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Factors Influencing College Decision-Making for First-Generation Appalachian Students

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**FACTORS INFLUENCING COLLEGE DECISION-MAKING FOR FIRST-
GENERATION APPALACHIAN STUDENTS**

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Dissertation submitted to the
Graduate College of Marshall University
in partial fulfillment of the
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integration, social integration

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ABSTRACT

This investigation determined the degree of importance for selected personal-psychological, academic, peer, financial, and family factors influencing the decision to attend college by first-generation, Appalachian (FGA) sophomore students. Outcomes were further related to the degree of academic and social integration in college and the likelihood of participants returning (persisting) to the next term or year. Participants were a purposeful group of 3,264 sophomores enrolled at three universities. Data were collected using the *Transition to College Survey (TCS)*, which participants completed via an email invitation. Two-hundred, seventy-three responded (273) as follows: 110 (41%) first-generation status, 214 (78%); Appalachian status and 90 (33%), first-generation and Appalachian status.

Results found that personal-psychological factors were by far the most important influences for *ALL* respondents and especially for first-generation (*FGA*) students. Financial factors were also important influences, though differences were noted among the groupings. Overall, academic, peer, and family factors were not important influences. Participants reported modest levels of academic and social integration in their college settings and *FGA* participants reported even lesser degrees of integration compared to *ALL* or *OTHER* groupings. However, significant differences were found among the groupings for several social integration descriptors. Large percentages of *ALL* (83%) and *FGA* (87%) indicated to be very likely to return to college next term/year. No academic or social integration descriptors were significantly related to persistence, with the exception of “*spend time with friends on campus*” for *FGA* respondents.

Implications are if school personnel and families enhance personal-psychological factors of students, it may influence a greater number to consider transitioning to college. Also, providing students and parents with information about financing college early on in high school may ease financial concerns. Once there, it is important that *FGA*'s engage the college milieu and build academic and social relationships which can lead to persistence.

DEDICATION

This paper is humbly and lovingly dedicated to...

The almighty Creator for making it all possible.

If you see or hear goodness from me
Then that goodness is from The Creator
You should be thankful to The Creator for all of that
'Cause I'm not the architect of that
I'm only the...the recipient
If you see weakness or shortcoming in me
It's from my own weakness or shortcoming
And I ask The Creator and the people to forgive me for that (Mos Def, 2004).

My mother, Linda DeLong—I believe it takes growing up and having a child of your own to fully understand a mother's love. I appreciate how you raised me, all the sacrifices you've made, and all the extra love that you give me. Your encouragement and support have made all the difference.

My father, the late Bill Wood, who taught me at a young age that quitting was not an option.

My stepfather, Jeff DeLong, for loving me like I am his own.

My brother, Brian Wood, for helping me refine and appreciate my academic abilities and for being someone I can always count on.

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The cohort experience really just can’t be put into words, and yet I know any of the cohort reading this understands what I mean. I couldn’t have asked for a more meaningful personal and professional experience. My life is better for having known each of you, and to Julius, who may have had to stop joining us, but whom we were never without, you’ve inspired me beyond measure.

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CHAPTER ONE: INTRODUCTION

Formal education beyond high school continues to be an important mobility option for teenagers from family backgrounds with specific personal and socioeconomic circumstances and the related predispositions that historically negate motivation and self-efficacy for navigation to post-secondary education. Additionally, it is especially critical for those youngsters tagged as “first generation students,” those who attend but whose parents or caregivers did not attend college and likely could not appreciate the value of such an undertaking. For those in central Appalachia, the economic and social barriers may be especially operative.

It is estimated that between 59-63% of U.S. jobs require education beyond high school, and America’s colleges and universities are not churning out enough graduates to fill these positions (Fradella, 2010). Transitioning more students to post-secondary education is critical to the country remaining economically competitive. “It is estimated [there are] over one million high school graduates every year who are qualified but simply don’t go to college” (Lederman, 2010, p.1). The demand for a more-educated workforce means greater numbers of students need to continue their education beyond high school, including those students from underrepresented groups, such as first-generation Appalachian students.

First-generation students enroll at significantly lower rates than do their non-first-generation peers, and their parents’ educational attainment is a strong factor in predicting postsecondary attendance (Chenoweth & Galliher, 2004; Choy, 2001; Nunez & Cuccaro-Alamin, 1998). As parental educational attainment increases, so does the likelihood of the student enrolling in postsecondary education. In 1999, students whose parents held a

bachelor's degree or higher enrolled in college at a rate of 82%, while students whose parents had completed high school but not college enrolled at a rate of 54%, and students whose parents had less than a high school diploma enrolled at a rate of 36% (Choy, 2001).

Navigating the transition from high school to college can be challenging for all students. Students of parents who did not attend college may find the process especially difficult because their parents are unable to guide them from their own experiences. Parents who have not attended college may lack the information necessary for active involvement and may provide less assistance with college-going activities such as making curricular choices in high school, preparing for the ACT/SAT, and completing college applications (Bell, Rowan-Kenyon & Perna, 2009; Choy, 2001). Additionally, they may not have the predisposition to help or to appreciate the value added to one's life by attaining a college education.

