PERCEIVED FACTORS INFLUENCING THE PURSUIT OF HIGHER EDUCATION AMONG FIRST-GENERATION COLLEGE STUDENTS

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Perceived Factors Influencing the Pursuit of Higher Education Among First-Generation College Students

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Abstract

Lynne Coy-Ogan. PERCEIVED FACTORS INFLUENCING THE PURSUIT OF HIGHER EDUCATION AMONG FIRST-GENERATION COLLEGE STUDENTS. (Under the direction of Dr. Ellen Lowrie Black) School of Education, October 29, 2009.

Students who are first in their families to pursue higher education are often less likely to receive the academic, social, and financial support needed to experience success when compared to students from college-educated families. This study examined the perceived differences among salient factors influencing the pursuit of higher education between first-year, first-generation college students and students from college-educated families. These factors include *family influence, secondary school support, peer influence, preparation for college, awareness and access to financial aid*, and *relative functionalism*. An independent samples t-test was used to analyze data derived from *The Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire* (Harris, 2009) survey instrument, which was administered to 348 first-year college students. No significant differences were found between the perceptions of first-year, first-generation students when compared to first-year students from college-educated families except for the factors of *family influence* and *preparation for college*. First-year, first-generation college students perceived *family influence* and *preparation for college* to be less powerful factors affecting their pursuit of higher education than students from college-educated families.

Dedication

This study is dedicated to my children Abigail and Sarah, whose patience and encouragement have helped me to achieve this goal. And to my husband, Bob: I certainly would not have been able to accomplish this milestone without your support. Thank you for valuing my educational journey and believing in me.

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CHAPTER 1: INTRODUCTION

Introduction

The decision to pursue a college degree is one of the most significant commitments a student will make in his or her lifetime. It is predicated on the cultivation of high academic aspirations, a process of influence that begins well before high school graduation. This critically important decision for students is influenced by numerous internal and external factors. Research has shown how these factors often differ among various groups of students; however, few studies have analyzed the impact of perceived influential factors on the decision-making process of first-generation college students. This study examined the perceived influences of first-year college students in their pursuit of higher education in order to determine if these perceived influences differ significantly for first-generation students when compared to students from college-educated families.

In recent years, the impact of external factors on the economy has significantly heightened the urgency for higher education to address the global demands of an increasingly technological work force. A second important source of influence on the pursuit of higher education involves internal factors that may affect personal experiences. Family opinions, peer influence, secondary school support, and academic preparation are each examples of internal factors which ultimately influence students' decisions to attend college (Bui, 2002; Pike & Kuh, 2005).

In the early 20th Century, college enrollments were comprised of predominantly upper middle class white male adolescents who were the sons of prosperous farmers,

merchants, lawyers, doctors, and ministers (London, 2000). Over the past several decades, the educational aspirations of all groups of students have increased dramatically. During the 1960s and 1970s, “the nation was shifting away from a manufacturing-based economy, where a high school diploma was enough to land a job that paid well and could last a person's entire working life” (Higher Education Enrollment, 2003, p. 14). Simultaneously, a service-based economy was developing, and employers were seeking individuals who had obtained degrees in specialized areas of study. A postsecondary degree has become less of a luxury and more of a necessity (Zuekle, 2008) as the twenty-first century economy reduces or even eliminates many previously secure job markets. It is now commonplace for women to outnumber men in college classrooms, and first-generation students from minorities and lower socioeconomic groups are attending college in large numbers (London, 2000).

According to the U.S. Department of Education (2008), enrollment at degree-granting institutions has increased by 16% between 1985 and 1995. The increase surged to 23% between 1995 and 2005, or from 14.3 million to 17.5 million new college students. The Department’s National Center for Education Statistics projects a college enrollment rise of 15% among students under 25 between 2005 and 2016, and an 18% increase is projected during this time period for students over 25.

Although a concern of many students, the rising price of tuition has not negatively impacted students and colleges from a statistical standpoint. “The percentage of young adults ages 18 to 24 who are enrolled or who have completed college actually has risen from 36 percent in 2000 to 45 percent in 2006” (Zuekle, 2008, para. 4). Community colleges enroll an increasing proportion of first-generation college students; in 2005, first-generation students comprised 15.9% of freshmen at four-year institutions, down

from 38.5% in 1971 (Engle, 2007). Financial concerns due to an economic recession are driving students to pursue postsecondary education in order to become more marketable, and many of these students require financial aid (Lindell, 2009). Some students in more expensive four-year institutions, whose families are concerned about educational expenses, are transferring to less-costly universities or to community colleges in order to decrease the amount of debt they carry (Strauss, 2009).

The current sentiment within the field of education is a positive message of access and opportunity for all students (Pratt & Skaggs, 1989; Great Maine Schools Project, 2009). "Although no student should be forced or intimidated into attending college, every student should be encouraged to explore the option" (Great Maine Schools Project, 2009, p. 8). Pike and Kuh (2005, p. 292) would agree that "some form of postsecondary education is now within reach of virtually everyone in the U.S.," but, they caution, "not all students are equally likely to succeed." First-generation students, those whose parents have not earned a post-secondary degree (Great Maine Schools Project, 2009), often find the challenge to complete college to be more significant when compared to students who were raised in college-educated families (Choy, 2001; Engle, 2007). Understanding this high-risk population is a crucial issue for educators and policymakers (Jenkins, Miyazaki, & Janosik, 2009).

This chapter presents the background of the study, theoretical framework, statement of the problem, statement of hypotheses, overview of methodology, significance of the study, and definition of terms.

Background of the Study

A synthesis of research clearly demonstrates the numerous benefits of a college education (Ashenfelter, 1999; Dee, 2004; Baum & Payea, 2005; Levin, Belfield,

Meunning, & Rouse, 2007). Obtaining a college degree not only enhances earning potential; it alters one's world view, prompting further growth intellectually, socially, academically, and often spiritually. For first-generation college students, this accomplishment may be even more significant, as its impact may also extend to other family members.

While national data indicate a significantly larger number of students are pursuing a college education, those from college-educated families typically benefit from advantages that first-generation students may not experience (Choy, 2001). While many research studies have noted the specific challenges facing first-generation college students (such as Piorkowski, 1983; Phelan, Davidson, & Cao, 1991; Choy, Horn, Nunex, & Chen, 2000; Pike & Kuh, 2005; Attewell, Lavin, Domina, & Levin, 2006; Conley, 2007; Engle, 2007; Orbe, 2008), little data is available documenting the perceived differences of first-generation students specific to the influences affecting the pursuit of higher education (such as Bui, 2002; Valadez, 2008).

This study contributes to the body of research by exploring the differences in perceived influences between first-year, first-generation college students and first-year college students from college-educated families. The study should be useful to secondary school teachers and counselors in supporting students' decision-making process as they investigate opportunities in higher education. The information will also be useful to higher education admissions personnel and college faculty in their efforts to better understand the influences that may impact students in their decision to attend college. With educational initiatives now focused on developing higher educational aspirations for all students, it behooves teachers at all levels to be cognizant of the factors that influence students' educational goals. The Great Maine Schools Project (2009), for example,

emphasizes the need to encourage higher educational aspirations among all youth of this generation:

> No matter what our youth choose to do with their lives, it is the responsibility of every policy maker, educator, and citizen to give our students every opportunity to succeed. If the potential exists for some students to experience disappointment, then the potential is also present for those same students to unexpectedly experience success (p. 6).

The target university in this study strives to provide conditions for all its students to achieve success in realizing their dreams, as suggested in the above sentiments. The mission statement of the target university states:

> (The target university) is a private institution of post-secondary education offering undergraduate and graduate degrees in business, health, education and professional studies. (The target university) seeks to serve motivated, career-oriented students through a curriculum that integrates liberal arts and sciences, professional and technical studies, and experiential learning outside the classroom. (The target university) dedicates itself to excellence in teaching, to a personalized collegiate experience, to the development of individual self-worth, to a curriculum which promotes clear thinking and communication skills, and to an environment which values the search for ethical truths in a changing world.

> While the target university has a robust general educational requirement, it is not a liberal arts college, but a university with a focus on career and professional preparation. Therefore, the very nature of the mission of the target university might influence the subset of college-goers and their decision to pursue their education at that institution.

Theoretical Framework

The theoretical framework for this research study is rooted in Hossler and Gallagher's (1987) model of college choice. A student's transitional experience from high school to college is considered the definition of the college choice process (Hossler, Braxton, & Coopersmith, 1989; Hossler et al, 1989). Hossler and Gallagher (1987) posit that this process occurs in a series of three stages. During the predisposition stage, which is considered to include grades seven through nine, some students have general aspirations to attend college. Parents may offer encouragement and support, discuss college plans, and save for college expenses. Students develop possible career interests and may even establish personal goals to pursue specific occupations (Terenzini, Cabrera, & Bernal, 2001).

The search stage is the second phase of this theoretical framework, which occurs between tenth grade and the first half of twelfth grade (Hossler, Braxton, & Coopersmith, 1989; Terenzini, Cabrera, & Bernal, 2001). This is when students acquire information in order to narrow down possibilities of institutions based on their characteristics, thus seeking a "good personal fit." They decide which institutions they wish to seriously consider and take actions, such as searching online, interacting with college personnel, visiting campuses, and requesting materials about specific programs.

The final stage, known as the choice stage, is reached once sufficient information leads to a clear decision about attending a particular college and the student officially completes the application process (Hossler, Braxton, & Coopersmith, 1989; Terenzini, Cabrera, & Bernal, 2001). By grade eleven or twelve, a student has established a strong preference for characteristics of one institution, understands admissions qualifications, and has pondered options for financing college costs. A student may decide to exit this three-stage process at any stage, however (Hossler et al., 1989), and a variety of factors can influence how this uniquely unfolds for each individual student (Nora & Cabrera, 1992). Academic achievement appears to be a particularly important variable affecting the degree to which a student is able to maintain college aspirations; parents, teachers, and counselors demonstrate greater support for those who consistently produce higher academic achievement (Hossler et al., 1999).

Statement of Problem

This study examines the impact of influential factors affecting first year, first-generation college students when compared to the experiences of first-year students from college-educated families. Specifically, this analysis will focus on the following variables: *family influence, secondary school support, peer influence, preparation for college, awareness and access to financial aid,* and *relative functionalism* – an awareness of the benefits of a college education. Research results will show whether each of these variables is either more or less significant for first-generation college students.

Although researchers have hypothesized that first-generation college students differ in their experiences from their college counterparts (Bui, 2002; Valadez, 2008), fewer studies have investigated the differences in perceived factors influencing the pursuit of higher education between first-year, first-generation college students and first-

year students from college educated families. The present study adapted the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire* (Harris, 2009) that has been used in illuminating the factors influencing the pursuit of higher education to determine if first-generation students perceive the process differently than their peers. This questionnaire was selected because it specifically provided factor analysis for nine influential factors relating to influencing the pursuit of higher education – six of which were used in the present study because they were identified in the literature (St. John & Somers, 1993; Valadez, 1998; Maduakolam, 2000; Thayer, 2000; Choy, 2001; Gandara, 2001; Samarge, 2006; Stewart, Stewart, & Simons, 2007; Conley, 2008; Jenkins, Miyazaki, & Janosik, 2009) as directly relating to the internal influential factors being analyzed in order to address the null hypotheses. Additionally, the instrument reported reliability coefficients ranging from moderate (.66) to strong (.90) (Harris & Halpin, 2002).

Many students entering college are under-prepared for the rigor, pace and expectations of higher education (Conley, 2007). Approximately 50% of those who enroll each year at the target university, where this study was conducted and where students who completed the survey attend, are first-generation students. The 2008 retention rate for students who were enrolled on a full-time basis at this university was 69% (U.S. Department of Education, 2009).

The target university involved in this study is committed to expanding its recruiting efforts, improving the transitional experience to higher education for first-year students and increasing retention rates. The researcher is currently employed as an academic administrator at the university. A current understanding of the influence of environmental factors and support structures on students' pursuit of a college education

may guide the processes of 1) improving recruiting strategies; and 2) identifying interventions that can positively influence transitional experiences and retention rates of first-year students.

Professionals working with students in secondary schools and at institutions of higher education can benefit from becoming sensitive to factors which might influence first-generation students, in a deliberate effort to provide necessary guidance and support. Educators sometimes assume that the level of influence from a specific factor, such as secondary school support, will later prove to be more influential than another factor. This study is significant to the body of literature regarding first-generation students as it helps to clarify the degree to which first-year, first-generation college students and first-year students from college-educated families perceive their decision to pursue a college education to be influenced by these various factors.

Null Hypotheses

The null hypotheses of this study assert:

Null Hypothesis One: There will be no significant difference between first-year, first-generation college students and first-year college students from college-educated families in relation to the perceived *influence of family* on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire*.

Null Hypothesis Two: There will be no significant difference between first-year, first-generation college students and first-year college students from college-educated families in the relation to the perceived *influence of secondary school support* on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire*.

Null Hypothesis Three: There will be no significant difference between first-year, first-generation college students and first-year college students from college-educated families in the relation to the perceived *influence of peers* on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire*.

Null Hypothesis Four: There will be no significant difference between first-year, first-generation college students and first-year college students from college-educated families in the relation to the perceived influence of *preparation for college* on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire*.

Null Hypothesis Five: There will be no significant difference between first-year, first-generation college students and first-year college students from college-educated families in the relation to the perceived *influence of their awareness and access to financial aid* on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire*.

Null Hypothesis Six: There will be no significant difference between first-year, first-generation college students and first-year college students from college-educated families in the relation to the perceived *influence of relative functionalism* of a college education on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire*.

Hossler and Gallagher's (1987) model of college choice was applied as a theoretical framework to examine six factors influencing the pursuit of higher education for first-year, first-generation college students in comparison to first-year, continuing-generation students. More specifically, this study sought to answer the following

research question: Are there differences in the perception of *family influence, secondary school support, peer influence, preparation for college, awareness and access to financial aid*, and *relative functionalism* between first-year, first-generation college students and first-year students from college-educated families? In order to examine whether these two groups of first-year students differed in their perceptions within each of these six categories, the revised 2009 version of *The Factors Influencing Pursuit of Higher Education (FIPHE) Questionnaire* was selected.

Overview of Methodology

A summary of the overview of the methodology used in this research study is provided below; however, a comprehensive description of methodology is outlined in chapter three.

Independent samples t-tests were used in this descriptive research study to reject or accept the six null hypotheses. McMillan and Wergin (2010) define descriptive research that analyzes survey results in the following manner: "Descriptive non-experimental research uses frequencies, percentages, averages, and other simple statistics to provide a description of the data collected." When descriptive research is used, the "nature of the sample and instrumentation are key to understanding the results. While descriptive investigations are particularly valuable when something is first researched, most non-experimental studies go beyond mere description to examine comparisons and relationships among variables" (p. 14).

