFA revealed two latent factors among the 151 student respondents regarding college-going culture at HB 400 schools in the Dallas-Fort Worth Metroplex. These hidden perspectives explained 40.1% of the variance of high school student responses to the college-going culture survey. Factor 1 was Verified College Potential and accounted for 20.98% of students’ responses (see Table 10). Factor 2 was College Capital Awareness and accounted for 19.12% of students’ responses (see Table 10). These two factors did not influence students’ perspectives in the exact same way.

This section includes an elaboration of the relationship of hidden perceptions to observed perceptions of college-going culture. In Table 10, the promax rotated factor pattern matrix suggested that Factor 1 of Verified College Potential was comprised of six items Q1, Q2, Q4, Q9, Q14, and Q15 (see Table 11). The label of Verified College Potential was used because the items revealed students’ perceptions about stakeholders’ affirming their plans and potential to succeed in college. This finding was consistent with the literature in which expectations and persistence are linked (Goldrick-Rab & Shaw, 2005; Tierney, 1999; Tinto, 1975; Walpole, 2007). Approximately 75% of respondents stated it was very true to Q1 “I plan to go to college after high school graduation” (see Figure 2). The finding was consistent with Walne’s (2008)
suggestion engaging in visualization techniques like planning a career path and using critical thinking skills to take baby steps toward the goal of attending college are useful to college ready students.

The hidden perception of Verified College Potential loaded with .831 for Q1 “I plan to go to college after high school graduation” (see Table 10). Verified College Potential explained 69.05% of this item. The hidden perception of Verified College Potential explained the most information about students’ plans to attend college as seen in Table 10. The complexity of the college-going process entails a collaborative effort among a variety of stakeholders including high school counselors, parents providing financial information, high school administration providing records, students obtaining letters of recommendations from teachers, and students filling out applications, not to mention students earning appropriate grades and standardized test scores. Without scaffolding, the battery of steps for going to college, even with the best intentions, can discourage students from receiving personal attention (Conley, 2007; Kavile & Willis, 2009). Therefore, if African American or Latino students’ college potential is verified during their high school experience, these students are likely to plan to attend college after high school. Understanding the indicators like Verified College Potential and low-income students’ plans to attend college can be used to design programming to overcome barriers to persistence in urban high schools and challenges to increasing participation in higher education (Lucas, 1993; Marti, 2008; McSwain & Davis, 2007; Oakes et al., 2006).

The level of support that parents/guardians provide students enhances or diminishes their future college aspirations (Conley, 2007; Hossler, Schmit, & Vesper, 1999; Institute for Demographic and Socioeconomic Research, 2005; Perez, 1999). Parents model their personal educational philosophies to their children, and as a result, students’ anticipatory socialization
about college is taught at home, not just taught at school (Hossler et al., 1999; Perna & Thomas, 2008; Ver Ploeg, 2002). The average response to Q10 “My parents expect me to go to college” was 1.7, and 66% of student respondents answered that this item was very true of them (see Table 7). The hidden perspective of Verified College Potential accounted for 44.8% of the structure coefficient for the Q10 “My parents expect me to go to college” item (see Table 10).

Bourdieu (1973) postulated that parents transfer social and cultural capital to their children in streams of information, attitudes, and social networks which are shared through human interaction within communities (Coleman et al., 1964). The hidden student perception of Verified College Potential was associated with 44.8% of all student responses to the item Q10 “My parents expect me to go to college” (see Table 10).

Of the 25 well-paying and fastest-growing occupations in Texas, 19 require some post-secondary education, with half of those requiring a master’s degree as the minimum level of education necessary (Story, 2006). Approximately 88% of students acknowledged it to be very true of them that they could make more money if they had a college degree, with an average response of 1.19 on the College-going Culture Survey (see Table 7). The hidden perception of Verified College Potential explained 33% of student perceptions for Q15 “I can make more money if I have a college degree” (see Figure 16). If college-going participation rates increase among African American and Latinos, as projected in Texas Closing the Gaps by 2015 initiative, monetary benefits will include an additional 3% of Texans not living in poverty in 2030 and an increase in annual household earnings by $3,000 per year (THECB, 2005a). As a result, if students achieve their plans of participating and succeeding in college, Texans stand to gain $121.894 billion dollars in personal income by 2030 (Perryman Group, 2007).
Frakas et al. (2002) and Morgan (1998) contend that African American students might lack exposure to higher levels of academic rigor customary in college preparatory programs due to their often lower-socioeconomic status, race-based discrimination in the workforce, and the educational achievement gaps between minority populations and majority populations’ college-going. Approximately 36% of students responded “somewhat true about me” to Q14 “I will be well prepared for college” (see Figure 15). The mean response to Q14 “I will be well prepared for college” was 2.28 (see Table 7). Verified College Potential accounted for 29% of the variance for this item (see Table 10).