Many Appalachian students are also first-generation students. An analysis of the 2000 U.S. Census data shows that while 24.4% of the national population age 25 or older holds a bachelor's degree or higher, only 17.7% of the Appalachian region's population aged 25 or older has obtained this level of education (Schwartz, 2004). Added to the barriers faced by first-generation students are the cultural, economic and social characteristics unique to Appalachia. High unemployment and poverty are prevalent in Appalachia, and Appalachians tend to value independence, kinship, and self-reliance. This combination of factors may diminish access to information about postsecondary education, because students may have few family members knowledgeable about the

college-going process, and they may be reluctant to seek information about postsecondary education from outside the family.

Appalachian youth continue to be underrepresented in postsecondary education, and understanding their challenges and the related academic, personal and social barriers are the crucial beginning steps for increasing their participation in postsecondary education. Researchers over the past several years have begun to identify, analyze and clarify the factors that influence, or could ultimately predict, postsecondary enrollment for first-generation Appalachian students, including personal-psychological, academic, peer, financial, and family variables.

The demand for a more educated workforce places even greater emphasis on the need for these underrepresented students to continue their formal education beyond high school. Not only is it paramount to their individual success but is also important to the strength of local, regional and national economies, within the current global context of economic competition. Notwithstanding the employment and earning value for those attending and completing college in a global-tech environment, college officials have at their hands a new market for admissions in a time of diminishing enrollments and related budget reductions. They would be well advised to enhance and to incubate these transitions.

Statement of the Problem

The major purpose of the current investigation is to determine the degree of importance given to selected personal-psychological, academic, peer, financial and family background factors regarding the decision by first-generation Appalachian students to transition to college. The second major purpose is to determine the degree of

academic and social integration that participants experienced while in college and to determine if there is a relationship between their levels of academic and social integration and their likelihood of returning to college the next semester or year. Identifying these predictors, operating individually or in combination, is important for establishing interventions to mitigate the effects of those perceived barriers that discourage these students from continuing their education beyond high school and persisting to the completion of a college degree.

Obviously, keeping students retained in college is good business for everyone, but getting them enrolled initially is a necessary precursor. When we know that the students' parents did not attend postsecondary education and that they grew up in an economically disadvantaged area, with low levels of family income and high poverty rates, it would appear that a new and more appropriate set of factors is needed to inform all concerned, including school personnel and policymakers, about first-generation Appalachian students.

Rationale

The results of the research, whatever may occur, are important to various parties such as individual students, their parents, secondary school personnel, institutions of higher education and to society in general. By identifying and indexing the most important factors that potentially influence college-going for first-generation Appalachian students, stakeholders have an informational data-base that can be used to create and build transition activities which address related unique needs before the fact. Additionally, such data can be added to a growing regional and national body of

knowledge about the transition process for first-generation students and the effect of their social and academic integration on their persistence to stay in college.

The results could assist and motivate more first-generation Appalachian students in furthering their education and enjoying the personal benefits that result from postsecondary education, for example, the potential for higher incomes, better health, more appropriate investment and savings strategies, more informed purchases, more leisure time, greater participation in social and cultural events, greater civic involvement, greater trust, and greater tolerance (ACT, Inc., 2007; Baum, Ma, & Payea, 2010; Perna 2007).

Secondary school personnel are facing increasing pressures to transition more students to postsecondary education. Results of this study could help school personnel, such as teachers, counselors, and administrators, to understand, and perhaps to manipulate, the factors influencing the decision to attend college by first-generation Appalachian students. Such understanding and related information can assist in developing a plan of action among secondary school teachers, counselors and administrators for establishing a college going culture that provides guidance and support for these students.

Institutions of higher education could also benefit from the results of this investigation. Colleges and universities are experiencing difficult economic times. Diminishing enrollments coupled with budget reductions have strained the resources for these institutions. Higher education officials need to expand their enrollments to include greater numbers of students from underrepresented groups, and first-generation Appalachian students are an untapped market. Once these students get there, higher

education officials need to provide them with support programs that monitor and encourage their persistence.

Society benefits from a highly educated population as well. A highly educated and skilled workforce encourages business development and the creation of high-paying and high-demand jobs, influencing local, regional and national economies. Additionally, society benefits from increased tax revenues from college graduates and fewer expenditures on support programs for them (Baum et al., 2010).

Overall, the results of this study will provide educational policymakers at all levels with the information about the transition process needed to create effective practices for smoothing the process and for increasing postsecondary attendance. Transitioning more students to college is essential to improving the quality of life for individuals and society. Many, beyond the individual students, stand to benefit from such an undertaking.

Research Questions

1. What is the overall degree of importance given to the various *personal-psychological* factors noted on the Transition to College Survey (Appendix B) for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents?
2. What is the overall degree of importance given to the various *academic* factors noted on the Transition to College Survey for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents?
3. What is the overall degree of importance given to the various *peer* factors noted on the Transition to College Survey for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents?
4. What is the overall degree of importance given to the various *financial* factors noted on the Transition to College Survey for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents?