Two survey instruments were completed by 348 first-year students at the target university. The demographic information survey developed by the researcher was used to determine how many students involved in this study would have first-generation status. The *Factors Influencing Pursuit of Higher Education (FIPHE) Questionnaire* was used

to identify the perceived factors which influenced first-year college student decisions to attend college. This instrument was selected because it specifically provided factor analysis for nine influential factors related to influencing the pursuit of higher education – six of which were used in the present study because they directly relate to the internal influential factors being analyzed in order to address the null hypotheses. These six categories were: *family influence, secondary school support, peer influence, preparation for college, awareness and access to financial aid,* and *relative functionalism*. Additionally, the instrument reported alpha (reliability) coefficients ranging from moderate (.66) to strong (.90) (Harris & Halpin, 2002).

Although all 92 questions on the survey instrument, *Factors Influencing Pursuit of Higher Education (FIPHE) Questionnaire*, were used, only six of the nine possible categories were included in the data reports once the data were analyzed for purposes of this specific study. The data for the categories of *sister's influence, glass ceiling*, and *self-appraisal* were not included because the other six themes showed more salience and appeared more often in the literature (St. John & Somers, 1993; Valadez, 1998; Maduakolam, 2000; Thayer, 2000; Choy, 2001; Gandara, 2001; Samarge, 2006; Stewart, Stewart, & Simons, 2007; Conley, 2008; Jenkins, Miyazaki, & Janosik, 2009).

The two survey instruments were distributed to students in each of the first-year, second-semester English classes at the target university. Students were invited to sign a Consent for Research form indicating their willingness to participate in the study. Standard directions were given including an explanation of the research. The researcher collected all surveys and analyzed the data using independent samples t-tests. The means and standard deviations were identified for each of the six perceived factors. Contingency coefficients were used to explore the relationship between first-year, first-generation

college students and first-year college students from college-educated families regarding each of the six factors influencing their pursuit of higher education.

Significance of the Study

In recent decades, a college education has become necessary even for many entry-level jobs (Higher Education Enrollment, 2003; Great Maine Schools Project, 2009), as technological advances have added value to intellectual ability and specialized domain knowledge. The United States government established mechanisms for providing the financial support to high school graduates for whom a college education had not been an affordable option. As a result, more first-generation college students are now pursuing post-secondary degrees and encountering challenges their peers may not face (Tym, McMillion, Barone, & Webster, 2004). Research studies have focused on ways in which these students differ from their peers as they enter the college arena (such as Piorkowski, 1983; Phelan, Davidson, & Cao, 1991; Choy, Horn, Nunex, & Chen, 2000; Xianglei, 2005; Attewell, Lavin, Domina, & Levey, 2006; Saenz, Hurtado, Barera, Wolf, & Yeung, 2007; Conley, 2007; Engle, 2007; Orbe, 2008). Fewer studies, however, have explored the factors that influence first-generation college students' pursuit of a college education (such as Bui, 2002; Valadez, 2008).

Despite the fact that more students are now pursuing a college education, the attrition rate for first-generation college students tends to be higher than for students from college-educated families (Thayer, 2000; Choy, 2001; Somers, Woodhouse, & Cofer, 2004). The expectations, family encouragement, and financial support may exist (Hossler & Stage, 1992; Ceja, 2006); yet, these students may struggle to navigate the nuances of college study and campus life (Phelan, Davidson, & Cao, 1991; Hsaio, 1992; Tym, McMillion, Barone, & Webster, 2004; Orbe, 2008). They often express personal doubts

about their academic abilities and motivation (Mitchell, 1997); demonstrate lower levels of institutional connectedness (Astin, 1984); and struggle to integrate themselves academically and socially (Tinto, 1993) into their college community.

Payne (2005) asserts that individuals from each socioeconomic group demonstrate beliefs, values, and behaviors embraced by others in their socioeconomic group. She concludes that those living in poverty often value entertainment and relationships over education. Those from middle class and wealthy groups tend to encourage creativity and cultivate an environment that nourishes a natural curiosity and learning; high expectations often permeate the middle-class home. Because a higher percentage of first-generation college students come from lower socioeconomic groups (Choy, 2001), one might assume a connection between the conditions described by Payne and the experiences of the first-generation college student. Students from low socioeconomic backgrounds are considered to be at a disadvantage in many ways, but college can act as a variable that allows for upward socioeconomic mobility (Pratt & Skaggs, 1989).

Definitions

The following definitions of terms apply throughout this study:

Continuing-Generation Student – Student who has at least one parent who has earned a post-secondary degree (Engle, 2007)

Financial Aid - Any form of formal financial support awarded to college students to help pay for tuition or living expenses, including student loans, grants, scholarships, or work-study programs (Lindsay, 2004; Basko, 2005)

First-Generation Family– Network of grandparents, parents, and siblings in which one of its members is in the process of becoming the first to pursue a college education;

concept of "family" includes all close relatives who may exert influence upon the college-going individual (Great Maine Schools Project, 2009)

First-Generation Student – A student whose grandparents and parents have not yet earned a post-secondary degree (Engle, 2007; Great Maine Schools Project, 2009)

Peers –Individuals of equal standing who spend time together during or after school, including close friendships, siblings, acquaintances, classmates, teammates, and neighborhood youths during the elementary and secondary grades and/or college (Parke & Ladd, 1992); influence extends to unwritten rules, norms, beliefs, and attitudes of the peer group (Radziwon, 2003)

Post-Secondary Degree – An award conferred by a college or university as official recognition of successful completion of the requirements of a predetermined program of study (U.S. Department of Education, n.d.)

Relative Functionalism – A student's perceived usefulness of a specific life choice, such as attaining a college education, compared with other available options (Harris & Halpin, 2002)

Secondary School Support – The level of encouragement students receive from secondary school personnel, such as teachers and guidance counselors (Harris & Halpin, 2002)

Secondary Academic Preparation – An individual's general preparation for college in academic subject areas (Harris & Halpin, 2002)

Target University – The university where the study is being conducted and where students who completed the survey attended

CHAPTER 2: REVIEW OF LITERATURE

Challenges for First-Generation College Students

First-generation college students are said to "embody the realization of social mobility"; they break a pattern of "intergenerational inheritance of educational level," which is not easy to achieve (Gofen, 2009, p. 104). Most often, children of parents who did not attend college are also likely to obtain a minimal level of education (Choy, 2001). Those who seek to change this pattern may experience more complicated transition issues than continuing-generation students during the high school-to-college transition (Nunez & Cuccaro-Alamin, 1998; Choy, Horn, Nunez, & Chen, 2000). Overcoming such obstacles is critical in order for students to persevere from enrollment through graduation.

The decision to pursue a college education is a complex topic of study with multiple factors to consider. A statistical examination of youth from low-income families indicates that a mere 60% are graduating from high schools, only one in three will enroll in college, and one in seven can expect ultimately to obtain a bachelor's degree (Bedsworth, Colby, & Doctor, 2006). Research also indicates that low-income, often first-generation (Cabrera & La Nasa, 2001; Choy, 2001) families feel ill-equipped to provide advice to their children (Center for Higher Education Policy Analysis, 2007); are more reliant upon the school to properly prepare their children (Hsiao, 1992); and are more likely to have their children enroll in remedial college coursework (Conley, 2007). They may even be less optimistic in believing their children have the ability to try pursuing higher education, which, in turn, may influence parenting behaviors that reduce opportunity (Duncan, Brooks, Gunn, Yeung, & Smith, 1998).

"Access to higher education is increasingly difficult for lower-income families; yet a college degree is more important than ever in today's global economy" (Zuekle, 2008, para. 2). By the year 2020, the United States may encounter a shortage of up to 14 million workers who possess college-level skills; some postsecondary education is a prerequisite for 22 of the 30 fastest-growing career fields (Zuekle, 2008).

The amount of saving for college is associated with parents' own socioeconomic status. Miller (1997) noted that two-thirds of low-income parents had saved little – 10 percent or less of the total college educational costs. She also found that most low-income parents expected to finance college education through financial aid instead of through their own resources. Reliance on financial aid varied in direct proportion to family income. Low-income parents were more likely to expect to go into debt to finance their children's college education than were upper-income parents (65 percent versus 40 percent). The U.S. Department of Education examined the financial preparation of the parents of students in grades six to twelve; while 81% of families with a household income of over $75,000 believed they had enough information about college costs to begin planning, only 49% of families with a household income of under $25,000 felt prepared (Schmidt, 2008).

Warburton, Bugarin, and Nunez (2001) found that college-entrance examinations are taken less often by first-generation students and, where taken, appear to pose greater difficulty to them. Of those who completed an exam, 40% of first-generation students in their study scored in the lowest quartile, compared with 15% of students from college-educated families.

First-generation college student status is found to occupy "a central place in one's sense of self, especially as it occurs on college campuses when the majority of the student

population is presumed to come from more-educated families" (Orbe, 2008, p. 87). Fitting into the category of first-generation college student may carry a negative connotation. Publicizing this attribute can worry some students, who fear being perceived as "ill-prepared for college-level academics, without substantial educational aspirations, socially or communicatively inept, and less committed to participating fully in the learning process" (Orbe, 2008, p. 92). Institutions of higher education are places laden with class-inflicted perspectives, and the inherently-important higher-class ideals of empowerment and prestige can themselves intimidate first-generation students (Casey, 2005).

Lubrano coined the term "straddlers" for those who have a blue-collar heritage, having "one foot in the working class, the other in the middle class…at home in neither worlds, living a limbo life" (p. 8). Tension can mount between them and their families at home as their new attitudes and ideas, styles of clothing, political views, and interests clash with the values and beliefs they previously-espoused (London, 1996). Even their love and allegiance to the family can come into question. Students are in a constant state of negotiating between their two "worlds" as they experience the passage into the middle class (London, 1996).

An analysis of socioeconomic status may be especially relevant when considering first-generation, low-income students' perceptions of themselves and their abilities. In a qualitative study involving secondary students conducted by Bratlinger (1993), these were the students who were more willing to accept unflattering descriptions of themselves, including retarded, disturbed, unintelligent, or low-track, which appeared to contribute to their willingness to accept humiliating, boring, and repetitive daily routines that would decrease their chances of achieving honorable personal goals. These

perceptions had been internalized as they did not question their standing as subordinate in relation to their peers. A sense of vulnerability, rather than confidence, was commonly the nature of their relationship with teachers. Although many students in Bratlinger's (1993) study reported a desire to pursue college, they believed college work would be too difficult for them. "Attributing failure to a lack of ability implies that success is not possible in the future, while attributions to insufficient effort intimate that instrumental action can be undertaken which will lead to goal attainment" (Weiner & Kukla, 1970, p. 4).

A teacher's informal collection of years of student opinions about why the poor are poor offered some striking revelations (Books, 1996). Students frequently referenced welfare and thus equated poverty with cheating, crime, violence, and drugs. They distinguished between "deserving" and "undeserving" poor; rural areas were associated with deserving poor and urban areas were considered to be the locations of the undeserving poor – those who accepted handouts and failed to support themselves.

Integration within the college community can be a complicated and sometimes daunting experience for many college freshmen, but first-generation students perceive the college environment as being less supportive of them than for continuing-generation students (Pike & Kuh, 2005). Lower educational aspirations and living off campus relate to lower levels of engagement during the first year of college (Nunez & Cuccaro-Alamin, 1998), and first-generation students often fall into one or both of these categories (Choy, 2001). They fear the prospect of failing more than students whose parents attended college (Bui, 2002) and sense the need to commit more time and energy to studying, feeling less-prepared for various facets of the college experience (Oliverez &

Tierney, 2005). First-generation students usually shy away from asking questions or seeking assistance from college faculty members (Jenkins, Miyazaki, & Janosik, 2009).

A recent ACT policy report (Lotkrowski, Bobbins, & Noeth, 2004) discussed the direct positive correlation between college persistence and a student's level of financial support, networking, institutional fit, and social involvement. First-generation students often have weaker family and peer support systems and a sense of belonging in their institution, referred to as "institutional fit" (Tinto, 1993). This sense of belonging can lead to greater academic success (Gandara & Bial, 2001), but a failure to securely bond with an institution can push away individuals who are already unsure of whether postsecondary aspirations are right for them (Tinto, 1993).

The collision between the worlds of college and of home and family must be understood by institutions as lower-income students become more prevalent (Howard & Levine, 2004); they may have a minimal sense of belonging to either their new college community or to their home community. Howard and Levine (2004) advocate for college-based counselors to be available to address the range of emotions that are experienced, the colloquialisms or language differences, and the location of relevant resources that might be helpful. The first year, and more poignantly the first few weeks (Tinto, 1988), are of utmost importance in helping college students integrate into the institutional community (Low, 2000). Student satisfaction with the first taste of college improves the rate of retention (Low, 2000).

To increase retention of first-generation students, relevant programming, such as first-year experiences, must be ingrained within the institution's structure and must willingly recognize individual variations and needs (Tinto, 1988). Otherwise, many students experiencing the most difficulty may simply decide not to participate to program

offerings (Baker & Nisenbaum, 1979). Heisserer and Parette (2002) looked into the retention of at-risk students and declared that the "single most important factor" for retention of these students is advising them on a regular basis, thereby showing them they are "cared for" by the college and increasing their sense of institutional fit.

Kuh, Kinzie, Schuh, Whitt, and Associates (2005) espoused recommendations for institutions based on their study of colleges and universities which had been recognized for their innovative approaches to student learning, involvement, and overall engagement. They noted the importance of sharing responsibility for student success and believed it should be the priority of all faculty members in order to create an atmosphere of encouragement and support for student engagement and their active involvement in college life. Specifically, these authors discovered that colleges and universities that led in student academic success and first-year transition remained focused upon their vision and mission statement. At all faculty levels, student engagement, success, and involvement were often discussed with the goal of assisting students in making meaning out of their college experience. These colleges and universities enjoyed the payoff of increased student commitment to the institution, an area that is often lacking for first-generation students (Tinto, 1988; Howard & Levine, 2004).

Though there are many hurdles, the most common challenges attributed to first-generation students are: applying academic behaviors and trying to simultaneously meet the expectations of family and faculty (Snell, 2008). In particular, Snell has expressed concerns about reading discrepancies which she believes "indicate a cross-cultural gap between faculty, who generally read literature for pleasure, and their students, who read less and less and generally do not read literature for pleasure" (p. 31). Due to this gap, the

very intellectual practice of engaged reading that is required by faculty may prove to be a pre-existing area of weakness.

Xianglei (2005) used high school transcript data and determined that first-generation students were less likely to enter college with adequate academic preparation. Students in this study had completed less advanced math courses, had lower entrance exam scores, and produced lower achievement test scores. As a result, 55% of first-generation students' college transcripts showed that they completed remedial coursework compared with 27% of students whose parents completed college.