Pascarella and Terenzini (2005) reported that attitudes can be used as a salient factor in predicting educational attainment among differing socioeconomic groups. Attending poor performing high schools can thwart students’ high expectations for attending college (Condron & Roscigno 2003). Approximately 61% of HB 400 students indicated not at all true about themselves on Q2 “I do not think I CAN go to college after graduation” (see Figure 3). The mean response made by the HB 400 students was 1.91, which should be interpreted as not very true about themselves because the Likert scale was reverse coded for this question (see Table 7). The hidden perception found in the factor of Verified College Potential explained 11.4% of students, overall rejection of Q2 “I do not think I CAN go to college after graduation” statement (see Table 10). Interestingly, African American students demonstrated the most positive attitudes about schooling and have very high educational aspirations, while paradoxically their positivity tends not to result in higher levels of academic achievement when compared to Caucasian and Asian American students (Coleman, 1966; Hays, 2011; Ogbu, 1991). Similar to African American students, Latino students’ self-discipline, self-efficacy, and motivational characteristics are positively correlated with higher standardized test scores, and these students
can overcome barriers to persistence such as inefficient communication from schools to parents (Ceja, 2004).

HB 400 students generally perceived that their teachers believed they could succeed in college because the mean of student responses to Q4 “My teachers believe I can succeed in college” was 1.56 (see Table 7). Approximately 63% of students responded with 1 (very true of me) to Q4 “My teachers believe I can succeed in college” (see Figure 5). However, in Table 10 Q4 “My teachers believe I can succeed in college” had a loading of .321 which was the lowest of all of the items comprising Factor 1 (i.e., Verified College Potential). This latent factor also explained 10.3% of student responses on Q4 “My teachers believe I can succeed in college.” HB 400 students perceive their teachers, as people who see them as succeeding in college; however Q4 “My teachers believe I can succeed in college” was the least influential significant item on hidden perception Verified College Potential. Researchers like Mikelson (1990) concluded that positive attitudes about schooling and teachers among minority students stem from under-informed, lofty opinions. HB 400 students’ optimistic hidden perceptions about their teachers reveal a puzzling paradox since Latino and African American students have traditionally had lower college readiness rates, and as a consequence, their underrepresentation persists in higher education (Venezia, 2003). Therefore, Mikelson (1990) further recommended that pro-school attitudes are an anomaly for African American and Latino American students and should not be taken seriously unless an intervention has already been conducted with the same students.

In isolation, perhaps, students affirm that they believe their teachers believe they can be successful in college. However, Q4 “My teachers believe I can succeed in college” was the least influential item among all of the significant loadings comprising Factor 1 (i.e., Verified College Potential). Among possible reasons for this phenomenon are (a) some students might perceive
that educators have negative stereotypes about the changing demographics in public schools (Yamaura, Martinez, & Saenz, 2010); (b) at times teachers feel overwhelmed because they cannot provide the individual attention each child and family needs (Pew Hispanic Center/Kaiser Family Foundation, 2004). Of note, Q4 “My teachers believe I can succeed in college” is the only cross-loading item shared between Verified College Potential (Factor 1) and College Capital Awareness (Factor 2).

Factor 2 explained 19.12% of variance and was comprised of the five items numbered as Q3, Q4, Q6, Q7, and Q12, also reported in Chapter IV (see Tables 10 and 12). Factor 2 was labeled College Capital Awareness since the items focused on students’ awareness of resources, which included fiscal, academic, and social capital, for attending college. Urban low-income students might share many similar attitudes regardless of race (Knight & Diop, 2010). Often the primary resources for minority students about college financial aid are outside the home. Such sources of information include school counselors and teachers. In contrast, Caucasian non-first generation students often rely on family and close friends as consultants about college financial aid resources (Immerwahr, 2000). First-generation students (FGS) are often of a lower socio-economic status. Theoretically speaking, FGSs often have less college knowledge regarding policies, processes, and procedures related to admissions, financial aid, and educational degree expectations than students whose parents have some college education (Moises & Vohra-Gupta, 2007). A common deterrent to Latino families applying for financial aid is misinformation about financial aid availability and eligibility requirements (Zarate & Pachon, 2006). Some types of federal aid may require citizenship, yet Latino students often assume that this is requirement for all types of scholarships and financial aid. Thus, overcoming the financial barrier is in part rooted in knowledge about financial aid. In today’s economy, fewer grants and more loans are
available, and lack of funding has diminished minority students’ participation in higher education because minority students often have less accumulated wealth, are less likely to take on educational financial debt, and are more susceptible to lay-off during hard economic times (Berzin, 2010; Hauser & Anderson, 1991; Hipple, 2010).