5. What is the overall degree of importance given to the various *family* factors noted on the Transition to College Survey for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents?
6. What additional factors do college students report as being important in their decision to attend college?
7. How are *ALL* respondents and FIRST-GENERATION APPALACHIAN (*FGA*) college students financing their education?
8. To what extent do *ALL*, *OTHER* and FIRST-GENERATION APPALACHIAN (*FGA*) college students report being *academically integrated* into their college experience?
9. To what extent do *ALL*, *OTHER* and FIRST-GENERATION APPALACHIAN (*FGA*) college students report being *socially integrated* into their college experience?
10. What, if any, relationship exists between academic and social integration and the likelihood of returning to college next term for *ALL*, *OTHER* and FIRST-GENERATION APPALACHIAN (*FGA*) students?

Operational Definitions

1. *First-generation college students* are those whose parents completed 12 or fewer years of formal education, meaning that neither parent attended college.
2. *Non-first-generation college students* have one or more parents who attended higher education.
3. *Appalachian students* are those who attended the majority of their formal education in a county in the Appalachian region as defined by the Appalachian Regional Commission. Appendix A shows the counties included in the Appalachian region.

4. *First-generation Appalachian (FGA) students* are both first-generation and Appalachian, as previously defined, who responded to the Transition to College Survey (TCS).
5. *ALL respondents* refers to all respondents to the Transition to College Survey (TCS).
6. *OTHER respondents* refers to those respondents who were any combination of generation and Appalachian status *other* than first-generation Appalachian (*FGA*).
7. *Transition to College Survey (TCS)* is the major data collection instrument designed with items related to the various personal-psychological, academic, peer, financial and family factors that may influence transition to college and items related to academic and social integration.
8. *Social Integration* refers to the mean score of the numerical ratings of the six variables addressed in Part IV, Social Integration, of the *Transition to College Survey*.
9. *Academic Integration* refers to the mean score of the numerical ratings of the seven variables addressed in Part III, Academic Integration, of the *Transition to College Survey*.

Limitations

1. The Transition to College Survey was developed by the researcher for the specific purpose of the investigation. The data collected are limited to the various categories and variables noted therein.

2. The investigation is based upon “self-report” data and is limited to the extent that participants are willing to share personal data and to respond consistently with their perceptions, experiences and attributions.
3. Survey data collected with a “Likert-type scale” has a restricted interval or range of values, which limits the data analysis primarily to descriptive and nonparametric statistical techniques and limits respondents to offer qualifications for replies in all cases.
4. Although the study has taken into account the views of others in regard to the causal factors of college going, the main perspective from which the investigation is conducted and the conclusions made is that of the college-going student.

Delimitations

1. The population for the investigation is sophomore collegiate students at Fairmont State University, in Fairmont, West Virginia, Marshall University, in Huntington, West Virginia and Shawnee State University, in Portsmouth, Ohio. These universities are situated in the central Appalachian region of the U.S. Results are not necessarily generalized to other college-going populations in WV, OH, and in the region.
2. The data collection phase of the study took place from the end of October to the middle of December of 2011.
3. The researcher recognizes that there are a variety of background variables with complexities that influence decision-making about college going for high school students, including such aspects as aspirations, personal motivation and

commitment. Notwithstanding such factors, the data for this study is delimited to the variables and events noted on the *Transition to College Survey*.

CHAPTER TWO: REVIEW OF LITERATURE

In recent years, research publications and governmental reports have documented and described the relationships between educational attainment and the realities of the new technology labor market in the U.S. Specifically, the trend points to a demand for individuals with greater levels of post-secondary education and training to meet the emerging and continuing job needs and requirements related to the technology revolution (Bureau of Labor Statistics—Employment by Major Occupational Group, 1999; Lacey & Wright, 2009; Zumeta & Evans, 2010).

While the percentage of earned bachelor's degrees steadily increased to about 32% by 2009 for the U.S. population as a whole, the figure is estimated to be about 24% for those known as first-generation college students. Moreover, that figure is further lessened to be approximately 18% for first-generation matriculates from the Appalachian region of the U.S.

The following Review of Literature (ROL) will examine key topics and issues related to decision-making by first-generation Appalachian students to attend college and the significant background variables and experiences that influence their motivation to attend. Initially, the ROL is organized sequentially by a discussion of the benefits of higher education, and the characteristics of first-generation and Appalachian students. A discussion of the factors influencing the decision to transition to college follows and is organized by the following sub-topics: *personal-psychological factors, academic factors, peer factors, financial factors, and family factors*. Finally, the review examines the variable of persistence or the resolution by one to continue and persevere in college going

after initial enrollment, notwithstanding the barriers and obstacles. Two important dimensions of persistence are examined: social and academic integration (Tinto, 1975).

Benefits of Higher Education

An array of previous studies has convincingly documented the benefits of college attendance, both to individuals and to society. A person with a bachelor's degree will earn an average of \$2.1 million over a lifetime, nearly twice as much as a high school graduate (U.S. Department of Education, 2006). Additionally, college graduates experience less unemployment. In 2009, the U.S. unemployment rate for those with a bachelor's degree was 4.6% compared to the 9.7% unemployment rate for high school graduates (Baum et al., 2010). Beyond income and employment, college graduates enjoy better health, more appropriate investment and savings strategies, more informed purchases, more job satisfaction, more leisure time, more participation in social and cultural events, greater access to pension plans, greater access to health insurance, greater civic involvement, greater trust, and greater tolerance (ACT, Inc., 2007; Baum et al., 2010). Societal benefits include productivity increases, increased tax revenues, and fewer expenditures on social support programs such as unemployment compensation, food stamps, and Medicaid (Baum et al., 2010).