Additionally, freshmen first-generation college students are less likely to have made a decision about their major (Xianglei, 2005); thirty-three percent were declared "undecided," compared with 13% of students from college-educated families. Those first-generation students who had decided on a chosen major were more likely to have selected a vocational or technical field rather than a "higher-skill" field with higher income-earning potential. Xianglei also noted that during the first two semesters of postsecondary education, continuing-generation students completed a more rigorous course load, with an average of 25 credits compared with 18 credits for first-generation students, who often must balance the need to work part-time while attending college. Earning fewer credits during the freshman year is associated with the need for extra semesters to complete a degree and with a higher risk for abandoning the notion of college graduation altogether (Attewell, Lavin, Domina, & Levey, 2006). First-generation students earned slightly lower overall grade point averages than their counterparts – 2.5 versus 2.8, and they were more likely to withdraw from or repeat courses (Xianglei, 2005).

Although income is often cited, income alone does not provide a definitive index of the total resources available to a particular student (Adelman, 1999). Coleman (1988)

describes the concept of social capital as the complete picture of resources that are obtainable within the family and community's social structure. This would extend beyond a family's annual income and include social networks, norms, and interpersonal relationships, as they, too, contribute to one's attainment and personal development. Bourdieu's (1977) interpretation of social – and cultural - capital would also include the attitudes, competencies, behaviors, and inclinations that are associated with a particular rung of the socioeconomic ladder. Socioeconomic status implies the measures of social and cultural capital, along with actual household income (Terenzini, Cabrera, & Bernal, 2001).

Influence of Family

The home setting is a particularly rich and ongoing source of information for college-educated families (McDonough, 1997). Numerous studies conclude that the influence of family greatly affects the future educational aspiration of students (McDonough, 1997; Jun & Colyar, 2001; Plank & Jordan, 2001; Gandara, 2002). Schneider & Stevenson (1999) report in their findings that parents not only motivate students to achieve their educational aspirations but they also assist them in "strategically organizing and managing their lives around educational and occupational opportunities to reach their ambitions" (p. 141). Many studies have connected parent support and encouragement to college plans (Conklin & Dailey, 1981; Ekstrom, 1985; Hossler & Stage, 1992). For families to be informational resources, they must be able to provide information which is gained through personal experiences or as in the case of some minority groups, through secondary knowledge about educational experiences and resources (Schneider & Stevenson, 1999). Family members not only offer verbal encouragement, but also provide tangible support, which may include: arranging for

college visitations, saving money for tuition, guiding the completion of applications and other forms, gathering information from college programs, and attending financial aid workshops (National Postsecondary Education Cooperative, 2007).

Maintaining high parental expectations is influenced by a variety of socioeconomic factors (Terenzini, Cabrera, & Bernal, 2001). The ability and gender of the high school student seem to mediate these expectations. Occupational attainment research indicated that parents provide the most encouragement to the child who portrayed the apparent highest academic ability (Hossler, Braxton, & Coopersmith, 1989). Stage and Hossler (1989) ascertained that single parents and parents with children already in college were less likely to develop high expectations for the child, particularly when the child is female.

Regardless of ethnicity or socioeconomic status, high-achieving children typically have parents who have provided motivations, expectations, and a home environment conducive to learning (Bempechat, 1998; Payne, 2005). Research might suggest that parental encouragement comprises two dimensions. The first deals with motivation: Parents maintain high educational expectations for their children and talk with them about their college plans (Stage & Hossler, 1989). The second dimension is tangible and proactive; parents plan and cumulatively save for college (Flint, 1993; Hossler & Vesper, 1993).

Students from first-generation families - the network of grandparents, parents, and siblings in which one of its members is in the process of becoming the first to pursue a college education - may receive strong parental encouragement regarding college, yet have limited means of support. College-educated parents tend to be more knowledgeable than low-income parents regarding financial aid, and this not only entails the different

types of financial aid programs available, but also the qualification criteria (Olson, & Rosenfeld, 1984). Parents' understanding of available options increased the most when they employed a variety of information-seeking strategies, including consulting with high school guidance counselors and bank loan officers, as well as perusing a variety of pamphlets and books about college financing. Leslie, Johnson, and Carlson (1977) similarly found that higher-SES parents access a variety of information sources, including other parents, students, catalogs, college representatives, and even private guidance counselors. Contrastingly, low-SES students became more reliant upon high school counselors as the single most consulted source of information about college (Leslie, Johnson, & Carlson, 1977). When parents lack firsthand "college knowledge" and have limited financial and social resources, they consequently have a lessened capacity to facilitate college planning (Thayer, 2000; Choy, 2001; Oliverez & Tierney, 2005; Ceja, 2006).

King (1996) discovered that parental encouragement was a deciding factor in postsecondary plans among a sample of 1995 low-income secondary students who had completed the SAT. Unsure of whether their fathers were pleased with their postsecondary plans, the low-income seniors were less likely than the higher-income peers within their cohort to fulfill aspirations to attend a public four-year college or university. Their children can become more reliant upon the advice they receive from guidance counselors, unsolicited college marketing materials, college fairs, or information they specifically requested from colleges (National Postsecondary Education Cooperative, 2007).

Hossler, Schmit, and Vesper (1999, p. 24) define parental encouragement as "the frequency of discussions between parents and students about parents' expectations,

hopes, and dreams for their children." Parents' ability to mold initial thinking and aspirations for a college degree tends to be most salient during the early predisposition phase (Hossler & Stage, 1992). This implies that academic achievement goals are forming well before high school.

Parental ability to effectively plan for their children's college education also seems depend upon their own collegiate financial experiences. Flint (1993) documented an intergenerational effect in which parents' plans of financing their children's college education were shaped by the specific strategies parents themselves employed when financing their own undergraduate education.

Other sources of information tend to replace parents and become more influential during later stages; yet, parents remain the key source of encouragement and guidance during the entire college choice process (Davies & Kandel, 1981; Ceja, 2006; NPEC, 2007). During this sequence, there appears to be a mutually-reinforcing influence between the parent(s) and child, as parental encouragement propels student achievement, and further student achievement earns additional encouragement and the expectation of higher career aspirations (NPEC, 2007).

Quality, not quantity, of involvement makes the difference for high-achieving students, according to a study by Bempechat (1998). High achievers overwhelmingly have a more internal locus of control, sensing they have some personal control over their own learning experiences. However, lower achievers perceive their parents' involvement in a more negative light, interpreting it as intrusive and intense (Bempechat, 1998).

Encouragement and support from parents, parents' educational attainment, and student achievement have been described as the strongest predictors of postsecondary aspirations and college enrollment (NPEC, 2007). Differences across socioeconomic

levels were also identified in how the process of how postsecondary decisions had unfolded for students. In a finding that coincides with later research (McDonough et al., 2000; Jun & Colyar, 2001; Plank & Jordan; 2001; Gandara, 2002), highest SES-quartile students in a study by Adelman (1999) were nearly one-third more likely than lower-SES-quartile students to make the college decision in conjunction with their parents, whereas the lowest-SES students more commonly made this important decision independently of their families. Although many individuals can impact a student's decision about college over time, parents have the unique potential to influence positively and directly their children's educational goals (Bers & Galowich, 2002; Ceja, 2006), regardless of their own educational attainment (Horn & Nunez, 2000).

Students whose parents did not attend college have been thought to perceive their parents and siblings as being less supportive in their quest to become a college graduate (Hsaio, 1992; Thayer, 2000). However, a more recent look at the complexion of first-generation college families reveals a growing trend in which students commonly identify parental encouragement as a primary reason for actually deciding to attend college (Saenz, Hurtado, Barrera, Wolf, & Yeung, 2007).

Influence of Secondary School Support

For those who cannot depend on parents eagerly disseminating college wisdom, school counselors, college recruiters, and teachers often begin their influence relatively late in the decision-making process (Hossler, Schmit, & Vesper, 1999). Students do report the desire for a quality high school counselor who might guide them through a process that seems daunting, complicated, and time-consuming (Maduakolam, 2000). Readily-accessible, early, deliberate forms of support over the span of multiple years can increase the confidence of families who may otherwise shy away from the college

experience. “Counselors are in a good position to operate as impartial advisors committed to the students' best interests, rather than as sales agents for any specific institution in influencing students' college decisions” (Chapman & DeMasi, 1991, para. 26).

Although some students are more limited in their access to available sources of information, having a high-school-based academic resource upon which to rely seems to level the playing field (King, 1996). Consulting with a school counselor about postsecondary plans increases the likelihood that a student will aspire to college. Berkner and Chaves (1997) go a step further and point out that lower-SES students with more poignant academic qualifications were more likely to consult a school counselor in the first place, and they are viewed more favorably by high school personnel as likely college candidates.

Hossler, Schmidt, and Vesper (1999) report that only 35 percent of high school students they surveyed ultimately attended one of the colleges they had been considering during their tenth grade. Yet, 52 percent attended a college they were seriously considering during their junior year. “These figures suggest that students make the largest shift toward certainty during their junior year, so this year, when students are most open to options, may be the most opportune time to influence the consideration set” (Hossler, Schmidt, & Vesper, 1999, p. 113). These researchers also found that college aspirations tend to remain stable or increase from the sophomore to the junior year. This has implications for school counselors who may need to focus their college-planning efforts to a particular frame of time during a student’s high school career.

Despite the belief held by many in education that guidance counselors should assume primary responsibility for increasing college attendance among high school graduates, “in a conference devoted to counseling and career planning in high schools,

several counseling practitioners lamented the difficulties associated with assisting students in career planning" (Maduakolam, 2000, p. 1). In the Maduakolam study (2000), most low-income students did not believe their guidance counselor was helpful in motivating or preparing them for college. In fact, many were not sure if their school even had a guidance counselor. Unfortunately, guidance counselors have large caseloads and multifaceted responsibilities, only one of which is to act as facilitator of the college planning process (National Association for College Admission Counseling, 2006). Yet, when guidance counselors are consistently and frequently available to provide direct services, they genuinely impact student aspirations, preparations, and knowledge of financial aid (NACAC, 2006).

Parents' discussions with counselors are a significant step toward eventual college attendance, which highlights the benefits of cultivating early positive parent-counselor relationships (Bryan, Holcomb-McCoy, Moore-Thomas, & Day-Vines, 2009). Students whose parents contact a counselor are more likely to have also contacted the counselor themselves. Chapman and DeMasi (1991) urge parents and school counselors to collaborate in the college advisement process. Parents alone may not have the most current and comprehensive knowledge about college opportunities, but when parents and counselors work together, they can offer more consistent advice to students and initiate college planning well before college recruiters are involved in students' lives.

Teachers also influence students' beliefs about college and stimulate interest in new fields of study. They acknowledge individual students' potential and talents through their interactions with students (Samarge, 2006). College talk is an important vehicle by which teachers can inform students about preparation for college and nuances of the college experience. Teachers have the power to communicate expectations for college,

and students respond to teachers' beliefs about their potential. College readiness is becoming an area in which high school faculty are encouraged to influence students who are not yet college-ready by addressing "weaknesses in the overall high school curriculum" and to "help students target areas of academic weakness" (Campbell, 2005, p. 102).

Renchler (1992) believed the faculty's creation of a strong secondary school culture could, indeed, influence student achievement and the desire to pursue college upon graduation. Other researchers have reinforced this point (i.e. Hoy & Miskel, 2005; Bandura, 1997) in describing how a positive school culture demonstrated significant effects on enhancing student achievement, augmenting student confidence to finish high school, and strengthening student efficacy about their own potential for success if they chose to matriculate to college. These researchers emphasized the overarching role of the school administrators in shaping the dynamics of the school culture. In fact, models of positive school cultures hold the potential to transform and even replace negative ones (Deal & Peterson, 1999).

The degree to which secondary teachers collectively feel efficacious may be regulated by school culture, and this may affect their beliefs about whether or not they have the ability to enhance their students' achievement and encourage them to complete high school and pursue college (Bandura, 1993). Bandura (1993) proclaimed that high collective teacher efficacy – evidence of a positive school culture – could actually override the effects of socioeconomic status upon student achievement.

Influence of Peers

Research has found that adolescents' peer relationships are related to their educational attainment outcomes, however, to a lesser degree than parents' relationships

(Steinberg, Brown, Cider, Kaczmark, and Laaro, 1998). Further research has suggested that students who spend a great deal of their time with peers form aspirations and values based on the manner in which peer groups define success (MacLeod,1995).

Peer influence is dependent upon variables of friendship closeness, high school track placement, race, and gender composition of the relationship (Hallinan & Williams, 1990). Intuition reinforces the finding that peers who are academically-oriented are an asset to academic achievement in school and career aspirations (Garg, Melancson, & Levin, 1992). Not surprisingly, as students enter the college environment, "students who have best friends with relatively high levels of intellectual self-confidence tend to be more self-confident intellectually after two years of college compared to students with less confident friendship groups" (Antonio, 2004, p. 457).

Young people are more vulnerable to the influence of close friends who share similar experiences and backgrounds (Hallinan & Williams, 1990, p. 130). Very few friends admit to talking about future plans or sharing school-related information with peers (Gandara, 2001). "Peer influence may be strong in many areas of life," concludes Cohen; however, "peer influence on college aspirations is quite a weak effect" (1983, p. 733). Choy and Premo (1996) found that the strongest predictors of degree attainment (or remaining enrolled after four years) were: being female, having parents with a bachelor's degree or higher, receiving parental contributions to one's education, and having taken out a loan in at least one year of one's college tenure.

A specific exception may be low-income, urban youths, particularly those in concentrated impoverished neighborhoods (Stewart, Stewart, & Simons, 2007); peer influence for these youth appears to be the most influential factor in the decision about college, even when controlling for variables that may affect post-high school decisions

(Sokatch, 2006). In a study among the lower socioeconomic black and Hispanic youths, peer support for postsecondary aspirations increased likely enrollment by 60%. Among the general high school population, however, students "show an increasing reliance on parents and family members in shaping their postsecondary aspirations as the years progress" (Gandara, 2001, para. 33).

Influence of Preparation for College

There are five sequential steps in the typical "pipeline to college" (Choy, Horn, Nunez, & Chen, 2000). Students should: 1) aspire to attaining a bachelor's degree early enough to make necessary preparations; 2) prepare academically to ensure qualification; 3) take examinations for admission; 4) apply to a four-year college; and 5) receive acknowledgment of acceptance and enroll. Many students who otherwise have the potential for graduating with a bachelor's degree are lost at some point along this pipeline. Students need current, realistic information about the array of postsecondary options and their individual likelihood for success in particular fields (Valadez, 1998). "The likelihood that students will make a successful transition to the college environment is often a function of their readiness – the degree to which previous educational and personal experiences have equipped them for the expectations and demands they will encounter in college" (Conley, 2008, p. 24).