The largest loading of College Capital Awareness was .857 from Q12 “I know about financial aid for college,” which explained 73% of the shared variance (see Table 10). HB 400 respondents most frequently answered 2 (“somewhat true about me”) on Q12 “I know about financial aid for college,” while the mean response to this item was 2.19. For instance, African Americans and Latino students often perceive financial aid to be more important than did Caucasian students when planning to attend college (Hauser & Anderson, 1991). African American students are less likely to take on college loans, compared to Caucasian students (McDonough & Calдрone, 2006). Often African American students’ college aspirations persist if they are pursing vocational certification, since short-term goals correspond to immediate employability (St. John, Paulsen, & Carter, 2005). However, the long-term goal of graduate school is often delayed in order to meet immediate financial needs (St. John et al., 2005). In sum, compared to all exploratory factor analysis significant item loadings for the College-going Culture Survey, Q12 “I know about financial aid for college” represented the single largest loading explained by Factor 1: Verified College Potential or Factor 2: College Capital Awareness (see Table 10). Perhaps students’ acute awareness of financial aid is driven by their awareness of the need for financial aid to achieve their plans to attend college.

Greene and Forster (2003) noted that African American and Latino students comprise 31% of the 18-year-old general population but only 18% of the 18-year-old college ready population (Fletcher & Tienda, 2010). Approximately 60% of the HB 400 students most
frequently responded very true of themselves to Q6 “I know what the SAT and ACT are,” but the mean response to the item was 2.08, indicating the typical HB 400 student only has some knowledge about the SAT and ACT (see Table 7 and Figure 7). The factor of College Capital Awareness explained 47% of Q6 “I know what the SAT and ACT” (see Table 10). As a result of being unfamiliar with the American higher education system, low-income minority students and parents often rely on the school guidance counselors to be knowledgeable about entrance requirements and critical standardized testing dates (Immerwahr, 2000). Many higher socio-economic students have taken multiple ACT and SAT prep tests. Non-first generation students (NFGS) often avail themselves of very expensive courses provided by private vendors such as Kaplan, Princeton Review, and private college counseling services, so they have not only heard of the ACT and SAT, but have taken them two or three times during their high school academic career.

Approximately 73% of HB 400 students answered not at all true about themselves to Q3 “I have not thought about college for myself” (see Figure 4). To avoid bias this item was reverse coded. Thus, the HB 400 students responded on average with a 1.56 to Q3 “I have not thought about college for myself” (see Table 7). HB 400 students rejected the notion that they do not think about college for themselves. Yet the underlying latent factor College Capital Awareness explained 25.4% of this item’s variance for the factor.

The students’ most frequent response was 37% as “very true of themselves” to Q7 “My counselor has talked with me about my future after high school” (see Figure 8). Yet the HB 400 average response to this item was 2.28 (see Table 7). In other words the average student acknowledged that it was somewhat true for them that their counselors had talked with them about their futures after high school. College-going African American and Latino high school
seniors rely more heavily on high school counseling resources than Caucasian students who rely on familial constellations more often (Toldson, Braithwaite, & Rentie, 2009). Approximately 22.65% of the variance for Q7 “My counselor has talked with me about my future after high school” was accounted for by the factor of College Capital Awareness (see Table 10). Perhaps the 37% of students who responded very true to this item represented the more highly performing students.

Without scaffolding, this battery of hoops to jump through for college-going may discourage students and not allow for personal attention (Conley, 2007; Kavile & Willis, 2009). Latino families often desire to take advantage of external college and financial information sessions provided by schools, churches, and non-profits (Zarate & Pachon, 2006). Latino students who excel in school and attend high performing schools hold aspirations that are equally ambitious as all students regardless of socioeconomic status (Hurtado, 1994; Hurtado et al., 1997). However, college-going culture and social capital are normally found outside of the home for Latino students, but often Caucasian students find college-going culture and social capital within the home (Perez & McDonough, 2008).

In figure 5, approximately 63% of HB 400 students responded that it was very true of them regarding Q4 “My teachers believe I can succeed in college” ($M = 1.56$, $SD = 0.92$). HB 400 students in general affirmed that they thought their teachers believed they could succeed in college. However, at times even in highly populated urban areas, resources are scarce and even the best public school teachers are more likely to help low-income students who show the most aptitude and interest (Davison-Aviles et al., 1999). The College Capital Awareness lowest significant loading was .318 which occurred for Q4 “My teachers believe I can succeed in
college.” College Capital Awareness explained 10.1% of the variance, a value smaller for the two cross-loadings (see Table 10).

Often students who perceive their teachers as not caring are more likely to skip class or miss class and less likely to give their best effort (Davison-Aviles et al., 1999). Not surprisingly, teachers play an important role in defining students’ perceptions about their college potential. Often teachers contribute to students’ awareness of the required resources for successfully going to college (see Figure 6). In sum, the loadings from the factor pattern matrix for Factor 2: College Capital Awareness were moderate (≥ .30) to high with one lower cross-loading. The factor was sufficiently over determined, meaning it had an adequate number of items in its composition.