There is evidence that the percentage of individuals graduating from high school and earning a bachelor's degree in the United States has steadily increased. By 2009, 32% of the U.S. population had earned a bachelor's degree (Baum et al., 2010). While great strides have been made in increasing the educational attainment of the U.S. labor force, these strides are not keeping pace with the economy's demand for postsecondary educated individuals to fulfill new jobs, which is creating a situation of simultaneous

unemployment and job vacancy (Schwartz, 2004). Future estimates predict that 90% of the fastest-growing jobs will require some postsecondary education (U.S. Department of Education, 2006). Clearly, the economic forecast for the U.S. includes the need for more high school students to attend and to complete post-secondary education.

First-Generation Students

Despite overall gains in the percentage of adults attending postsecondary education, educational attainment differs by demographic characteristics and geographic location. Individuals with certain characteristics are substantially less likely to enroll in higher education. An especially noteworthy characteristic identified in the literature is first-generation status—meaning neither parent attended college. College enrollment rates vary significantly in regard to parents' education levels. Even after controlling for other important factors, students whose parents did not attend college are at a distinct disadvantage for enrolling in and completing postsecondary education (Choy, 2001; Engle, 2007; Nunez & Carroll, 1998).

While parental educational attainment is a strong determining factor, other variables are tied to such decision-making. First-generation students are more likely than their peers to come from low-income families, have lower educational aspirations, and have lower levels of academic preparation (Engle, 2007; Nunez & Carroll, 1998; Thayer, 2000). Only five percent of non-first-generation students are in the lowest income quartile, compared to 23% of first-generation students (Nunez & Carroll, 1998). Taken together, these circumstances contribute to negatively impact the decision to transition to college.

Additionally, first-generation students receive less encouragement and support from home and school to attend college, have limited knowledge about the transition process, and have fewer resources to pay for college (Engle, 2007; Nunez & Carroll, 1998). They are less likely to enroll in college, more likely to delay enrollment, and more likely to enroll in a two-year college rather than in a four-year college or university (Engle, 2007; Engle, Bermeo, & O'Brien, 2006; Nunez & Carroll, 1998). Students who have at least one parent with at least a bachelor's degree enroll in a four-year institution within two years of graduating from high school at a rate of 71% compared to 27% of first-generation students (Choy, 2002). The author does not make a distinction about whether a difference occurs specifically for the mother or father.

Once enrolled in postsecondary education, first-generation students are more likely to commute to campus, take classes part-time, and work full-time, which may negatively influence their academic and social integration and their persistence to a degree (Choy, 2001; Engle, 2007; Nunez & Carroll, 1998). In fact, nearly half of first-generation students leave without a degree (Choy, 2001), and they are twice as likely as their non-first-generation peers to leave before their second year (Engle, 2007). A national sample of approximately 7,400 students who had graduated high school in 1992 and who had enrolled in postsecondary education between 1992 and 2000 indicated that 24% of first-generation and 68% of students whose parents had a bachelor's degree or higher had earned a bachelor's degree by 2000 (Chen, 2005). First-generation students who do complete a bachelor's degree are less likely than their non-first-generation peers to continue their education in graduate school (Choy, 2001; Engle, 2007; Nunez & Carroll, 1998).

Appalachian Students

In 1965, the United States Congress established the Appalachian Regional Commission (ARC) to improve social and economic conditions of the Appalachian region. The Appalachian region is home to 24.8 million people, extends over 1,000 miles, and includes all of West Virginia and parts of 12 other states: Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, and Virginia. Initially, the ARC designated three Appalachian subregions: Northern, Central, and Southern. In 2009, the ARC revised the classification to include five subregions: (1) *Northern*, which includes all of the Appalachian counties in New York, Pennsylvania, and Maryland, the northern counties of Ohio, and the counties in the northern panhandle of West Virginia, (2) *North Central*, which includes the southern Ohio counties and all but a handful of southern West Virginia counties, (3) *Central*, which includes the remaining West Virginia counties, a few Virginia counties, a few Tennessee counties, and all of the Kentucky counties, (4) *South Central*, which includes the remaining Virginia and Tennessee counties and all of the North Carolina counties, (5) *Southern*, which includes all of the South Carolina, Georgia, Alabama, and Mississippi counties (Appalachian Regional Commission, 2009). A map of the Appalachian region can be found in Appendix A.

Appalachia is highly rural and characterized as an economically disadvantaged area with low-income, high poverty, high unemployment, and high rates of dependency on federal and state supplemental income. Appalachians are characterized by their strong sense of independence, kinship, and localism (Ali & Saunders, 2006; Chenoweth & Galliher, 2004).

In addition to first-generation students, students from Appalachia are historically underrepresented in postsecondary education. An analysis of the 2000 U.S. Census data shows that while 24.4% of the national population aged 25 or older holds a bachelor's degree or higher, only 17.7% of this age group in the Appalachian region holds a bachelor's degree or higher (Schwartz, 2004), and in central Appalachia only 12.3 % of the population aged 18 or older holds a college degree (U.S. Census Bureau, as cited by Ali & Saunders, 2006).