Pre-collegiate academic preparation is an essential focus for first-generation students during the middle grades (Engle, 2007). Information about college is recommended by at least grade eight in order for students to make appropriate high school course decisions and to develop solid postsecondary aspirations (McDonough, 2004). Academic habits ingrained before and during the high school years and a student's accomplishments have a major impact on college success not only for first-generation

students, but for all college students (Wyer, 2005). Research reveals that most students who advance to college are not fully prepared, having limited knowledge of how colleges operate and how to navigate the demanding expectations (Education Resources Institute and the Institute for Higher Education Policy, 1997; Adelman, 1999; Attewell, Lavin, Domina, & Levey, 2006; Conley, 2007).

Preparation for college must involve the dimensions of academic preparation, emotional preparation, and cultural preparation (Robinson, 1996). Without preparation in these areas, students – particularly first-generation students (Choy, 2001) – are categorized as "at risk" of failing to complete the program in which they enroll. Robinson (1996) would delineate the dimensions by describing that academic under-preparation involves low high school grade point averages, selection of more basic coursework during high school, or dealing with an untreated learning disability (Robinson, 1996). Emotional under-preparation can involve low self-esteem about oneself or one's skills, problems in their personal lives, or substance abuse issues. Cultural under-preparation is a common factor for first-generation students and implies a situation of coming from a low-income family, a family that places low value on education or believes it is unattainable, or perhaps from a family that represents a minority culture.

When students advance to college, they often find that social and cultural expectations about performance and about learning in general can be quite different from those of high school (Conley, 2007). While completing coursework, they encounter a disparity between the extent of teacher leniency, as well as required independent assignments and thinking skills for reading, report-writing, projects, presentations, and studying. High school course titles may have been completed with good grades, satisfying admissions requirements; yet the rigor may not imply readiness for the general

education courses in which they will be enrolled during their first year in college – courses such as biology, algebra, or literature. Conley's (2007, p. 10) review of research also concluded that "a 'B' average in high school now may reflect knowledge and skills equivalent to something more like a 'C' average thirty years ago." "The phenomenon of giving increasing percentages of students credit for courses whose content they have not learned may be labeled 'course credit inflation' by analogy with the concept of grade inflation" (Dougherty et al., 2006).

Adelman (1999) concluded that the rigor of a student's high school curriculum can better predict the likelihood of college graduation than either high school grades or test scores. The rigor of a student's high school curriculum was strongly associated with the extent of remedial coursework, rates of persistence and attainment, and post-secondary GPA (Warburton, Bugarin, & Nunez, 2001). Students who had completed a more demanding series of coursework, such as four years of English and mathematics beyond Algebra II, graduated from college at very high rates (Adelman, 1999). Only 9% of first-generation college students complete a rigorous high school curriculum, compared with 20% of continuing-generation students. Specifically, first-generation students were found to be less likely to have taken calculus in high school, and they were less likely to report taking advanced placement tests.

Similar findings from Planty, Bozick, & Ingels, (2006) augment the literature by focusing on minority and poor students. Fewer minority and poor high school graduates had completed math credits beyond Algebra II and science course credits beyond general biology. Planty, Bozick, and Ingels' study (2006) revealed that only 16% of the lowest socioeconomic quartile complete AP courses, compared with 51% of students from the highest quartile. As a result of weakened pre-college academic preparation, 55% of first-

generation students' college transcripts reveal that they completed remedial course work, compared with 27% of students whose parents completed college. Certain gatekeeper courses ultimately can determine students' educational qualifications for college, and students need to understand this variable early in their scholastic career (Samarge, 2006).

Students who had earned college credits during high school were more likely to enroll in college, performed better in their first-year coursework, and were more likely to graduate than peers who had not (Lerner & Brand, 2006). To increase college and workplace readiness, Dougherty, Mellor, and Jian (2006) advocate the strategy of enrolling more students in advanced and college-preparatory courses while in high school.

This advice was reinforced by the College Board's findings that students who had participated in its Advanced Placement (AP) courses had greater college success. It might stand to reason that first-generation students should not be overlooked as AP class candidates and should be encouraged to consider these courses if they are capable and motivated (Samarge, 2006; Conley, 2007). These courses allow for a more seamless transition from the high school environment to the postsecondary environment, as AP course expectations are very similar to those of professors of college courses (Conley, 2007). All 50 states currently offer incentives for students to complete dual enrollment courses or Advanced Placement courses (College Board, 2005).

For the first-generation, college-bound high school student, parents are depending on signals from the school regarding readiness for college, as they may have no personal gauge for making this assertion on their own (Conley, 2007). This may include grades, test scores, and comments from guidance counselors and teachers. If these signals are unclear or inaccurate measures of readiness, these students are more likely to end up in

remedial coursework, decide to drop out of college, or take longer to graduate. First-generation college students may already face challenges that are culturally-based and less reversible by the age of 18 or 19, at the time when they would begin a college program (Somers, Woodhouse, & Cofer, 2004). Dissonance results when the worlds of home and postsecondary education collide due to the incongruence of values (Phelan, Davidson, & Cao, 1991). They are often unprepared for what will be expected of them in colleges and lack an understanding of how colleges operate (Conley, 2007).

Some researchers strongly advocate academic support strategies that may help strengthen otherwise poor student achievement and promote continuous enrollment (Finn, 1989; Hammond et al., 2007). They urge institutions to incorporate or maintain dropout prevention services, such as mentoring, tutoring, mixed ability classes, scaffolding, test preparation, cooperative learning , inquiry-based instruction, and academic summer camps. However, researchers' opinions are mixed; Roueche and Roueche (1993, p. 41) noted that "institutions of higher education have literally been in the business of remediation for more than 150 years." Colleges have created complex intervention systems to address the issue of underprepared college students by providing ways for them to learn or relearn skills they should have learned well before their freshman college year (Campbell, 2005; Attewell, Lavin, Domina, & Levey, 2006). They often offer "more of the same" instruction they had already been receiving for several years (Grubb, 2001). In a study in which high school students were exposed to the content and demands of a college course, 30% of even those deemed "exceptional" could not earn at least the grade of a "C" average, and all students reported that the course was "slightly more difficult" or "significantly more difficult" than their high school classes (Campbell, 2005).

A more current concept of college readiness is focused on "preparing students to succeed in college-level work rather than fulfilling basic eligibility requirements that are primarily course- and grade-based" (Cline, Bissell, Hatnet, & Katz, 2007, p. 30). High schools and colleges must work to bridge the gaps between what it means to be "college-eligible" and "college-ready" (Conley, 2008) and to better align standards, assessments, data systems, and expectations (Thomas, 2008). From their study of school support systems, Bedsworth, Colby, and Doctor (2006) concluded that by ensuring student preparation for the academic rigors of college, educators were providing "the most effective means of increasing the odds that students graduate from high school ready for college, matriculate, and eventually receive their degrees" (p. 3).

Influence of Awareness and Access to Financial Aid

First-generation college students are more likely to face financial problems and come from homes with household incomes that are significantly lower than those of non-first-generation students (Jenkins, Miyazaki, & Janosik, 2009). As a result, their families have a greater tendency to worry about financial aspects of attending college (Bui, 2002). Unfortunately, first-generation families are often unsure about how to handle the process of acquiring post-secondary education financing (McDonough, 1997).

St. John, Paulsen, and Starkey (1996) found evidence of a negative relation between financial aid and persistence. More detailed analyses, however, suggested that this correlation possibly indicated that the financial aid factor was insufficient rather than ineffective. This finding was supported by the College Board (1999), which stated, "The share of family income required to pay college costs has increased for many families, but it has gone up the most for those on the bottom rungs of the economic ladder" (p. 5). Financial aid factors by themselves present only a partial view of the complex dynamics

which are at play through the intersections of socio-economic status, financial aid, and persistence (St. John, Paulsen, & Starkey, 1996). Many factors have an important interactive role in this process.

Some first-generation students may feel guilty about pursuing higher education while their families struggle financially (Piorkowski, 1983) and they may feel obligated to help meet the financial needs of their families while in college (Rendon, Justiz, & Resta, 1988). In fact, first-generation college students are more likely than continuing-generation college students to indicate their desire to later help out their families as a reason for pursuing a college education (Bui, 2002). Jenkins, Miyazaki, and Janosik (2009) encourage financial aid officers to consider policies that allocate scholarships and grants specifically for first-generation students whose families struggle with significant financial need.

Financial pressures can present barriers to the college enrollment process (Rendon, Justiz, & Resta, 1988). Perceptions regarding access to financial aid also shape postsecondary plans among low-income high school students. Leslie, Johnson, and Carlson (1977) found that low-income high school seniors were more likely to report availability of financial aid as a factor that was instrumental in their plans to attend college than were their more affluent counterparts. Likewise, King (1996) found that low-income students who anticipated receiving some form of financial aid were more likely to aspire to college than were the average low-income seniors.

Financial aid has more impact on eventual enrollment decisions than the cost of tuition (St. John & Somers, 1993). Research (Horn & Berktold, 1998) using data from the 1995-1996 National Post-Secondary Aid Study indicated that 79% of all undergraduate students enrolled in United States colleges and universities during this time frame

indicated they worked during their postsecondary experience. Half of the students reported working as a means of paying their tuition. These students considered themselves "Students Who Work," while 29% of students were primarily employees who were also taking classes and considered themselves to be "Employees Who Studied." The working-borrowing fiscal relationship for students poses a subtle, but potentially significant policy issue (Terenzini, Cabrera, & Berkal, 2001).

Horn & Berktold (1998) state: " While borrowing results in debt that must be repaid when students finish their postsecondary education, choosing to work intensively in lieu of any borrowing may increase a student's chance of not finishing his or her degree" (p.25). Because time is a finite commodity, the more hours a student works, the fewer hours students have available for school-related activities that affect both academic and social integration. This, in turn, has been associated not only with persistence and degree completion, but also with cognitive, psycho-social, and attitudinal and value change and development (Pascarella & Terenzini, 1991). Working 35 or more hours per week was found in a related study to have a negative impact on degree completion for college students (Cuccaro-Alamin & Choy, 1998). The degree of student employment was also identified by Horn & Berktold (1998) to be linked to persistence.

To offer an historical comparison, in the 1963-1964 academic period, total available financial aid assistance was $546 million, an amount that increased to $25.5 billion by the 1988-1989 year, a total which then included financial aid from federal, state, and institutional sources (Lewis, 1989). By 1999, this total amount rose to $64 billion being made available (College Board, 1999); during the 1990's alone, financial aid from all sources grew by 85%.

An institution's level of financial aid offered does positively impact the enrollment decisions of accepted college applicants. In a study by Braunstein, McGrath, and Pescatrice (1999), the probability of enrollment increased between 1.1% and 2.5% for every $1,000 increase in the financial aid offered. Low-income students tend to be more responsive to grants than to work study or student loans (St. John & Somers, 1993). “The availability of funds to meet tuition and other college-going expenses not only bears on a student's decision to attend college but also affects, to a great extent, the choice of college made by that student” (Nora, Barlow, & Crisp, 2006, p. 1636).

The availability of financial aid is also considered a pivotal predictor of degree completion, impacting the likelihood of persistence for low-income college students (Jing & Fenske, 2006). During college completion, greater proportions of first-generation students find it financially necessary to balance the demands of working 20 or more hours per week with the expectations of college coursework (Jenkins, Miyazaki, & Janosik, 2009).

Influence of Relative Functionalism – The Benefits of a College Education

America’s colleges and universities are responsible not only for educating students, but also for certifying them; indeed, a bachelor’s degree has been described as the passport to America’s middle class (Bowles & Gintis, 1976; Jencks & Riesman, 1968). “The institutions in which these students enroll are the gateways to their futures. More precisely, colleges and universities provide an array of opportunities, depending on the characteristics of the students who enter, the kinds of institutions they attend, how long they remain enrolled, how engaged they become in their education, the nonacademic demands made on them, and the nature of the experiences they have while enrolled. These gateways lead to an equally varied array of outcomes that help shape students’

future circumstances in a range of areas, including personal, financial, educational, intellectual, social, cultural, and civic areas" (Terenzini, Cabrera, & Bernal, 2001, p. 18).

Continuing-generation families tend to be strong proponents of a college education, and they realize the long-term impact of a college education. They share information about these benefits with their children, bolstered by their own sequence of personal and professional experiences (Coleman, 1988). Parents' own familiarity with college through direct experiences was proven to be an influential asset - regardless of their current socioeconomic status (Cabrera & La Nasa, 2001). Longwell-Grice's (2003) qualitative study revealed that first-generation students may view college differently; they may consider it to be a place where they prepare themselves for work – something to get out of the way instead of a possibly life-altering experience.

"The primary framework in economics of education is the human capital model. When deciding whether to continue their education, individuals compare the benefits of human capital to the costs of obtaining it" (Long, 2007, p. 2367). Students' educational aspirations can be influenced by their own reviews of their perceived academic abilities. Students who are confident in their academic abilities are usually more engaged in school and have increased educational aspirations. Alva (1991) found that "students' subjective appraisal of their preparation of college was most significantly influenced by their grade point average in secondary school" (p. 18). Grade point average and standardized test scores are two of the most commonly regarded forms for determining admissions in colleges and university across the country.

Students bring to college a wide range of personal, educational, and occupational goals, hopes, and expectations for themselves (Terenzini, Cabrera, & Bernal, 2001). While the variety of goals is extensive, and while the degree of importance attached

varies from goal to goal, the level of importance for any specific goal appears to be relatively invariant across socioeconomic status. For example, data (Pratt, Whittemore, Wine, et al., 1996) show that all students had similar levels of importance placed upon several of the suggested goals, such as: 1) becoming an authority in a given field; 2) being able to find steady work; 3) being a leader in the community; 4) influencing the political structure; 5) being successful in a given line of work; or 6) being well-off financially.

Society places weighted value on the educational attainment an individual has achieved, though individuals possess personal reasons for their academic aspirations. College-attending men and women in a study by Green and Hill (2003) indicated their primary reasons for pursuing a college degree. Their top reasons, regardless of gender, were to increase their chance of success in the workplace, to increase knowledge, and to make more money.

When Tuma and Geis (1995) examined labor market participation by socioeconomic status, they found that 1980 high school sophomores in the lowest SES quartile were less likely to be working 12 years later than were those in the middle two or highest-quartiles (79, 86, and 87 percent, respectively). Among bachelor's degree recipients, however, they found no statistically significant SES-related differences in employment rates. This, again, reinforces the benefits first-generation students gain upon obtaining a college degree. In a recent study by Schultz and Higbee (2007), 89% of students interviewed indicated their reasons as being either preparing for the world of work or acquiring knowledge. The relative functionalism of a college degree is clear; increased education is associated with higher income, prestige, better working conditions, and potential for promotion (Baum & Payea, 2005, p. 2).