Research Question 4

The fourth research question was: What is the relationship among hidden perceptions? The minimum threshold of reliability for an instrument used in exploratory research is 0.60 to 0.70. The initial internal item consistency of 15-tem College-going Culture Survey had an overall unstandardized Cronbach α of 0.48 and a standardized Cronbach of 0.56 (see Table 14). Therefore, removing five items strengthened the internal consistency of the College-going Culture Survey. The 10-item Revised College-going Culture Survey had an overall unstandardized Cronbach α of 0.77 and a standardized Cronbach α of 0.78 (see Table 15). The College-going Culture Survey Revised was comprised of latent factors Verified College Potential and College Capital Awareness. The subscale of Verified College Potential in Table 11 and the subscale of College Capital Awareness in Table 12 can be used in together or independently in future college-going culture research.

Q1 “I plan to go to college after high school graduation”
Q2 “I do not think I CAN go to college after high school”
Q3 “I have not thought about college for myself”
Q4 “My teachers believe I can succeed in college”
Q6 “I know what the SAT and ACT are”
Q7 “My counselor has talked with me about my future after high school with college as a goal”
Q9 “My parents expect me to go to college”
Q12 “I know about financial aid for college”
Q14 “I will be well prepared in high school for college”
Q15 “I can make more money if I have a college degree”

In reference to Table 13, latent factors Verified College Potential and College Capital Awareness were non-significantly negatively correlated ($r = -0.495$, $p = 0.354$, $r^2 = 0.249$) The HB 400 students perceived their Verified College Potential to increase as their College Capital Awareness decreased. In other words, Latino and African American students’ college potential is affirmed when they have less awareness about how to go to college according to their own perceptions. Alternatively, when HB 400 students are more aware about how to get to college, their college potential is less affirmed. Perhaps this phenomenon provides impetus to design college-going culture interventions that are encouraging and informative. Perhaps the most effective college-going cultures both verify college potential and increase college capital awareness simultaneously. A robust college-going culture would be expected to demonstrate a strong positive relationship between Verified College Potential and College Capital Awareness. Cultures that can verify students’ college potential, specifically supporting underrepresented students’ plans to attend college, while simultaneously increasing their understanding about
resources, specifically financial resources, will benefit students’ ability to achieve their own higher education aspirations. To achieve the Closing the Gaps by 2015 initiative, HB 400 schools must increase the participation of their graduates in higher education. Strategically aligning the college-going culture to affirm and inform all students is a helpful step in increasing Latino and African American students’ participation in Texas higher education.

The communality coefficient explained how much information an item contributed across all the extracted factors. The communality coefficients for Factor 1 ranged from 0.56 to 0.24 (see Table 10). Item Q1 “I plan to go to college after high school graduation” had the largest communality coefficient ($h^2 = 0.56$) for Factor 1: Verified College Potential. The communality coefficients for Factor 2: College Capital Awareness ranged from 0.54 to 0.3 (see Table 10). Item Q12 “I know about financial aid for college” had the largest communality coefficient ($h^2 = 0.54$) on College Capital Awareness (see Table 10). In general, the communality coefficients of Factor 1: Verified College Potential showed moderately low communality coefficients. The communality coefficients in Factor 2: College Capital Awareness explained more information than did Factor 1: Verified College Potential, yet Verified College Potential accounted for more variance. It should be noted, that the low communality coefficients are a limitation of the recommended model 4 (see Tables 9 and 10 for display of 2 Factor EFA using maximum likelihood extraction with a promax rotation).

Implications for Practice

This study addressed the mission of the Strategic Plan for Outreach and Success in support of Closing the Gaps by 2015, namely, “to create and sustain a college-going culture in Texas that prepares all students for academic rigor and discipline needed to enter and successfully participate in college” (THECB, 2005, p. 5). McDonough (1998) defined college-
going culture (i.e., habitus) as the high school patterns of thought, worldviews, conceptions and anticipations of key stakeholders within a given academic institution, regarding the possible choices and actions related to college choice. One of the specific purposes of this study was to identify students’ hidden perceptions about college-going culture at HB 400 schools in the Dallas-Fort Worth Metroplex. To this end, the study has several implications for practice.

Verified College Potential

First, the study identified two hidden perceptions, latent factors (see Tables 10, 11, and 12). Latent Factor 1 is Verified College Potential. Latent Factor 2 is College Capital Awareness. Both latent factors were extracted via exploratory factor analysis using maximum likelihood extraction with a promax rotation (see Tables 9 and 10). “Latent factors are unobserved variables which typically cannot be directly measured; but, they are assumed to cause the scores we observe on the measured or indicator variables” (Research and Statistical Support, 2010, para. 10).

Verified College Potential has been identified as a hidden perception about college-going culture at HB 400 schools in Dallas-Fort Worth Texas. Verified College Potential is composed of six items: Q1 “I plan to go to college after high school”; Q2* “I do not think I CAN go to college after graduating”; Q4 “My teachers believe I can succeed in college”; Q9 “My parents expect me to go to college”; Q14 “I will be well prepared in high school for college”; Q15 “I can make more money if I have a college degree.” Items Q1, Q2*, Q4, Q9, Q14, and Q15 were combined using a linear equate to create the synthetic latent factor Verified College Potential (see Table 10 and 12).