While rural youth are significantly more likely than urban youth to graduate from high school, they are less likely to pursue college (Kamptis, 1996; Adelman, 2002). Interestingly, half of all rural students live in counties without colleges (Poole & More, 2001). Low-access high schools, those where 39% or fewer of college-qualified graduates attend a four-year institution, are more frequently located in rural or small town settings than in suburban or urban settings.

Appalachian youth face many disadvantages. One of five Appalachian children live in poverty and many are without adequate health and dental care (Schwartz, 2004). Their parents are more likely to be unemployed and less likely to have attended postsecondary education. They are less likely to be classified as gifted and more likely to receive special education services (Ali & Saunders, 2006).

Because Appalachia is characterized by high poverty and low-income, an understanding of the experiences of low-income students may shed light on the distinctiveness of Appalachian students. Socioeconomic status is a strong predictor of postsecondary enrollment: as socioeconomic status increases, so does the likelihood of enrolling in postsecondary education (Engberg & Wolniak, 2009). Nearly 50% of high

school graduates in the lowest socioeconomic quartile do not enroll in postsecondary education for the fall term following their graduation from high school, compared to 7% of students from the highest socioeconomic quartile who do not enroll (Perna & Titus, 2004).

Perhaps one of the most astonishing realities is that socioeconomic status is a better predictor of postsecondary enrollment than academic qualifications. A high-income student with low test scores is just as likely to enroll in postsecondary education as a low-income student with high test scores (Advisory Committee on Student Financial Assistance, 2001). When parents of high-test-score students were asked why their children did not apply to any institution of higher education, 25% of parents in the low-income group said they did not apply because they did not know how, compared to 9% of high-income students (Akerhielm, Berger, Hooker, & Wise, 1998). When low-SES students know how and apply for college, their probability of enrolling matches the national average (Cabrera & La Nasa, 2001).

In addition to the aforementioned disadvantages faced by Appalachian students, many are also first-generation students. The combination of being first-generation and residing in the Appalachian region place these students at a distinct disadvantage for attending postsecondary education. Although considerable research exists on first-generation college students, modest research to date addresses the experiences of either first-generation and/or Appalachian students' decision to attend college, and even less research exists about the college-going tendencies for those students who are both first-generation and Appalachian. Understanding the factors influencing the decision to transition to college for first-generation Appalachian students may help policy makers

and significant others at all levels create effective practices to enable more of these students to overcome these disadvantages and to make the transition to postsecondary education.

Factors Influencing the Decision to Transition to College

Various factors have been identified as influencing the decision to attend postsecondary education for the general college-going population and first-generation college students. These factors are reviewed and grouped into the following categories: personal-psychological, academic, peer, financial, and family.

Personal-Psychological Factors

Personal-psychological factors, such as motivation, self-efficacy, self-esteem, and locus of control, influence the decision to attend college. “Research has shown for first-generation students, the motivation to enroll in college is a deliberate attempt to improve their social, economic, and occupational standing” (Ayala & Striplen, 2002, p. 57). First-generation students are more likely than their non-first-generation peers to cite being very well off financially, providing them with better opportunities, being able to live close to relatives and parents (Nunez & Cuccaro-Alamin, 1998), and having a better life than their parents as very important motives for enrolling in postsecondary education (Engle et al., 2006).

Self-efficacy, or the belief one has in the ability to perform and to effect positive, personal change, influences educational aspirations, as does the related factor of self-esteem, or the appraisal of self-worth. Students are more likely to attend postsecondary education if they have confidence in their ability to succeed (Yang, 1981). *The Social Cognitive Career Theory*, a model used to explain the career development process of

minority and underserved populations, suggests that self-efficacy and support may be more influential than parent's education or occupation in the development of education and career aspirations (Ali & Saunders, 2006). Regarding college expectations of Appalachian youth, the authors found evidence of the importance of self-efficacy beliefs in the development of expectations to attend college, and yet, in another study of Appalachian youth, students showed a lack of self-esteem, with less than 30% of students rating themselves as having above-average intelligence (Institute for the Local Government Administration and Rural Development, 1992). Chenoweth & Galliher (2004) also found self-esteem to be a factor in the decisions by rural West Virginians to pursue higher education, noting that "many seniors saw themselves as unable to fit into the college scene or lacking in intelligence or adequate grades for acceptance and success" (p. 2-3).

Both rural youth and first-generation students are susceptible to doubts about their intelligence and ability to compete in college (Striplin, 1999; Poole & More, 2001), even when they have the same level of high school preparation and achievement as their peers (Engle, 2007). In 1992, 26% of rural youth rated themselves as not being intelligent enough for college (Institute of Local Government Administration and Rural Development, 1992). Likewise, lack of self-esteem and self-efficacy affects the decision of first-generation Appalachian students to attend postsecondary education as well as the type of postsecondary education chosen. The majority of first-generation students enroll in two-year institutions (55%); whereas, 76 % of the students whose parents have a bachelor's degree or higher are more likely to enroll in a four-year institution (Chen, 2005).