College graduates will earn an average of $1,000,000 more over the course of their working lives than those with a high school diploma (Baum & Payea, 2005). Degree-holders also present an average lifetime savings to society of $209,000 per person (Levin, Belfield, Meunning, & Rouse, 2007). Purely economic benefits, though commonly referenced, are a small component of a larger realm of benefits to those who earn a college degree (Baum & Payea, 2005). Communities with more highly-educated residents experience social benefits; these advantages are a consequence of better employment opportunities, learned decision-making skills, and social relationships that are established (Maine Compact for Higher Education, 2007). Also, college graduates are more likely to work as a volunteer, donate blood, vote, and perceive themselves as healthy, and they are less likely to smoke, be incarcerated, live in poverty, or require aid from a government program (Baum & Payea, 2005; Levin, Belfield, Meunning, & Rouse, 2007). This author believes that familiarizing middle and high school students with the array of benefits that are simultaneously conferred upon receiving a college degree may entice many who are otherwise unaware, apathetic or unconvinced.

Summary

The decision to attend college is a significant process influenced by numerous internal and external factors. As increasing numbers of students pursue higher education, many more first-generation students are making the commitment to attain a college degree. These students are faced with numerous challenges when compared to their peers from college-educated homes. While they are enrolling in increasing numbers, there is still proportionately less participation from students who would be first in their families to attend college. Both internal and external factors influence the decision-making process, but ultimately internal factors carry the most weight in the development of

aspirational commitments to attaining a college degree. Personal experiences, self-efficacy, and beliefs about the benefits of college create a foundation from which students approach the college decision-making process.

The following chapters describe the method used in this research study and discuss the findings. Implications for further research, along with limitations for the study, are also presented.

CHAPTER 3: METHODOLOGY

Introduction

The previous chapter provided a review of the theoretical and empirical literature regarding each of the perceived factors influencing the pursuit of higher education. The present chapter outlines the methodology used to address the research question and the six related null hypotheses:

Null Hypothesis One: There will be no significant difference between first-year, first-generation college students and first-year college students from college-educated families in relation to the perceived *influence of family* on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire*.

Null Hypothesis Two: There will be no significant difference between first-year, first-generation college students and first-year college students from college-educated families in the relation to the perceived *influence of secondary school* support on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire* .

Null Hypothesis Three: There will be no significant difference between first-year, first-generation college students and first-year college students from college-educated families in the relation to the perceived *influence of peers* on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire*.

Null Hypothesis Four: There will be no significant difference between first-year, first-generation college students and first-year college students from college-educated families in the relation to the perceived *influence of preparation for college* on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire*.

Null Hypothesis Five: There will be no significant difference between first-year, first-generation students and first-year college students from college-educated families in the relation to the perceived *influence of their awareness and access to financial aid* on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire*.

Null Hypothesis Six: There will be no significant difference between first-year, first-generation college students and first-year college students from college-educated families in the relation to the perceived *influence of relative functionalism* of a college education on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire*.

The process used to address the research question and related null hypotheses is described in this chapter: (a) general perspective, (b) research participants, (c) selection of site, (d) instruments, (e) procedures, (f) data analysis, and (g) summary of methodology.

General Perspective

This research study used quantitative analysis techniques to compare the responses of the two groups of first-year college students regarding the perceived factors influencing the pursuit of higher education. The independent samples t-test was used for each of the factors to determine if there were any significant differences between the

means of the paired samples. The unique nature of the exclusive true/false questions in the *preparation for college* category necessitated further analysis using a nonparametric task, since the student responses were clustered and no longer continuous. Therefore, they had to be treated as a categorical variable, which resulted in the use of the chi-square test. This research study was conducted in order to accept or reject each of the null hypotheses using the data collected following the administration of *The Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire* (Harris, 2009) and the researcher's demographic information questionnaire.

Design of the Study

A prevailing theme during the 21st century within the field of education is an encouraging message that emphasizes access and opportunity for all students (Pratt & Skaggs, 1989; Great Maine Schools Project, 2009). "Although no student should be forced or intimidated into attending college, every student should be encouraged to explore the option" (Great Maine Schools Project, 2009, p. 8). "Some form of postsecondary education is now within reach of virtually everyone in the U.S.," but, Pike and Kuh (2005, p. 292) qualify this positive assertion by adding that "not all students are equally likely to succeed." First-generation students, those whose parents have not earned a postsecondary degree (Great Maine Schools Project, 2009), often find the challenge to complete college to be more significant when compared to students who were raised in college-educated families (Choy, 2001; Engle, 2007). Understanding this high-risk population is a crucial issue for educators and policymakers (Jenkins, Miyazaki, & Janosik, 2009).

National data indicate that a significantly larger number of students are pursuing a college education. Students from college-educated families, however, typically benefit

from advantages that first-generation students may not experience (Choy, 2001). While many research studies have noted the specific challenges facing first-generation college students (Piorkowski, 1983; Phelan, Davidson, & Cao, 1991; Choy, Horn, Nunex, & Chen, 2000; Pike & Kuh, 2005; Attewell, Lavin, Domina, & Levin, 2006; Conley, 2007; Engle, 2007; Orbe, 2008), little data is available documenting the perceived differences of first-generation students specific to the influences affecting the pursuit of higher education (Bui, 2002; Valadez, 1998).

The design of this study was prepared with these issues in mind as the research was planned and the instrument was developed. The research problem is the effect of the perceived factors influencing the pursuit of higher education among first-generation college students. The research method was survey research. "Surveys permit the researcher to summarize the characteristics of different groups or to measure their abilities and opinions toward some issue" (Ary et al., 2006, p.31).

The design of the study, as well as the survey instrument, were constructed with the intention of providing participants with a sense of meaningful contribution, that the study valued their perceptions and opinions related to higher education, and that their responses concerning each of the factors were important to better understand the perceived factors influencing the pursuit of higher education.

The survey instrument was composed of three parts. Part one was the consent for research agreement which was signed by all participants and witnessed by the impartial survey proctor. Part two consisted of a brief nine-item demographic questionnaire that was developed by the researcher for the purpose of identifying survey participants who were first-generation students and for collecting additional data pertaining to student participants. Part three consisted of the primary instrument used, the revised 2009

version of *The Factors Influencing Pursuit of Higher Education (FIPHE) Questionnaire*. Upon completion of the entire survey, part one was separated from parts two and three of the survey by the impartial proctor prior to being given to the investigator, thus ensuring anonymity and confidentiality for the participants.

Statistical treatment of the data was analyzed with the Statistical Package for Social Sciences (SPSS 16.0). As outlined by the author of the survey (Harris, 2009), *The Factors Influencing Pursuit of Higher Education (FIPHE) Questionnaire* items #1-#83 were coded as 4=strongly agree, 3=agree, 2=disagree, and 1=strongly disagree. Items #84-#92 were coded 4=true and 3=false. As outlined in the survey scoring directions, 19 items needed to be reverse-coded into SPSS. Items left blank by students completing the survey were treated as missing data. Missing data were handled through the means imputation procedure. Item means were identified for each of the 92 questions; then corresponding means were inserted for all questions that were designated as having missing data. Scores for each of the four scales used in the research study were written into SPSS and calculated by adding the question totals together and dividing by the number of questions in each cluster.

The identification of first-generation students was made by identifying a formula for questions six and eight from the researcher's demographic questionnaire which identified responses *a*, *b*, or *c* in both questions six and eight to equal "first-generation" and responses *d*, *e*, and *f* in either question six and eight to equal non-first-generation. A student response of *g* for questions six and eight indicated that he or she did not know the status of their parents' education.

The independent samples t-test was used for each of the six factors to determine if there were any significant differences between the means of the paired samples. The

unique nature of the exclusive true/false questions in the *preparation for college* category necessitated further analysis using a nonparametric task, since the student responses were clustered and no longer continuous. Therefore, this data had to be treated as a categorical variable, which resulted in the use of the chi-square test.

The research study was implemented in order to accept or reject each of the six null hypotheses using the data collected in part two and part three of the survey. Descriptive statistics were used to organize and describe the data from this research study concerning respondents' perceived factors influencing the pursuit of higher education.

Research Participants

All first-year students at the target university were invited to participate in this study. Over 85% of these students were from Maine communities, while the remaining 15% came from 14 other states and two foreign countries. The current student population at the target university is 91% white, four percent black, one percent Hispanic, and one percent Native American. Of these students, 59% are female and 41% are male. Approximately 53% of the current students are first-generation college students. In the 2008-2009 first-year class, four percent of the students enrolled had family incomes of under $15,000 per year. While the target university has four campuses across the state, all of the participants in the study attended the main campus in eastern Maine.

The incoming 2008-2009 freshman class at the target university was composed of 471 students with 221 males and 250 females (NCES, 2008). At the time the survey was administered during the second semester, there were 408 first-year students enrolled. Surveys were only distributed to students in attendance during the specified class time period; therefore, students not in attendance during the identified class session did not

complete a survey. A total of 348 students (85.3% of the second semester, first-year, students) completed the survey.

The research survey was administered as part of a second semester scheduled English class. In accordance with the official Institutional Review Board (IRB) policies at the target university, students were invited to sign a Consent for Research form indicating their willingness to participate in the study. As part of this process, students were assured that their responses would be kept confidential.

Selection of Site

The site for this research project was a private university in eastern Maine with an enrollment of over 3500 undergraduate and graduate students. It was selected because the researcher is employed as an academic administrator at this institution, allowing access to student data relevant to this research. Furthermore, the issues of recruitment, retention and enhancing students' first-year experience have been recent priorities for senior staff and the deans' council. Due to the inherent relevance, the administration at the target university was supportive of gathering observational insights and identifying meaningful interventions as a result of this research study.

The target university has six schools: education, health, science and humanities, pharmacy, law and business. Survey participants came from the four schools which admit first-year students – education, health, science and humanities, and business.

Instruments

The revised 2009 version of the *Factors Influencing Pursuit of Higher Education (FIPHE) Questionnaire* (see Appendix B) was the primary instrument used in collecting data for the study. Permission (see Appendix C) was granted by the author, Dr. Sandra M. Harris, to utilize the questionnaire which has 83 items that use a four-point Likert-

type scale and an additional nine items which use true-false indicators to analyze factors which influence students to pursue higher education. This instrument was selected due to its strong validity (Harris, 2009) and reliability ratings and the fact that it provided factor analysis for six of the specific internal influential factors being analyzed in this research study. The survey instrument is readily available in an online format and has been used across the country to study such variables as race, gender and community college enrollment. The reliability estimates for the *FIPHE* scale scores range from moderate (.66) to high (.90). The survey instrument has nine scale score categories which include: *family influence, peer influence, self-efficacy, relative functionalism, glass ceiling, secondary school support, financial aid, preparation for college* and *sister's influence*. The factor analysis for the instrument was conducted on data from a sample (N=509) of college students enrolled in two southern universities.

The revised 2009 version of *The Factors Influencing Pursuit of Higher Education (FIPHE) Questionnaire* (Harris, 2009) was used in its entirety. However, only six of the nine categories were used in the data analysis process to make the survey data relevant to the investigator's particular research study: *family influence, secondary school support, peer influence, preparation for college, financial aid*, and *relative functionalism*. These categories were selected since they are the primary areas recognized in the literature (St. John & Somers, 1993; Valadez, 1998; Maduakolam, 2000; Thayer, 2000; Choy, 2001; Gandara, 2001; Samarge, 2006; Stewart, Stewart, & Simons, 2007; Conley, 2008; Jenkins, Miyazaki, & Janosik, 2009) as influencing the pursuit of higher education for both first-year, first-generation college students and students from college-educated families. The data from the remaining three categories of *sister's influence*, *self-appraisal*, and *locus of control* were not used in this particular study because these

categories were not reflected in the research as primary variables relating to perceived factors influencing the pursuit of higher education for these same two populations.

A brief nine-question demographic questionnaire (see Appendix A) was developed by the researcher for the purpose of identifying survey participants who were first-generation students and for collecting additional data pertaining to the student participants. Questions six and eight on the demographic survey were used to gather the data regarding the education levels of each student's mother and father. This data was then used to identify first-generation status in the independent samples t-test analysis.

The *FIPHE* scoring guidelines outlined that 19 identified questions needed to be reverse-coded before scoring the survey. The guidelines also clustered the questions for each of the research categories. The identified scales and corresponding *FIPHE* questions provided the data to address six subcategories that were pertinent to the research question.

The *family influence* scale included 26 questions: #1-#17, #19-#20, #22-#23, #25-#27, and #49-#50. The *family influence* scale refers to the influence that a student's family members have on his/her decision to pursue higher education. Sample items in this category include statements such as "My mother expects me to get good grades in college." and "I can talk to my grandparents about my college educational plans."

The *secondary school* scale included 13 questions: #65-#74, #84, and #86 #87. This scale measures the support and encouragement students received in middle and high school related to their pursuit of a college education. Survey items in this category include statements such as "My high school teachers encouraged me to go to college." and "My high school held briefings on the college application process."

The *peer influence* scale included six questions: #28-#33. The scale analyzes the influence students' peers have on their decision to pursue higher education. Sample items in this category include statements such as "I find it easy to make friends in the college setting." and "I cannot talk to my friends about college experiences."

The *preparation for college* scale included six questions: #85 and #88-#92. Survey items in this category are uniquely all true/false statements and assess a student's preparation for college. The category items include statements such as "I took remedial courses in high school." and "I used tutors to help me study in junior high school."

The *financial aid* scale included seven questions: #75-#78 and #82-#84. Survey items in this category assess student awareness of the importance of financial aid in pursuing higher education. Items in this category include "I am knowledgeable of the various types of Financial Aid Programs." and "My parents sometimes worry about paying my tuition bill."

The *relative functionalism* scale included nine questions: #34-#42. The *relative functionalism* scale assesses a student's perception of the function of higher education. Sample questions in this category of the survey included "Getting a college degree will improve my self-esteem." and "Getting a college degree is important for my future job opportunities."

Procedures

In preparation for the survey distribution to all first-year students, the Consent for Research was developed (see Appendix D). Since all student participants in this study were over age 18, the issue of FERPA was not a consideration for participation. The researcher identified all sections of the second-semester, first-year English course at the target university scheduled within a one-week block of time. Permission was granted by

the Dean of Science and Humanities and the English Department Chairperson to distribute the surveys at the start of each class period in order to ensure students had sufficient time to complete the survey. English professors were notified in advance of the date and time the survey would be distributed in their class. An explanation of the purpose of the survey was also provided to English faculty.

While the revised 2009 version of *The Factors Influencing Pursuit of Higher Education (FIPHE) Questionnaire* is available on-line, the researcher chose to administer the surveys to first-year students at the target university using a paper-and-pencil instrument. This decision was made after careful consideration about ensuring that all the subjects involved in the study would in fact complete the survey in its entirety under carefully-controlled conditions. It was the researcher's concern that given the population involved in the study, if the survey were offered online, computer access and the time involved in completing the survey may have resulted in fewer student participants. In order to ensure representative sampling, it was decided that the paper-and-pencil method of data collection would be most effective.