Second, Verified College Potential causes student perceptions about college-going culture. Verified College Potential explains 20.98% of variance of the 10-item College-going culture.
Culture Survey Revised (see Table 10). Verified College Potential highest loading .831 is on Q1 “I plan to go to college after high school graduation” (see Table 10). Verified College Potential causes $r^2 = 69.05\%$ on Q1 “I plan to go to college after high school graduation.” Therefore, when an HB 400 student plans to attend college it is because his/her college potential has been verified according by these six items Q1, Q2*, Q4, Q9, Q14, and Q15. Approximately 75% of high school students responded Very true about me to Q1 “I plan to attend college after graduating high school” (see Figure 2). To increase participation in college among students at HB 400 schools, the Texas Higher Education Coordinating Board suggests that students plan to attend college (TEA, 2001; THECB, 2005b). Approximately 15% of HB 400 students responded somewhat true of me on Q1 “I plan to attend college after graduating high school” (see Figure 2). Planning to attend college is a part of student perceptions about college-going culture at HB 400 schools. The HB 400 students’ hidden perception, Verified College Potential, significantly influences their plans to attend college.

Yet, latent Factor 2 is College Capital Awareness. College Capital Awareness is a hidden perception (see Tables 10 and 12). College Capital Awareness did not have a significant loading on Q1 “I plan to attend college after graduating high school.” Therefore, the hidden perception Verified College Potential explains more about HB 400 students’ plans to attend college than College Capital Awareness. An implication is that HB 400 students plan to attend college based on their college potential being verified, rather than being made aware resources needed to enroll in college.

Third, approximately 88% of HB 400 students responded “very true of me” to Q15 “I can make more money if I have a college degree” (see Figure 16). The loading of Verified College Potential on Q15 “I can make more money if I have a college degree” was .575 (see Table 10).
Verified College Potential accounted for $r^2 = 33.06\%$ of Q15 “I can make more money if I have a college degree.” However, College Capital Awareness did not have a significant loading on Q15 “I can make more money if I have a college degree.” An implication is that HB 400 students who have their college potential verified believe they can make more money with a college degree, than people who are aware of resources for college.

Fourth, when HB 400 students’ college potential is verified, they are more likely to feel somewhat prepared for college at HB 400 high schools in Dallas-Fort Worth. In Table 10, the loading of Q14 “I will be well prepared in high school for college” is .539 on Verified College Potential. Verified College Potential explains $r^2 = 29.05\%$ of Q14 “I will be well prepared in high school for college.” An implication is that 62% of the students indicated it was very true of me and somewhat true of me on Q14 “I will be well prepared in high school for college” (see Figure 15).

Fifth, hidden perception Verified College Potential causes students perceptions of parental expectations about attending college. Item Q9 “My parents expect me to go to college” has a loading of .68 on Verified College Potential. Q9 “My parents expect me to go to college” has the second largest coefficient of determination ($r^2 = 46.24\%$) on Verified College Potential (see Table 10). Therefore the hidden perception, Verified College Potential, shapes student perceptions about parental expectations about college.

Approximately 66% of students responded “very true of me” to Q9 “My parents expect me to go to college” (see Figure 10). The application is that students perceive parents’ expectations about college. The hidden perception Verified College Potential affirms the importance of parental influence on students’ perceptions about college-going. This implication confirms Harris et al. (2008) findings about the importance of the parental involvement in
preparing students for college. Based upon Bourdieu and Passeron’s social capital theory, many scholars hold that college aspirations are reproduced based upon social origin. As applied to higher education, inequitable policies have been part of American higher education resulting in participation gaps among underrepresented populations (Coleman et. al., 1964; Harper et al., 2009; McDonough, 1997). Therefore the role of parents’ expectations is formative to shaping students’ hidden and manifest perceptions about college-going culture and its importance should not be under estimated.

College Capital Awareness

First, the loading of Q12 “I know about financial aid for college” on College Capital Awareness is .857. College Capital Awareness explains 73.4% of variance on Q12 “I know about financial aid for college.” It should be noted that approximately 34% of students answered very true of me on Q12 “I know about financial aid for college” (see Figure 13). Approximately 36% of students answered somewhat true about me on Q12 “I know about financial aid for college” (see Figure 13). Financial aid is often a barrier to low income, urban, African American and Latino students (see Table 10). Approximately 30% of HB 400 students answered Q12 “I know about financial aid for college” with “not at all true about me,” “not very true about me,” and “neither true nor untrue about me” (see Table 13). The implication is that educators should continue to examine how financial status explains the gaps between students’ expectations and reality.