Locus of control refers to attributions about one's life situation and circumstances. Those with an external locus of control view external variables as determining their situation and feel that life circumstances are beyond their control; whereas, those with an internal locus of control feel more in control of their actions and outcomes. It makes sense that college enrollment and persistence would be positively affected by those with an internal locus of control. However, research on locus of control for Appalachian students is mixed. Ford (1991) suggests that "many Appalachians tend to have a passive resignation to their situation in life" (as cited by Wallace and Diekroger, 2000, p.140), yet others have found first-generation and Appalachian students to have an internal locus of control (Hand & Payne, 2008; Wallace & Diekroger, 2000). In Hand & Payne's (2008) study of first-generation Appalachian students, all sixteen participants cited responsibility for their own success, using words such as "determination," "focus," and "driven," and did not cite external factors as their motivation. Wallace & Diekroger (2000) measured locus of control for Appalachian students at three institutions in eastern Kentucky and southern Ohio. The range of scores for subjects occurred between 21 and 40, with higher values indicating the existence of an internal locus of control. The results, a statistical mean of 34.47, indicate that these students appear to have an internal locus of control.

Personal-psychological factors, such as motivation, self-efficacy, self-esteem and locus of control, interact to influence the decision to attend postsecondary education, the type of postsecondary institution to attend, and the type of degree to pursue (e.g. associate's or bachelor's degrees). Research suggests first-generation and Appalachian students are motivated to attend college by future rewards of a better life but they may

significantly vary in their levels of self-efficacy and self-esteem beliefs which influence higher educational aspirations.

Academic

Academic factors include academic preparation and achievement and encouragement and support from school personnel, including receiving information and guidance about postsecondary education. Academic preparation refers to the type of curriculum in which the student participates, including such options as tech/college prep; Advanced Placement; high school and college dual enrollment; and advanced English, science and math courses. Academic achievement mainly refers to grade point average and standardized test performance. On associated school measures, academic preparation and achievement affects access to and readiness for postsecondary education. Additionally, how students perceive their academic preparation for college influences college aspirations. Students with negative perceptions of their academic preparation are less likely to aspire to a college education (Pitre, 2006).

Parental educational attainment has been shown to influence the courses taken by students. Students whose parents' did not attend college are only marginally or not qualified to attend college (Choy, 2001) because of less academic preparation (Berkner & Chavez, 1997; Thayer, 2000). A high school curriculum of high academic intensity and high quality has a strong influence on college enrollment and bachelor's degree completion (Adelman, 1999; Chenoweth & Galliher, 2004; Engberg & Wolniak, 2009). More specifically, upper level math courses are a strong predictor of postsecondary enrollment (Adelman, 2006; Choy, 2001; Engberg & Wolniak, 2009; King, 1996) more than doubling the chances that a first-generation student will enroll in college (Horn &

Nunez, 2000). However, first-generation students enter college with less academic preparation, having completed fewer advanced math courses (Chen, 2005; Thayer, 2000; Wartburton, Bugarin, & Nunez, 2001). In a study of seventh grade students, in nine primarily rural counties in West Virginia, less than one-half planned to take trigonometry or calculus (Meehan, Cowley, Chadwick, & Whittaker, 2001). Adelman (1999) found that only nine percent of first-generation college students complete a rigorous high school curriculum, including four years of English and mathematics courses beyond Algebra II, and they were less likely to report taking Advanced Placement tests. Taking algebra in eighth grade is a necessary step toward taking advanced high school math courses, but first-generation students report less parental encouragement to take algebra then. This underscores the need for more extensive counseling and guidance in middle and junior high schools. Access to rigorous courses is also problematic: more than one-fifth of first-generation students report algebra was not offered by their school in eighth grade (Engle, 2007).

Advanced Placement (AP) courses and dual-credit courses are rigorous. In addition to providing academic preparation for college, success in these courses may increase academic self-confidence and college aspirations (King, 1996). Of SAT takers, students who take even one or two AP courses attend four-year colleges at higher than average rates (King, 1996) and enjoy greater college success (College Board, 2005). Appalachian Ohio students have fewer AP opportunities compared to students from the rest of the state. About 58% of Appalachian Ohio districts had one or more students in the 2006 graduating class take an AP test, compared to 72.5% of non-Appalachian districts in Ohio (Voinovich School of Leadership and Public Affairs Ohio University,

2007). Researchers found, in a study of all high school students in Florida and those from New York City's vocational high schools, that enrollment in dual-credit courses was positively related to graduating from high school, enrolling in college, remaining enrolled two years after graduation, and having higher college GPAs than their non-dual-enrollment peers (Karp, Calcagno, Hughes, Jeong, & Bailey, 2007).

How well a student performs academically influences college aspirations. Student's grade point average (GPA) is associated with college plans: students planning to attend college have higher GPAs than those who do not plan to attend college (Chenoweth & Galliher, 2004). In a longitudinal study of the Illinois High School Class of 2002, college readiness, as defined by a combination of high school GPA and ACT scores, was the strongest indicator of postsecondary enrollment and bachelor's degree completion (Smalley, Lichenberger & Brown, 2010). Nationally, two-thirds of students who take the ACT in high school enroll in college the fall after graduation (ACT Inc., 2007). The likelihood of a student taking the ACT or SAT is related to parents' educational attainment. Students whose parents did not attend college had a 25% likelihood of taking the ACT or SAT in high school compared to 73% of students whose parents held a bachelor's degree (Choy, 2001).