A concerted effort was made to avoid researcher bias and contamination of data. At no point during the data collection did the researcher have any direct contact with the survey participants. No student names were used when responding to the survey questions. The Consent for Research statement that was signed and dated by the subject, investigator, and witness (proctor) addressed confidentiality, assuring students that their responses would remain anonymous (See Appendix D). The Consent for Research form was purposefully removed from the completed survey prior to data analysis.

A specific administrator, identified as an impartial survey proctor, was selected and required to participate in a brief training session to remove the researcher from the

data collection process and help ensure that uniform directions and procedures were in place well in advance of the survey distribution. Instructions for the proctor were outlined in writing and clearly specified. The purpose of the written instructions was to simplify, organize, and standardize the administration of the surveys. The survey proctor was also provided with a detailed class schedule including instructors' names, student rosters, room numbers, and meeting times.

On each day of testing, the survey proctor met with each scheduled first-year English class. Upon entering the class, the survey proctor was introduced to the students who had been prepared in advance about the survey administration. Attendance was taken by the instructors. The survey proctor then distributed a survey and pencil to each student and read the standardized directions aloud. Students completed the survey instrument, including the demographic data, in approximately 30 minutes. The subjects were carefully monitored by the survey proctor during the entire administration. Upon completion of the survey, the survey proctor collected and counted materials and thanked students for their participation. The instructors then resumed their class activities. The survey proctor stored the completed surveys in a previously-determined, secure location.

Data Analysis

The data for the study were obtained from the surveys administered to the first-year students at the target university. The independent samples t-test was used to analyze the data. "The t-test is used when investigators seek to match the subjects of their two groups on some qualities that are important to the purpose of their research" (Ary et al., 2006, p. 194). In this study, the key factor for comparing the data was the defined category of first-generation students.

The data were reported in tables outlining the number of first-generation students as well as the means and standard deviations for each of the six factors as outlined by the scoring code question clusters. To answer the research question, contingency coefficients were used to explore the relationship between first-generation students and students from college-educated families, and additional tables were used to report these results. The t-values were used to determine the statistical significance of the observed ratio for the null hypotheses in this study.

Summary of Methodology

The Statistical Package for Social Sciences (SPSS 16.0) was used to analyze the data. As outlined by the author of the survey (Harris, 2009), *The Factors Influencing Pursuit of Higher Education (FIPHE) Questionnaire* items #1-#83 were coded as 4=strongly agree, 3=agree, 2=disagree, and 1=strongly disagree. Items #84-#92 were coded 4=true and 3=false. As outlined in the survey scoring directions, 19 items needed to be reverse-coded into SPSS. In the reverse coding system, 4=1, 3=2, 2=3, and 1=4. Items left blank by students completing the survey were treated as missing data. Missing data were handled through the means imputation procedure. Item means were identified for each of the 92 questions; then corresponding means were inserted for all questions that were designated as having missing data. Scores for each of the four scales used in the research study were written into SPSS and calculated by adding the question totals together and dividing by the number of questions in each cluster.

The identification of first-generation students was made by identifying a formula for questions six and eight from the researcher's demographic questionnaire which identified responses *a*, *b*, or *c* in both questions six and eight to equal "first-generation" and responses *d*, *e*, and *f* in either question six and eight to equal non-first-generation. A

student response of *g* for questions six and eight indicated that he or she did not know the status of their parents' education. Two student surveys were not used in the statistical analysis due to a *g* code. Therefore, of the 348 surveys collected, 346 were used in the statistical analysis reported in this research study.

CHAPTER 4: FINDINGS

Introduction

This study examined the perceived influences of first-year college students in their pursuit of higher education in order to determine if these perceived influences differ significantly for first-generation students compared to students from college-educated families. Specifically, this study sought to answer the following question: Are there significant differences in perception of *family influence, secondary school support, peer influence, preparation for college, awareness and access to financial aid,* and *relative functionalism* between first-year, first-generation college students and first-year students from college-educated families? The data revealed that only the factors of *family influence* and *preparation for college* showed significant differences between first-generation students and students from college-educated families. This chapter begins with a discussion of the sample, followed by the findings for the research question. The chapter will conclude with a summary of the major findings.

Sample

There were 348 first-year students attending the private university that participated in this study. All first-year students enrolled at the main campus of the target university were invited to participate in this the study. Over 85% of the students were from Maine communities, while the remaining 15% came from 14 other states and two foreign countries. The current student population at the target university is 91% white, four percent black, one percent Hispanic, and one percent Native American. Of these

students, 59% are female and 41% are male. Approximately 53% of the current students are first-generation college students.

In the 2008-2009 first-year class, four percent of the students enrolled had family incomes of under $15,000 per year. Although the university enrolls approximately 3500 undergraduate and graduate students on four campuses across the state, all of the participants in the study attended the main campus in eastern Maine.

The incoming 2008-2009 freshman class at the target university was comprised of 471 students with 221 males and 250 females (NCES, 2008). At the time the survey was administered during the second semester, there were 408 first-year students enrolled. Surveys were only distributed to students in attendance during the specified class time period; thus, students not in attendance during the identified class session did not complete a survey. A total of 348 students (85.3% of the second-semester, first-year students) completed the survey.

Two of the 348 students were excluded from the analysis since they could not indicate the education level of either their mother or father. The final sample, therefore, included 346 first-year students, including 161 first-generation students and 185 students from college-educated families. The final student sample accounted for 85.3% of the first-year class of the target university.

Results

The Statistical Package for Social Sciences (SPSS16.0) was used to analyze the survey data. Significance levels for each of the six variables were set at alpha level= .05. An independent samples t-test was used to compare the responses of first-year, first-generation college students with those of first-year college students from college-educated families. Additionally, a chi-square test was used to analyze the results of the

preparation for college factor since the distribution of scores was notably skewed. The results of the statistical analyses are reported for each of the six variables and illustrated in corresponding tables.

Table 4.1

Means, Standard Deviations, and a t-test of the Family Influence Factor

Group Statistics – *Family Influence Factor*

Student Status	n	M	SD	t	p =
First-Generation Students	161	3.279	.3900		
				-2.348	0.019
Students from College-Educated Families	185	3.376	.3646		

Table 4.1 indicates that the mean of first-year students from college-educated families is statistically significantly higher than the mean of the first-year, first-generation student group with regard to the perceived *family influence* factor by 0.10 points (p value = .019).

Table 4.2

Means, Standard Deviations, and a t-test of the Secondary School Support Influence Factor

Group Statistics – *Secondary School Support*

Student Status	n	M	SD	t	p =
First-Generation Students	161	3.375	.3789		
				-.146	0.884
Students from College-Educated Families	185	3.381	.4019		

Table 4.2 indicates that there was no statistical difference regarding the perceived influence of *secondary school support* between first-year, first-generation students and first-year students from college-educated families (p value = .884).

Table 4.3

Means, Standard Deviations, and a t-test of the Peer Influence Factor

Group Statistics - *Peer Influence Factor*

Student Status	n	M	SD	t	p =
First-Generation Students	161	3.464	.4351	.082	0.935
Students from College-Educated Families	185	3.461	.4477		

As identified in Table 4.3, the results for the perceived *peer influence* factor indicates no significant difference existed between first-year, first-generation students and first-year students from college educated families (p value = .935).

Table 4.4

Means, Standard Deviations, and a t-test of the Preparation for College Factor

Group Statistics - *Preparation for College Factor*

Student Status	n	M	SD	t	p =
First-Generation Students	161	3.205	.2353		
				.401	0.688
Students from College-Educated Families	185	3.194	.2727		

As identified in Table 4.4, the results for the perceived influence of *preparation for college* factor indicates that with an alpha level of .05, there appear to be no significant differences between first-year, first-generation students and first-year students from college educated families (p value = .688). However, since these six questionnaire items were all true/false with an assigned value of four or three, it led to a skewed distribution of the scores. It is important to note this exclusive true/false clustering of questions was only present for this variable in the revised 2009 version of the *Factors Influencing Pursuit of Higher Education (FIPHE) Questionnaire* (see Appendix B). All other variables in the surveys were comprised of either all multiple choice items or a combination of multiple choice and true/false items.

Table 4.5

Chi-Square Test:

Percentages of True and False Responses for Preparation for College Factor

Group Statistics - Responses to True and False Items			
Student Status	N	Percent All False Responses	Percent One or More True Responses
First-Generation Students	161	37.00%	63.00%
Students from College-Educated Families	185	50.00%	50.00%

P value = .014

In interpreting the data for the *preparation for college* variable as outlined in Tables 4.4 and 4.5, it is important to note that the mean scores may be misleading since the six statements assessed on *The Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire* only used true/false responses to assess, and therefore the scoring differential was only between the assigned value of four or three. This led to a skewed distribution of the scores in this category. The researcher chose to further analyze the variable by implementing a chi-square test. In analyzing the data with regard to this factor, two categories were identified. The first category indicates the percentage of students which had all false responses and the second category identifies those students who had one or more true responses in responding to the six statements. Results indicated first-year students from college-educated families had a statistically significantly larger percentage of all false responses, 13% higher (p value = .014).

Table 4.6

Means, Standard Deviations, and a t-test of the Awareness and Access to Financial Aid Factor

Group Statistics - *Awareness and Access to Financial Aid*

Student Status	n	M	SD	t	p =
First-Generation Students	161	2.8341	0.32230		
				-.308	0.758
Students from College-Educated Families	185	2.8452	0.34838		

Table 4.6 indicates that there was no statistical difference regarding the perceived influence of the *awareness and access to financial aid* between first-year, first-generation students and first-year students from college-educated families (p value = .758).

Table 4.7

Means, Standard Deviations, and a t-test of the Relative Functionalism Factor

Group Statistics - Relative Functionalism Factor

Student Status	n	M	SD	t	p =
First-Generation Students	161	3.5889	0.41823		
				.194	0.846
Students from College-Educated Families	185	3.5801	0.42637		

As identified in Table 4.7, the results for the perceived influence of *relative functionalism* - the benefits of a college education - factor indicates that with an alpha level of .05, no significant difference existed between first-year, first-generation students and first-year students from college-educated families (p value = .846).

Table 4.8

Summary of Means and Standard Deviations

Group Statistics				
Factor	Student Status	N	Mean	Std. Deviation
Family Influence	0 1	161 185	3.2794 3.3758	.39456 .36461
Secondary School Support	0 1	161 185	3.3748 3.3810	.37896 .40191
Peer Influence	0 1	161 185	3.4644 3.4605	.43510 .44765
Preparation for College	0 1	161 185	3.2047 3.1937	.23532 .27266
Awareness and Access to Financial Aid	0 1	161 185	2.8341 2.8452	.32230 .34838
Relative Functionalism	0 1	161 185	3.5889 3.5801	.41823 .42637

0 = First-Generation Students
1 = Students from College-Educated Families

Conclusion

This study sought to accept or reject the following null hypotheses:

Null Hypothesis One: There will be no significant difference between first-year, first-generation college students and first-year college students from college-educated families in relation to the perceived *influence of family* on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire*.

Null Hypothesis Two: There will be no significant difference between first-year, first-generation college students and first-year college students from college-educated

families in the relation to the perceived *influence of secondary school support* on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire*.

Null Hypothesis Three: There will be no significant difference between first-year, first-generation college students and first-year college students from college-educated families in the relation to the perceived *influence of peers* on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire*.

Null Hypothesis Four: There will be no significant difference between first-year, first-generation college students and first-year college students from college-educated families in the relation to the perceived influence of *preparation for college* on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire*.

Null Hypothesis Five: There will be no significant difference between first-year, first-generation students and first-year college students from college-educated families in the relation to the perceived *influence of their awareness and access to financial aid* on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire*.

Null Hypothesis Six: There will be no significant difference between first-year, first-generation college students and first-year college students from college-educated families in the relation to the perceived *influence of relative functionalism* of a college education on their decision to attend college, as indicated by the *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire*.

Summary Table 4.8 indicates that there are indeed significant differences in the perceived *family influence* and *preparation for college* factors between first-generation students and first-year students from college-educated families with first-year, first-generation college students perceiving to be less influenced by these factors. A discussion of the results, the limitations of the study and recommendations for further research will be covered in chapter five.

CHAPTER 5: SUMMARY, DISCUSSION, AND RECOMMENDATIONS

This chapter begins with a summary and discussion of the results followed by the potential limitations of the study that should be considered. The chapter ends with recommendations for future research and conclusions drawn from the study.

Review of the Problem and Methodology

This study examined the perceived differences among six factors influencing the pursuit of higher education between first-year, first-generation college students and students from college-educated families. These factors include *family influence*, *secondary school support, peer influence, preparation for college, awareness and access to financial aid,* and *relative functionalism*. The demographic information survey developed by the researcher was used to determine first-generation status of the students involved in this study. An independent samples t-test was used to analyze data gathered from *The Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire* (Harris, 2009) survey instrument, which was administered to 348 first-year college students in second semester English classes at the target university. This instrument was selected because it specifically provided factor analysis for nine influential factors related to influencing the pursuit of higher education – six of which were used in the present study because they directly relate to the internal influential factors being analyzed in order to address the null hypotheses. Additionally, the instrument reported alpha (reliability) coefficients ranging from moderate (.66) to strong (.90) (Harris & Halpin, 2002).

The student sub-groups were shown to be more alike than different in their perceptions of these factors. No significant differences were found between the perceptions of first-year, first-generation students when compared to first-year students from college-educated families except for the factors of *family influence* and *preparation for college*. The data from the study indicated that first-year, first-generation college students perceived *family influence* and *preparation for college* to be less influential factors impacting their pursuit of higher education than did first-year students college-educated families.

Summary of the Results

In summarizing the results for each of the six factors, an independent samples t-test was used to compare the responses of first-year, first-generation college students with those of first-year students from college-educated families. Additionally, a chi-square was used to analyze the results of *preparation for college factor* since the distribution of scores was notably skewed. The results of the statistical analyses are reported for each of the six variables.

The data indicated that the mean of students from college-educated families is statistically significantly higher than the mean of the first-generation student group with regard to the perceived *family influence* factor by 0.10 points (p value = .019). These findings support those of McDonough (1997) and Hossler, Schmit, & Vesper (1999) that indicated the home setting is a particularly rich and ongoing source of information for college educated families and that academic achievement goals are formed well before high school and influenced significantly by families. These findings have implications for both first-generation college students and their families. These students may not be aware of the many interactions that may occur within college-educated families which

reinforce the importance of pursuing higher education. The families' lack of knowledge and experience regarding higher education may further limit support for the college planning process and therefore impact the eventual attainment of a college degree.

With regard to the second factor, the data from this study indicated that there was no statistical difference regarding the perceived influence of *secondary school support* between first-year, first-generation students and first-year students from college-educated families (p value = .884). These findings suggest that secondary school support is perceived as a relatively unimportant factor for both groups as a factor affecting the pursuit of higher education. The lack of influence of secondary support factor is interesting since evidence shows that some secondary schools have significantly more success in moving first-generation students on to higher education.