In concert with Closing the Gaps by 2015, community councils can bolster students’ College Capital Awareness and connect students to fiscal resources needed for college enrollment. Helping students understand financial information, scholarships, the Federal Application for Student Financial Aid, and grants may reverse the negative correlation between
Verified College Potential and College Capital Awareness found among HB 400 students’ perceptions in this study. In summary, the implications for practice provided by this study helps schools, students, and families address societal implications of demographic shift, provides information for colleges to readjust to support students, and validation of the instrument.

Second, students have conflicting hidden perceptions about the college-going culture at HB 400 schools. In table 13, it should be noted that a non-significant negative correlation of the Verified College Potential and College Capital Awareness ($r = -0.495, p = 0.354$). Only 37% of HB 400 respondents indicated that it was very true that Q7 “My Counselor has talked with me about my future after high school with college as a goal” (see Figure 8). The nature of this conflict can justify more college counseling for HB 400 students. Perhaps taking a closer look at additional opportunities for HB 400 students to get more college counseling in school would help increase resolve conflicting hidden perceptions and increase greater participation in higher education. There are implications that counseling may be critical to college-going.

Third, HB 400 students believe that their teachers see them as successful college students (see Figure 5). If HB 400 students have their college potential verified, then they believe that teachers view them as successful college students. Verified College Potential accounts for 10.3% of Q4 “My teachers believe I can succeed in college.” Also, if HB 400 students are aware of college capital, HB 400 students believe that teachers see them as successful college students. College Capital Awareness explains 10.11% of Q4 “My teachers believe I can succeed in college.” Q4 “My teachers believe I can succeed in college” is the only cross-loading above $.30.$ on Verified College Potential and Capital College Awareness (see Table 10). It should be noted that Q4 “My teachers believe I can succeed in college” has a loading of .321 on Verified College Potential in the promax rotated pattern matrix. In Table 10, Q4 “My teachers believe I
can succeed in college” has a loading of .318 on Capital College Awareness in the promax rotated pattern matrix. Approximately 87% of HB 400 student respondents answered “very true of me” and “somewhat true about me” to Q4 “My teachers believe I can succeed in college.” These hidden perceptions (e.g., Verified College Potential and College Capital Awareness) shape students’ views of teachers at HB 400 schools in Dallas-Forth Worth.

Instrument Validation and Reliability

This study addresses the state’s Texas Higher Education Coordinating Boards’ objective of identifying trends about college-going culture in Dallas-Fort Worth (THECB, 2005b). Although the College Going Culture in Urban High Schools utilized 15-item College-going Culture Survey (unstandardized α = 0.48) to analyze the college-going culture in Dallas-Fort Worth, a 10-item College-going Culture Survey Revised is recommended (unstandardized α = 0.77). Based upon the parallel analysis, EFA using maximum likelihood extraction technique with a promax rotation, and Cronbach α inter-item reliability analysis, only items with significant loadings on latent factors Verified College Potential and College Capital Awareness should be retained in the College-going Culture Survey Revised (see Tables 10, 15, and 16). The following items should be included in the College-going Culture Survey Revised:

Q1 “I plan to go to college after high school graduation”
Q2 “I do not think I CAN go to college after high school”
Q3 “I have not thought about college for myself”
Q4 “My teachers believe I can succeed in college”
Q6 “I know what the SAT and ACT are”
Q7 “My counselor has talked with me about my future after high school with college as a goal”
Q9 “My parents expect me to go to college”
Q12 “I know about financial aid for college”
Q14 “I will be well prepared in high school for college”
Q15 “I can make more money if I have a college degree”

The following six items comprise the subscale for Factor 1, Verified College Potential (unstandardized $\alpha = .70$) is: Q1 “I plan to go to college after high school”; Q2* “I do not think I CAN go to college after graduating”; Q4 “My teachers believe I can succeed in college”; Q9 “My parents expect me to go to college”; Q14 “I will be well prepared in high school for college”; Q15 “I can make more money if I have a college degree” (see Tables 10 and 12).

The following six items comprise the subscale for Factor 2, College Capital Awareness (unstandardized $\alpha = .712$) is comprised of 5 items: Q3 “I have not thought about college for myself”; Q4 “My teachers believe I can succeed in college”; Q6 “I know what the SAT and ACT are”; Q7 “My counselor has talked with me about my future after high school”; Q12 “I know about financial aid for college” (see Tables 10 and 13).