Academic factors beyond academic preparation and achievement include support and encouragement from school personnel, including the dissemination of information about college. Research shows the more information a student has the more likely that student will attend college (Bell et al., 2009; Berkner & Chavez, 1997; Hossler, Braxton & Coopersmith, 1989; Hossler, Schmit & Vesper, 1999; King, 2004; Perna, 2004; Plank & Jordan, 2001).

Because first-generation students come from families with limited or no college experience, they may rely heavily on the school to provide college information. As students move throughout the secondary pipeline their reliance on family and peers for college information shifts to school personnel during the junior and senior years (Bell et al., 2009). Teachers, counselors, college fairs and college representatives become critical sources of information.

Teachers and counselors influence educational aspirations by helping students choose their high school curriculum and postsecondary plans. Counselors play a crucial role in students' educational aspirations, especially for those from disadvantaged groups (Cabrera & LaNasa, 2000; McDonough, 2005, as cited in Hahn & Price, 2008). Low-income students are less likely to report that their parents were helpful sources when making post-high school plans, while they are more likely to cite counselors and teachers as helpful (Cabrera & LaNasa, 2001). Students who discuss their future with high school counselors several times a year are more likely than average to attend college (King, 1996), and talking with teachers and counselors in high school has been shown to influence how "academically competent" students feel in college, especially for first-generation students (Hudley, Moshetti, Gonzalez, Cho, Barry, & Kelly, 2009).

Perceptions of students' ability by teachers' and counselors' perceptions of students' ability may affect the amount and type of interaction they have with students regarding college. They, intentionally or unintentionally, may give more interest and attention to those they view as "college material" (College Board, 2007; Voinovich School of Leadership and Public Affairs, 1992; Hart & Jacobi, 1992; Vargas, 2004). Students from disadvantaged groups may be viewed as academically incapable or at risk

and are guided into less rigorous high school courses (The Institute for College Access & Success, 2008) and receive less encouragement and support for attending college (Engle, 2007). Favoring students they view as “college material” may be a result of high student-to-counselor ratios which restricts the availability of time and resources. It may also be a socio-economic bias.

Choy (2001), using data from the National Education Longitudinal Study, the Beginning Postsecondary Students Longitudinal Study and the Baccalaureate and Beyond Longitudinal Study, found no differences in the percentage of first-generation and non-first-generation students reporting receiving help from teachers or counselors either for selecting their high school program or for applying to colleges. However, Johnson, Rochkind, Ott, and DuPont (2009), in a telephone survey of a nationally representative sample of 614 young adults ages 22-30 with some post-secondary education, found that 62% of these students who personally paid for college reported that their high school counselors did a poor or fair job of helping them with the college application process.

Overall these results suggest that academic preparation and achievement and encouragement and support from high school personnel influence students’ perceptions of their ability to succeed in college and their decision to enroll in college. Students are more likely to aspire to and enroll in college if they take rigorous high school courses and perform well in high school. Consequently, teachers and counselors act as important sources of information and influence high school curriculum and postsecondary plans.

Peers

Peers influence the decision to attend college. Students consistently rank friends as a major influence on the decision to attend college and which college to attend.

Students whose friends enroll in college are more likely to enroll in college themselves

(Engberg & Wolniak, 2009). For low-income urban minority students, friends' plans were found to be the single best predictor of four-year college enrollment, even when controlling for socioeconomic, familial, and academic ability variables. In fact, the probability of attending college increased nearly 30% when the participant had friends who planned on going to college and who wished them to attend as well. The author found peer variables to be a stronger predictor of four-year college enrollment for low-income urban minority students than for the comparison sample of all U.S. high school graduates, meaning peer influence and support are more significant for low-income urban minority students than for the general population (Sokatch, 2006). Similarly, Horn and Chen (1998) examined college going among at-risk students and found that peers have a significant effect on the decision to attend college. The authors concluded that at-risk students are six times more likely to attend college when most of their friends plan to attend.

Appalachian students ranked peers as the second most influential group in their higher education decisions, just behind parents and ahead of teachers, counselors, relatives, siblings, and even self (Institute for the Local Government Administration and Rural Development, 1992; Voinovich School of Leadership and Public Affairs Ohio University, 2009). Ninety-four percent of Appalachian Ohio students who enrolled in college reported that at least one of their two closest friends had also gone to college (Voinovich School of Leadership and Public Affairs Ohio University, 2009). For rural West Virginia students, a strong relationship emerged for males, but not females, between the primary friend's plans to attend college and the student's plans to attend college (Chenoweth & Galliher, 2004).

Students whose friends are supportive of their decision to enroll in college are more likely to attend college. This may be problematic for first-generation and rural students who tend to receive less encouragement and support for college enrollment from peers (Nunez & Carroll, 1998; Poole & More, 2001). Rural youth are often discouraged by their peers from going to college, which may reflect a lack of understanding of the benefits of higher education or a concern that their friends will not return to the community (Poole & More, 2001). Some of these perceptions and feelings may be related to the issues of self-efficacy and esteem noted previously.