Data results from the independent samples t-test for the perceived *peer influence* factor indicated no significant difference existed between first-year, first-generation students and students from college educated families (p value = .935). The fact that young people are more vulnerable to the influence of close friends who share similar experiences and backgrounds (Hallinan & Williams, 1990, p. 130) may have limited the influence of this factor since first-generation students appear to select friends who may be within their socio-economic level and who may be void of exposure to successful college experiences.

The data results for the perceived influence of *preparation for college* factor indicated that with an alpha level of .05, there appeared to be no significant differences between first-year, first-generation students and students from college-educated families (p value = .688). However, since these six questionnaire items were all true/false with an assigned value of four or three, it led to a skewed distribution of the scores. This

exclusive true/false clustering of questions existed only for this variable in the revised 2009 version of the *Factors Influencing Pursuit of Higher Education (FIPHE) Questionnaire* (see Appendix B). All other variables in the *FIPHE* survey were comprised of either of multiple choice items or a combination of multiple choice and true/false items. Therefore, in interpreting the data for the preparation for college variable, it is important to note that the mean scores may be misleading since the six statements assessed on *The Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire* only used true/false responses in the assessment. As a result, the scoring differential was limited between the assigned value of four or three which led to a skewed distribution of the scores in this category. The researcher chose to further analyze the variable by implementing a chi-square test. In analyzing the data with regard to this factor, two categories were identified. The first category indicated the percentage of students who had all false responses and the second category identified those students who had one or more true responses in responding to the six statements. The chi-square results showed students from college-educated families had a statistically significantly larger percentage of all false responses, 13% higher (p value = .014). The results of analysis for this factor are reinforced by the research of Conley (2008) which noted the likehood that students will make a successful transition to the university setting is often a function of their preparation for college as it is their educational and personal experiences which equip them for the expectations and demands of higher education.

With regard to the fifth factor, data indicated that there was no statistical difference regarding the perceived influence of the *awareness and access to financial aid* between first-year, first-generation students and first-year students from college-educated families (p value = .758). For both first-generation college students and students from

college-educated families, financial aid has more impact on eventual enrollment decisions than the cost of tuition (St. John & Summers, 1993). The implications for this finding suggest that a postsecondary institution's level of financial award letter must positively impact the enrollment decisions of accepted college applicants whether or not they come from college-educated families.

The research study results for the perceived influence of *relative functionalism* - the benefits of a college education - factor indicates that with an alpha level of .05, no significant difference existed between first-year, first-generation students and first-year students from college-educated families (p value = .846). These results are somewhat surprising, since according to Coleman (1988), continuing-generation families tend to be strong proponents of a college education, and they realize the long-term benefits of a college education. They also share information about these benefits with their children, bolstered by their own sequence of personal and professional experiences. Parents' own familiarity with college through direct experiences was proven to be an influential asset - regardless of their current socioeconomic status (Cabrera & La Nasa, 2001).

Discussion

The family plays a significant role in their children's aspirations from the elementary years through the college years (Carpenter & Fleishman, 1987; Stage & Hossler, 1989; Tucker, Harris, Brady, & Herman, 1998), and the communicated expectation is highly influential (Ekstrom, 1985). Student achievement in school correlates with higher parental expectations, but studies have yet to demonstrate the extent to which this influence is bidirectional (Spera, Wentzel, & Matto, 2009). In Stage and Hossler's (1989) study, it was concluded that "parental expectation was the best predictor of the predisposition to attend college" among the sample of ninth graders (p.

209). In fact, having an adult mentor – parents being primary examples – is considered to be a protective factor in terms of adolescent development (Masten, 2004).

Parents of all ethnicities generally express high expectations, with at least 85% of parents of every ethnic group desiring their children to obtain a college degree (Spera, Wentzel, & Matto, 2009). Yet, the question still remains: Why is there a discrepancy between these hopes and children's actual educational attainment? Spera, Wentzel, and Matto (2009) surmise that parents with minimal educational experiences in their own repertoires have a difficult time translating those aspirations into the necessary steps of parental involvement that lead to college graduation. They also believe that scarce resources limit their ability to help their children and may cause them to re-evaluate expectations over time.

The results of the current study in no way diminish the importance of the family as a critical factor in first-generation students' decision to attend college. Gofen's (2009) research provides insight that surprisingly contradicts many assumptions about the support system of first-generation college students. Every student in the study in some way mentioned that family was instrumental to pursuing a college education. Families were deemed to be a "resource rather than a constraint" (p. 114). The study reinforces the importance of family capital, which Gofen (2009) defined as "the ensemble of means, strategies, and resources embodied in the family's way of life that influences the future of its children," and it is "implicitly and explicitly reflected through behavior, emotional processes, and core values" (p. 115). The concept of family capital encompasses the meanings of the terms "social capital" and "cultural capital" by capturing the range of investments made by the family to benefit a child's future. Components of social capital can include: parental education, family income, family structure, educational

expectations, stable academic background, parental involvement in education, and intergenerational closure (Sandefeur, Meier, & Campbell, 2006).

Preparation for the academic demands of college is increasingly becoming an area of concern as colleges embrace a larger and more diverse student population (Reed & Conklin, 2005; Keup, 2006; McCarthy & Kuh, 2006). For many students, "getting in the door is only the first of many hurdles to their success in higher education" (Reed & Conklin, 2005, p. B16). In 2000, the U.S. Department of Education named college readiness among its seven top priorities. A national study illuminated the under-preparation of many students, with 41% of freshman community college students and 29% of all entering college students demonstrating academic struggles in at least one basic skill area (McCabe, 2000). High school students are expending a relatively low level of effort in terms of studying or preparing for class in order to receive good grades (McCarthy & Kuh, 2006). The rigor of high school college preparatory coursework has come into question (McCarthy & Kuh, 2006). Academic support services are a growing trend in colleges nation-wide (Smith, Szelest, & Downy, 2004); however, causes of remediation and retention are difficult to analyze as several factors can be involved (Hoyt, 1999). Reed and Conklin (2005) suggested that admissions decisions remain separate from readiness decisions so that college access is not compromised for students needing some remedial work. Students' experiences with the regular college-level program are more meaningful once they achieve the background skills and knowledge necessary for success.

Under-preparation for college may not only emerge in academic areas, but also in the types of student behaviors that are linked to integration within the college culture (Smith & Commander, 1999). Some students begin college without the tacit intelligence

necessary for college success, such as the importance of collaborating with other students, using course materials, class preparation, and attendance to class sessions; Smith and Commander recommend that students are explicitly taught these skills prior to transitioning to college (1999).

The present study differentiated between first-year, first-generation students and first-year students from college-educated families and investigated the perceived factors influencing the pursuit of higher education among these two groups of students. Results showed no significant differences between the perceptions of these two groups for any of the factors investigated except *family influence* and *preparation for college*. Both of these factors were shown to be less powerful in affecting first-year, first-generation college students' pursuit of college compared with first-year students from college-educated families. Based on the findings of this study, more research is needed to further examine student perceptions about *family influence* and *preparation for college*.

Limitations

Four potential limitations of this study should be considered. First, the subjects in this study were first-year students in one private university setting, with a significantly white population, located in a medium-sized city in eastern Maine. The results of this particular study might not be generalized to other populations for three reasons: 1) It is not easily argued that the results and conclusions would apply to first-year students in other universities; 2) It is not clear that the profile of a student from the target university would apply to students in other much larger or much smaller colleges or universities or those with greater or less racial diversity, in rural or inner city areas, or to students in other areas of the country; and 3) It cannot be stated that the results of this study would necessarily carry over to the same students another year.

Second, this study examined only survey data from the student's perspective and did not include qualitative data collection such as in-depth interviewing of students and information from faculty that might enhance the researcher's interpretation of the quantitative results.

Third, it should be noted that the researcher is employed at the university where the research was being conducted, although throughout the study, a concerted effort was made on the part of the researcher to minimize the "experimenter effect" that has been described by Ary, Jacobs, Razavieh, & Sorensen (2006). According to these researchers, "The threat of experimenter effect involves the unintentional effects that the researcher herself has on the study if the experimenter has expectations or personal bias" (p. 206, 300). At no point during the data collection did the researcher have any direct contact with the survey participants. A trained survey proctor administered and collected the anonymous surveys and the Consent for Research form was purposefully removed from the completed survey prior to data analysis helping to minimize "experimenter effect".

Fourth, the survey was administered under carefully controlled conditions, in a structured setting and with standardized instructions; however, the 99-question length of the two surveys could have led some students to casually or thoughtlessly respond to the survey questions.

Recommendations for Further Research

Five major recommendations are being suggested for further research as a result of the findings of this study. First, this study could be expanded to a cross-methods study utilizing interviews of randomly-selected research subjects. The interview would involve follow-up questions with the themes that comprise the *FIPHE* questionnaire. This in-depth interview format would perhaps result in an expanded depth of understanding

concerning the nature and interpretation of individual student experiences. Subject responses might also prompt future investigation focusing on an emerging factor that may not have been previously studied.

Second, the methodology used in this study could be replicated in other institutions of higher education. Specifically targeting the first-generation student – a parallel study of a cohort attending the state university located in close proximity to the target university might provide further insights relating to the perceived factors influencing the pursuit of higher education. Another option would be replicating the study in an urban setting with a more racially-diverse student population. This would allow insight into variables which influence students to pursue further education in urban postsecondary settings that might contrast with those of students who select more rural settings. In addition, such a study would reveal whether or not race or culture influence the pursuit of a college education.

Third, the body of educational research literature involving first-generation students would benefit from an investigation into the relationship between the downturn of the Maine economy and the increasing percentage of first-generation students deciding to enroll in college programs. For example, to what extent is college enrollment propelled by the fact that the primary traditional job sources in Maine for high school graduates (such as fishing, farming, lumbering, manufacturing and textiles) have dwindled significantly and thus become less economically-viable career choices? A second variable meriting further study is the State of Maine's recent efforts to encourage all high school graduates to attend college upon graduation. Since 2002, the Commissioners of Education in Maine, New Hampshire, Rhode Island, and Vermont have joined together under the New England Compact to focus on this and other pressing

educational issues. In an effort to raise student aspirations, a large number of Maine high schools now require all graduating seniors to complete at least one college application prior to graduation with the ambitious goal of having 100% of high school graduates continue their education. As a result of this state-wide initiative, perhaps parents of first-generation college students are now receiving the information and support needed in order to help their children pursue further education. It would be helpful to document the impact that both the troubled Maine economy and the Maine college initiative are having on the increased college-going rate of first-generation students.

Fourth, previous research has shown significant differences between first-year, first-generation college students and students from college-educated families regarding selection of college major, adjustment to college, the influence of family in terms of support and encouragement, and the influence of secondary school support in assisting students with the college decision-making process. It would be interesting to conduct a longitudinal study over a period of several years, using the same subjects, to determine if the perceived factors influencing the pursuit of higher education tend to remain constant over time or vary in some predictable way and how they might relate to the perseverance of students to achieve success in college.

Fifth, a further study could be implemented disaggregating student survey data based on college major. Since the target university has a substantial number of first-year, undeclared majors, it would be interesting to compare the data from these students against those first-year students who have identified majors.

Conclusion

In this particular study, first-year, first-generation college students and first-year students from college-educated families were found to be more alike than different in their perceptions of factors influencing the pursuit of higher education. No significant differences were found between the perceptions of first-year, first-generation college students when compared with first-year students from college-educated families for any of the factors except for *family influence* and *preparation for college*. First-year, first-generation college students perceived *family influence* and *preparation for college* to be less powerful factors affecting their pursuit of college than first-year students from college-educated families.

The *Factors Influencing the Pursuit of Higher Education (FIPHE) Questionnaire* (Harris, 2009) survey instrument provides an interesting and effective vehicle for investigating perceived factors influencing the pursuit of higher education among first-year, first-generation college students. More study needs to occur to better understand the complex relationship between the multidimensional construct of perceived factors influencing the pursuit of higher education and their effect on first-generation college students and students from college-educated families.

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APPENDICES

Appendix A

DEMOGRAPHIC INFORMATION
Target University

The purpose of this survey is to gather information concerning the factors that influence a person's decision to pursue higher education. It should take you about 10-15 minutes to complete both the demographic information and the questionnaire. Completion of the survey is voluntary, and all responses will be kept confidential. Please answer each item as honestly as possible. Return this demographic information sheet and questionnaire to your course instructor when you are finished. For each item below, circle the item that applies to you.

1. Age:

a. 20 or less

b. 21-25

c. 26-30

d. 31-40

e. 41-50

f. 51+

2. How many years in college:

a. 1 year or less

b. 2 years

c. 3 years

d. 4 years

3. Please select the choice that most accurately indicates your ethnicity:

a. African-American (Black, Caribbean)

b. Asian/Pacific Islander

c. Caucasian

d. Hispanic (Latino, Chicano, Puerto Rican)

e. Native American or American Indian

f. Other: _____

g. I choose not to disclose

4. Where do you think you are ranked among your peers in your high school graduating class?

a. Among the top 15%

b. Among the top 40%

c. Below the top 40%

5. What was your average grade in high school? (Circle only one.)

a. A or A+

b. B+

c. B

d. B-

e. C+

f. C

g. C-

h. D+

6. What is the extent of your father's education?

a. Some high school

b. High school graduate

c. Some college

d. Associate degree

e. Bachelor degree

f. Advanced degree (Masters, MBA, Ph.D., M.D., etc.)

g. Unknown

7. Please list your father's occupation (if unemployed, please indicate):

_____

8. What is the extent of your mother's education?

a. Some high school

b. High school graduate

c. Some college

d. Associate degree

e. Bachelor degree

f. Advanced degree (Masters, MBA, Ph.D., M.D., etc.)

g. Unknown

9. Please list your mother's occupation (if unemployed, please indicate):

_____

Appendix B

FACTORS INFLUENCING PURSUIT OF HIGHER EDUCATION (FIPHE) QUESTIONNAIRE

Dr. Sandra M. Harris
XXX University XXX

The Factors Influencing Pursuit of Higher Education (FIPHE) Questionnaire is a 92-item self-report measure that investigates factors which influence individuals to pursue higher education. A factor analysis of the FIPHE questionnaire generated the following factors: family influence, self-appraisal, secondary school support, self-appraisal, relative functionalism, peer influence, sister's influence, preparation for college, financial aid concerns, glass ceiling effect. Reliability estimates for those scales ranged from .66 to .90.