A limitation of the College-going Culture Survey Revised is that the hidden perceptions (cf. Verified College Potential and College Capital Awareness) account for 40.1% of common variance. The College-going Culture Survey Revised has 59.99% of unexplained variance which is either unique variance or measurement error (see Tables 9 and 10). Nevertheless, future research is studies on HB 400 schools college-going culture would be necessary to confirm the recommended latent factor structure as the most parsimonious solution that explains the most amount of information (see Henson & Roberts, 2006, for discussion).
Future Research Recommendations

This study provides many opportunities for further research. Generalizing the study to future populations of HB 400 students within Dallas-Fort Worth is an issue that should be addressed. Presumably, the low-socioeconomic status students attending the HB 400 schools serving urban Latino American and African American communities share characteristics relevant and helpful to future HB 400 schools in Dallas-Fort Worth with similar characteristics. However, conclusions cannot be definitively confirmed without replicating the results of this study longitudinally. Therefore, an additional longitudinal study would be helpful for understanding students’ long-term perceptions about college-going culture as the objectives of increasing participation and success in Texas higher education are sought to be achieved. Use of the College-going Culture Survey Revised in future longitudinal studies is in order to assess the hidden perceptions of students’ Verified College Potential and College Capital Awareness by incorporating EFA, confirmatory factor analysis, and Structural Equation Modeling.

Yet, multiple models were generated to account for the most variance explained between latent factors and responses to manifest variables in the College-going Culture Survey (see Table 9). While Model 4 with two latent factors, maximum likelihood extraction with promax rotation was selected because it best represented data, parenthetically Model 5, with three latent factors with orthogonal varimax rotation explained more variance than Model 4 (see Table 9). However, Model 3 had less desirable inter-item correlations on Factor 2 ($\alpha = 0.696$) and Factor 3 ($\alpha = 0.693$) because they were just below the .70 threshold. Perhaps in a replicated study, an orthogonal varimax model may yield a higher variance explained, while the Cronbach $\alpha$ levels ought to exceed the threshold. In the beginning of the study, a PCA model, similar to Model 5 (three factor orthogonal varimax), was the model of choice, but after reading a critique about the
little jiffy (Kaiser, 1970) and observing the low Cronbach α coefficients, the available model options were carefully reconsidered. However, though not chosen for this study as the preferred model, in a replicated study, the PCA varimax three factor model should not be immediately bypassed if it produces an initially compelling model, as it did in this study, and it might be helpful in achieving a sizeable trace with a very simple structure. Perhaps, the lower reliability (i.e., Cronbach α) of Factors 2 and 3 could be strengthened. This question could be explored if the study is replicated.

Five items were excluded from the College-going Culture Survey Revised because they did not significantly load on either factor, Verified College Potential or College Capital Awareness (see Tables 10 and 16). Maybe the additional items to the survey would warrant the reincorporation related of the five excluded items: (a) Q5 “My teachers talk about college issues like requirements and majors”; (b) Q8 “I am challenged in my classes”; (c) Q10 “I know at least five people who graduated from college”; (d) Q11 “My family cannot afford college”; and (e) Q13 “I wish our school had more information about college.” Extension of this effort could potentially lead to the development of a third, fourth, or fifth latent factor (e.g., hidden perception) and could better incorporate the items currently not coalescing with Verified College Potential and College Capital Awareness.

Based upon the findings of the this study, Verified College Potential and College Capital Awareness emerged as two hidden perceptions causing 40.1% of the responses to the College-going Culture Survey (see Table 10). How do perceptions and hidden perceptions of college-going culture differ among underrepresented urban students in metropolitan in regions of the United States (including the Midwest, Northeast, West Coast)? Exploring this question could provide a baseline for understanding the 50 states’ college participation levels from students’
perspectives, while addressing the local and national concerns of building competitive workforces by assessing overt and hidden perceptions of college-going culture.

Finally college-going culture has a component yet to be considered which is profoundly important to the Latino and African American communities, namely the relationship of Christianity and Catholicism on the lives of the students’ decision making about college. Perhaps exploring the relationship of a Christ-centered decision making process as a variable for navigating choices about college decisions can provide a more complete picture the college-going culture of underrepresented populations. While this variable is unexplored in the present study, it represents a hypothesis for future research as part of exploring the impact of faith on HB 400 students’ perceptions of college-going culture in Dallas-Fort Worth. Texas may be the ‘buckle of the Bible belt’ of North American, and Dallas may be an unofficial capital of evangelicalism with multiple mega churches (as in churches with Sunday attendance figures in the 2,000 plus range, see Hartford Institute for Religion Research, 2006) which are, in some cases, located across the street from one another. Such research has the potential to create regional expertise about hidden perceptions that influence college-going culture in HB 400 schools in Dallas-Fort Worth (THECB, 2005b).

Summary

In accordance with the Texas Higher Education Coordinating Boards’ Closing the Gaps by 2015, this research study analyzed self-reported perceptions from students (n = 151) who attended four HB 400 schools serving Latino and African American communities in the Dallas-Fort Worth Metroplex. The purpose of this study was to identify hidden student perceptions about college-going culture among underrepresented students in higher education in order to better understand and promote college-going culture in DFW, specifically at HB 400 schools.
Descriptive statistics revealed that Latino and African American students affirmed aspects of the college-going culture at HB 400 schools. The parallel analysis, EFA, and Cronbach’s $\alpha$ identified two latent factors. Specifically, this study utilized exploratory factor analysis (EFA) in R with a maximum likelihood extraction technique to identify latent factors (hidden perceptions): Verified College Potential ($\alpha = 0.70$) and College Capital Awareness ($\alpha = 0.71$). Together, Verified College Potential and College Capital Awareness explained 40.1% of student perceptions about college-going culture. The two factors were non-significantly negatively correlated ($r = -0.495, p = 0.354$). Latent factors suggest the possibility that students who reportedly feel most encouraged to attend college (Verified College Potential) may tend to be least aware of the actual logistics of college such as admissions processes and financial aid (College Capital Awareness), and conversely, those with the most logistical knowledge may tend to feel least encouraged.

Since multiple studies have utilized versions of the College-going Culture Survey, exploring several psychometric properties of the instrument used in the current study was in order. The validation of the instrument was limited to the results of the EFA and Cronbach inter-item reliability coefficients. Therefore, further testing would be necessary to confirm the factor structure via confirmatory factor analysis in future research. Ultimately, the research study reveals that College-going Culture Survey as a helpful to revealing students conceptualization about college-going culture, despite low reliability. This study’s recommendations offer a College-going Culture Survey Revised which strengthens reliability and reveals with identifiable subscales for latent factors Verified College Potential and College Capital Awareness.

The inter-item reliability of the 15-item College-going Culture Survey used in data collection. The College-going Culture Survey demonstrated an overall unstandardized Cronbach
α of .48 and a standardized Cronbach of .56. These values represented very low reliability. The internal-item reliability coefficient of the College-going Culture Survey increased by removing five items. It is for this reason the recommended College-going Culture Survey Revised would include 10-items instead of 15-items. The 10-item survey would only contain the two constructs uncovered in this study. Respectively Verified College Potential and College Capital Awareness because each latent factor meets the minimum threshold for reliability α = 0.70. By combining Verified College Potential and College Capital Awareness the reliability of the College-going Culture Survey Revised improves to α = 0.77.

Exploratory factor analysis (EFA) is complex multivariate multi-stage analysis concerned with correctly modeling relationships between unobserved variables, observed variables, and error (De Winter, Dodou, & Wieringa, 2009; MacCullum et al., 2001). Due to the small to moderate population examined, a parallel analysis was conducted in R by simulating random normal data for 1000 datasets using parameters of the original sample (n = 151, 15 variables, etc.). This facilitated greater accuracy in factor retention and increases generalizability of retained factor solution (e.g., Verified College Potential and College Capital Awareness).

Much of the significance of the research is rooted in its connection to the North Texas Regional P-16 Council’s objective to help increase participation in Texas institutions of higher education by 500,000 by 2015 as stated in Closing the Gaps by 2015 (TEA, 2001; THECB, 2005b). Identifying hidden student perceptions may lay groundwork for schools and families to organize support for burgeoning student populations based upon the student perceptions in order to tailor services that will ultimately help facilitate the realization of their college and vocational goals (Venezia, 2003). The need for balancing encouragement (Verified College Potential) and
information about college (College Capital Awareness) may be helpful discovery for HB 400
schools as they seek to strengthen their college-going culture’s effectiveness.
APPENDIX

COLLEGE-GOING CULTURE SURVEY

Developed by Harris & Willis (2008)
Student Survey

Name of School:

What grade are you in?  □ 9  □ 10  □ 11  □ 12

Gender:  □ Male  □ Female

Ethnicity:  □ African American  □ Asian  □ Hispanic  □ Native American  □ White

Would you be the first person in your family to go to college?  □ Yes  □ No

Student survey questions  (Likert scaled items from very true about me to not at all true about me)

Circle the number that shows how true the statement is about you.

1 = Very true about me.  4 = Not very true about me.
2 = Somewhat true about me.  5 = Not at all true about me.
3 = Neither true nor untrue about me.

1 2 3 4 5 1. I plan to go to college after high school graduation.
1 2 3 4 5 2. I do not think I CAN go to college after graduating.
1 2 3 4 5 3. I have not thought about college for myself.
1 2 3 4 5 4. My teachers believe I can succeed in college.
1 2 3 4 5 5. My teachers talk about college issues like requirements and majors.
1 2 3 4 5 6. I know what the SAT and ACT are.
1 2 3 4 5 7. My counselor has talked with me about my future after high school with college as the goal.
1 2 3 4 5 8. I am challenged in my classes.
1 2 3 4 5 9. My parents expect me to go to college.
1 2 3 4 5 10. I know at least five people who graduated from college.
1 2 3 4 5 11. My family cannot afford college.
1 2 3 4 5 12. I know about financial aid for college.
1 2 3 4 5 13. I wish our school had more information about college.
1 2 3 4 5 14. I will be well prepared in high school for college.
1 2 3 4 5 15. I can make more money if I have a college degree.

16. List five colleges and/or universities of which you have heard:
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