While results from the factor analysis supported the statistical validity of the questionnaire, the author proposes that there are theoretical underpinnings of the questionnaire support the use of the following 10 scales and two subscales: self-efficacy measures the participant's perceived competence in their college major; locus of control, which assesses a person's perceived locus of control; family support, which assesses the influence of family members; peer influence, which assesses the influence of peers; relative functionalism, which assesses an individual's perception of the function of higher education; glass ceiling effect, which measures the degree to which the participants perceive their opportunities for success in college to be limited or blocked; secondary school support, which measures the level of encouragement from secondary school personnel such as teachers and guidance counselors; preparation for college, which assesses an individual's general preparation for college; financial aid concerns, which addresses the importance of financial aid in pursuing higher education; sister's influence, which addresses the

influence of sister's on a person's decision to pursue higher education; mother's and father's sister's influence, which addresses the influence of parents on a person's decision to pursue higher education.

FACTORS INFLUENCING PURSUIT OF HIGHER EDUCATION QUESTIONNAIRE

Dr. Sandra M. Harris

Section 1

INSTRUCTIONS: Following is a series of statements that address factors which influence a person's decision to pursue higher education. There are no correct responses; please respond to each item as honestly as possible. Complete the questionnaire by marking the response closest to your agreement or disagreement with each statement. If a statement does not apply to you, leave the item blank. If a statement currently does not apply to you but has applied in the past, answer the statement as you would have in the past.

SA=Strongly Agree A=Agree D=Disagree SD=Strongly Disagree	SA	A	D	SD
1. My father encouraged me to go to college.	(a)	(b)	(c)	(d)
2. My mother encouraged me to go to college.	(a)	(b)	(c)	(d)
3. My mother is excited about me being in college.	(a)	(b)	(c)	(d)
4. My father is excited about me being in college.	(a)	(b)	(c)	(d)
5. My mother did not stress the importance of having a college education.	(a)	(b)	(c)	(d)
6. My father stressed the importance of having a college education.	(a)	(b)	(c)	(d)
7. My mother told me about the demands I would face in college.	(a)	(b)	(c)	(d)
8. My father did not tell me about the demands I would face in college.	(a)	(b)	(c)	(d)
9. I can talk to my mother about my college experiences.	(a)	(b)	(c)	(d)
10. I can talk to my father about my college experiences.	(a)	(b)	(c)	(d)
11. I can talk to my mother about my career goals for after college.	(a)	(b)	(c)	(d)
12. I cannot talk to my father about my career goals for after college.	(a)	(b)	(c)	(d)
13. My father expects me to earn good grades in college.	(a)	(b)	(c)	(d)
14. My mother expects me to earn good grades in college.	(a)	(b)	(c)	(d)
15. My father was a good role model for influencing me to go to college.	(a)	(b)	(c)	(d)
16. My mother was a good role model for influencing me to go to college.	(a)	(b)	(c)	(d)
17. My grandparents tried to discourage me from going to college.	(a)	(b)	(c)	(d)
18. My sister(s) encouraged me to go to college.	(a)	(b)	(c)	(d)
19. My brother(s) encouraged me to go to college	(a)	(b)	(c)	(d)
20. My brother is excited about me being in college.	(a)	(b)	(c)	(d)
21. My sister is excited about me being in college.	(a)	(b)	(c)	(d)
22. My other relatives stressed the importance of having a college education.	(a)	(b)	(c)	(d)
23. My grandparents are aware of the demands I face in college.	(a)	(b)	(c)	(d)
24. My sister is aware of the demands I face in college	(a)	(b)	(c)	(d)
25. My brother is aware of the demands I face in college.	(a)	(b)	(c)	(d)

26. My other relatives are not aware of the demands of college.	(a)	(b)	(c)	(d)
27. I can talk to my grandparents about my college educational plans.	(a)	(b)	(c)	(d)
28. My friends don't understand the demands I face in college.	(a)	(b)	(c)	(d)
29. I find it easy to make friends in the college setting.	(a)	(b)	(c)	(d)
30. I have not met any new friends during the time I have been in college.	(a)	(b)	(c)	(d)

SA=Strongly Agree A=Agree D=Disagree SD=Strongly Disagree	**SA**	**A**	**D**	**SD**
31. I can not talk to my friends about my college experiences.	(a)	(b)	(c)	(d)
32. I can not talk to my friends about my career goals after college.	(a)	(b)	(c)	(d)
33. I do not have a college student friend who I can talk to about my college education plans.	(a)	(b)	(c)	(d)
34. Getting a college degree will help me improve my social status.	(a)	(b)	(c)	(d)
35. Getting a college degree will help me get a better job.	(a)	(b)	(c)	(d)
36. I can gain a lot of knowledge about this world by getting a college degree.	(a)	(b)	(c)	(d)
37. I can meet professional people by getting a college degree.	(a)	(b)	(c)	(d)
38. Getting a college degree will make me more successful.	(a)	(b)	(c)	(d)
39. College graduates routinely get the best jobs.	(a)	(b)	(c)	(d)
40. Getting a college degree is important for my future job opportunities.	(a)	(b)	(c)	(d)
41. Getting a college degree will improve my self-esteem.	(a)	(b)	(c)	(d)
42. Getting a college degree will improve my self-pride.	(a)	(b)	(c)	(d)
43. My race does not limit my choice of college majors.	(a)	(b)	(c)	(d)
44. My gender does not limit my choice of college majors.	(a)	(b)	(c)	(d)
45. Society limits my choice of college majors.	(a)	(b)	(c)	(d)
46. My professors cannot limit my choice of college majors.	(a)	(b)	(c)	(d)
47. The university administrators cannot limit my choice of college majors.	(a)	(b)	(c)	(d)
48. I chose my college major because I am good at it.	(a)	(b)	(c)	(d)
49. My father influenced my choice of college majors.	(a)	(b)	(c)	(d)
50. My mother encouraged me to pursue my college major.	(a)	(b)	(c)	(d)
51. I chose my college major because I like the subject matter.	(a)	(b)	(c)	(d)
52. I chose my college major because I find the work challenging.	(a)	(b)	(c)	(d)
53. I chose my college major because I find the work satisfying.	(a)	(b)	(c)	(d)
54. I picked my college major because I find it interesting.	(a)	(b)	(c)	(d)
55. I can major in any college subject that I want.	(a)	(b)	(c)	(d)
56. I have the power to achieve my educational goals.	(a)	(b)	(c)	(d)
57. If I become unhappy with my life, I can do something to change it.	(a)	(b)	(c)	(d)
58. When bad things happen, I can make the best of the situation.	(a)	(b)	(c)	(d)
59. The good things that happen in my life are the result of my working to make them happen.	(a)	(b)	(c)	(d)
60. Each person controls his or her own fate.	(a)	(b)	(c)	(d)
61. Each person has the power to make life better or worse.	(a)	(b)	(c)	(d)

62. I have no control of my future.	(a)	(b)	(c)	(d)
63. No matter how hard I work, I won't succeed at anything I do.	(a)	(b)	(c)	(d)
64. I can be successful in any college major that I choose.	(a)	(b)	(c)	(d)
65. My high school teachers encouraged me to go to college.	(a)	(b)	(c)	(d)
66. My high school guidance counselor encouraged me to go to college.	(a)	(b)	(c)	(d)
67. My junior high school teachers did not encourage me to go to college.	(a)	(b)	(c)	(d)
68. My junior high school guidance counselor encouraged me to go to college.	(a)	(b)	(c)	(d)
SA=Strongly Agree A=Agree D=Disagree SD=Strongly Disagree	**SA**	**A**	**D**	**SD**
69. My high school teachers did not talk about the importance of having a college degree.	(a)	(b)	(c)	(d)
70. My high school guidance counselor did not stress the importance of having a college degree.	(a)	(b)	(c)	(d)
71. My junior high school guidance counselor stressed the importance of having a college degree.	(a)	(b)	(c)	(d)
72. My high school teachers talked about the demands I face in college.	(a)	(b)	(c)	(d)
73. My junior high school teachers talked about the demands I face in college.	(a)	(b)	(c)	(d)
74. My junior high guidance counselor told me of the demands of college.	(a)	(b)	(c)	(d)
75. I sometimes worry about paying my college tuition bill.	(a)	(b)	(c)	(d)
76. Without financial aid I can still get a college degree.	(a)	(b)	(c)	(d)
77. I am knowledgeable of the various types of Financial Aid Programs.	(a)	(b)	(c)	(d)
78. My parents sometimes worry about paying my tuition bill.	(a)	(b)	(c)	(d)
79. I consider myself a good college student.	(a)	(b)	(c)	(d)
80. I believe that I will be successful in my college major.	(a)	(b)	(c)	(d)
81. I feel that I will be successful in my future career.	(a)	(b)	(c)	(d)
82. The availability of financial aid was an important factor in my decision to go to college.	(a)	(b)	(c)	(d)
83. I am not likely to need financial aid in the future.	(a)	(b)	(c)	(d)

SECTION 2

Indicate your response to the following items by marking the appropriate response under the True (T) or False (F) Heading.

T-True	**F – False**	**T**	**F**
84. I know where to go to find information on Financial Aid Programs.		(a)	(b)

85. I used tutors to help me study in junior high school.	(a)	(b)
86. My high school held briefings on the college application process.	(a)	(b)
87. I attended briefings on the college application process during high school.	(a)	(b)
88. I took remedial education courses in high school.	(a)	(b)
89. I took remedial education courses in junior high school.	(a)	(b)
90. I was part of a regular study group in high school.	(a)	(b)
91. I took remedial college courses as a college freshman.	(a)	(b)
92. I was part of a regular study group in junior high school.	(a)	(b)

Scoring Instructions

Instructions: Before scoring the survey, the following items must first be reverse coded:

5	8	12	17	26	28	30	31	32	33
43	44	46	47	62	63	67	69	70	

Family Influence Scale:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	19	20	22
23	25	26	27	49	50				

Father's Influence SubScale	1	4	6	8	10	12	13	15	49
Mother's Influence SubScale	2	3	5	7	9	11	14	16	50

Peer Influence

28	29	30	31	32	33

Self-Appraisal (Items from the two subscales below are combined to obtain the Self-appraisal Scale Score)

Locus of Control Subscale	48	51	52	53	54	79	80	81		
Self-Efficacy Subscale	55	56	57	58	59	60	61	62	64	113

Relative Functionalism

34	35	36	37	38	39	40	41	42

Glass Ceiling

43	44	45	46	47

Secondary School

65	66	67	68	69	70	71
72	73	74	84	86	87	

Financial Aid

75	76	77	78	82	83	84

Preparation for College

85	88	89	90	91	92

Sister's Influence

18	21	24

Appendix C

SANDRA HARRIS E-MAIL CORRESPONDENCE

FW: Per our conversation earlier today

From: XXXXX
Sent: Thursday, March 26, 2009 9:16 PM
To: Lynne Coy-Ogan
Subject: Re: Per our conversation earlier today

Lynne,

You have my persmission to use Factors Influencing Pursuit of Higher Education FPHE) Questionnaire in your research. I too am interested in the factors that influence first generation college students to pursue higher education. The population of students that I work with at XXX University are primarily nontraditional college students who fall into array of factors that define nontraditional students. I would be interested in doing a collaborative study with you after you have collected your data. I would be interested in conducting a comparative analysis to determine if the factors differ for traditional and nontraditonal college students.

I am including the FIPHE Questionnaire along with the scoring directions for the instrument. Also, if you are interested the questionnaire is available via the internet. If you are interested in using the intertnet version, I can create an access code for your univesity and send instructions as to how students can gain access.

I have found that when collecting survey data, the rate of return is higher if students take the survey in the mode which is consistent with their course format. For instance, the return rate for online students is higher when students take online surveys. The return rate for resident students is higher when students are allowed to take the survey in paper format. Both formats are available to you. Let me know your preference.

I am very much interested in seeing your results. Hopefully we can collaborate on a comparative study of some sort.

Sincerely,
Sandra M. Harris, PhD

Chair of Psychology Department
Associate Professor of Psychology
XXX University

---- Original message ----
>Date: Wed, 25 Mar 2009 16:34:57 -0400
>From: "Lynne Coy-Ogan"
>Subject: Per our conversation earlier today
>To: Sandra Harris
>
> Dr. Harris-
>
>
>
> It was a pleasure to speak with you earlier today.
> Thank you for agreeing to allow me to use the
> Factors Influencing Pursuit of Higher Education
> (FPHE) Questionnaire that you developed in my
> research. I am currently studying the factors
> influencing the pursuit of higher education for
> first-generation college students. As we discussed,
> I will certainly forward you the results of the
> study once it is complete this fall.
>
>
>
> Thank you in advance for your assistance and I
> appreciate your willingness to forward me the
> documents.
>
>
>
> Best Regards-
>
> Lynne
>
>
>
> Lynne Coy-Ogan
>
> School of Education
>
> XXX University

Appendix D

CONSENT FOR RESEARCH

Dear Participant:

This letter serves as your invitation and your consent to participate in the research project identified below:

Research Protocol Name: A Study of Perceived Factors Influencing the Pursuit of Higher Education Among First-Generation College Students

Principal Investigator: Lynne Coy-Ogan
School of Education
XXX University

Purpose: The purpose of the study is to identify whether there is a difference in the perceived factors which influence the decision of first-generation students to attend college as compared to students from families where at least one parent has attended college.

Procedure: The revised 2009 version of the *Factors Influencing Pursuit of Higher Education* (FIPHE) Questionnaire, a survey developed by Dr. Sandra Harris at XXX University, will be distributed to all first-year students during their freshmen English classes. Written permission will be obtained from students prior to participation, and their responses will remain anonymous and confidential. The survey results will be coded according to the scoring instructions for the instrument and then processed with the SPSS statistical analysis program. Data entry, tabulation, and analysis will be completed by Lynne Coy-Ogan. It is expected this study will be completed by the fall of 2009.

Risks, Benefits, Compensation: This study will provide information regarding the extent to which specific experiences support the transition to higher of education of first-generation college students. The goal is to better inform the practice of preparing first-generational students to be successful in college. No risks or discomforts are anticipated from your participation in this study. There is no financial compensation for your participation in this study.

Confidentiality**:** Any information gathered for this project and which could be identified with you will be kept strictly confidential. Representatives of the Institutional Review Board at either XXX University or Liberty University may look at the research records to review the results of this research project. The information gathered in this study may be published in professional journals and/or presented at professional workshops, but your identity will be kept strictly confidential.

Voluntary participation**:** Your participation in the study is voluntary. You may refuse to take part in the study and you are also free to withdraw from the study at any time.

Questions**:** If you have any questions please contact the investigator(s). Contact information is given above. If you have any questions regarding your rights as a research subject, please contact the Institutional Review Board at Liberty University by emailing XXX.

You are voluntarily making a decision to take part in the research study described above. No guarantees are made to you about the result of the study or your care. Your signature indicates that you have agreed to take part in the study having read the information provided above. You will be given a copy of this consent form and a statement of your research subjects' rights to keep.

_____	_____
Signature of Subject	Date
_____	_____
Signature of Investigator	Date
_____	_____
Signature of Witness	Date

Original Date: _____

Revision Date:_____