The influence of peers has taken on a new dimension since the advent of the Internet. Due to the increased participation in social-networking sites over the past few years, the Internet may be another variation of the peer variable. Today, peers may not necessarily be those persons intimately known from the parameters of the community. Nevertheless, the Internet has value for youth and is perceived as a credible source of information and interaction. The Internet is frequently cited as a place to get information about college, yet little research exists on what types of websites or sources students are accessing to gather information. In a study of college knowledge of 9th and 11th grade students, the results ranked the Internet as the second primary source of information behind parents (Bell et al., 2009). Vargas (2004), who also studied college knowledge, found that students relied on guidance counselors and the Internet in their decision about where to apply to college.

It appears that students from disadvantaged backgrounds, such as at-risk, low-income, Appalachian, first-generation, rural, and/or urban-minority students, experience the influence of peers more so than the general college-going population. Peers influence

each other's decision to attend college by attending college themselves and/or showing support and encouragement for their friends who wish to attend college.

Financial

Financing a college education today is a major economic undertaking and concern of students and their families. Financial factors, including socio-economic status and the availability of financial aid, influence the decision to transition to college and the ability to persist in college. It is estimated that nearly one-half of all qualified low- and middle-income students do not enroll in college because of financial barriers (College Board, 2007). Every year, 400,000 of these students are unable to attend a four-year college, and 170,000 simply do not attend higher education at all (Ficklen & Stone, 2002). Comparatively, in 2004, only seven percent of students in the highest socioeconomic quartile did not enroll in postsecondary education in the fall immediately following graduation (Perna & Titus, 2004). Among those high income students who do enroll, 40% will earn a bachelors degree, compared to only six percent of low-income students (Advisory Committee on Student Financial Assistance, 2001). When low-income students do enroll, they are more much more likely to choose private for-profit and public two-year institutions (Baum et al., 2010).

As noted, the socio-economic status (SES) of individuals and their families is a predictor of postsecondary attendance. Moreover, the average SES of a high school's student body affects college enrollment (Engberg & Wolniak, 2009). The matter of social-cultural context is stated in these terms by Chenoweth & Galliher (2004).

Socioeconomic status (SES) can dictate educational choices...determine the availability of certain peers, limit or permit access to health services, and

influence a host of other social contexts (e.g. church, daycare, recreational activities, etc.). On a broader level, family income also impacts the choice of parents' friends, neighbors, coworkers, and the availability of media, legal services, and social services. Entire cultures or subcultures are influenced by economics in the expectations and accepted standards of living that are made available to members (p. 4).

Figuring out how to finance education can be overwhelming for students, and the cost of education is a major barrier in the decision to enroll and persist in college (College Forward, 2009), with many students feeling they cannot afford college and desiring an immediate income instead (Institute for the Local Government Administration and Rural Development, 1992; Voinovich School of Leadership and Public Affairs Ohio University, 2007). Finances were cited by high school counselors as the top four reasons why college-qualified students do not attend college, for example not enough financial aid, tuition too high, unwilling to borrow, and preferred to work (Hahn & Price, 2008).

First-generation, low-income students are less likely to receive financial support from their parents (Engle & Tinto, 2008). Parents who have earned at least a bachelor's degree are more likely to report that they plan to help pay the costs of higher education and that they had enough information about costs to begin planning (Lippman, Guzman, Keith, Kinukawa, & Shwalb, 2008). Moreover, students often lack accurate information about the cost of higher education and grossly overestimate the expense (Institute for the Local Government Administration and Rural Development, 1992; Choy, 2001; Long 2004; Horn, Chen, & Chapman, 2003), which discourages them from attending college (Goldrick-Rab, 2006). Parents, especially low-income, minority and/or those who did

not attend college, are also mis-informed about the cost of higher education and tend to overestimate costs as well (Choy, 2001; Grodsky & Jones, 2004; Horn, Chen, & Chapman, 2003).

Not only are many students and parents ill-informed about the cost of higher education, they lack understanding about financial aid. Add to this the complexity of completing a *Free Application for Federal Student Aid (FAFSA)*, and it's no wonder that for the 2003-2004 school year 1.5 million students, or about one in four (American Council on Education, 2004; King, 2004), who met Pell Grant criteria did not even complete a *FAFSA* (King, 2006). Yet, only one-fifth of counselors polled considered the *FAFSA* an important issue (Hahn & Price, 2008). "Those who need the most assistance—students from low-income families, whose parents have lower educational attainment—are probably the least well-equipped to complete the complex, difficult, and intimidating process of applying for college and for financial aid" (Institute for the Local Government Administration and Rural Development, 1992, p. 4). Because the *FAFSA* requires in-depth personal and financial information, parents, especially Appalachians who value privacy and independence, may be reluctant to request help which requires them to divulge and share such personal information. As parents become more concerned about college expenses and the availability of financial aid, they may discourage their children from applying to college (Grodsky & Jones, 2004), resulting in fewer attending a four year college (Engberg & Wolniak, 2009, p. 143). Nearly one-half of parents of 7th grade students in West Virginia thought their child would be able to afford college, while 20% of parents doubted their child would be able to afford college. The remaining 35% were unsure (Meehan et al., 2001). When low-income students

expect to receive financial support from parents and/or financial aid, they are much more likely to attend college than students who do not expect to receive such support (King, 1996).

First-generation and minority students are more likely to choose an institution based on cost-related reasons (College Forward, 2009.; McDonough & Calderone, 2004; Nunez & Cuccaro-Alamin, 1998). Minority students and students in low- and middle-income serving schools are cautious of loans, whereas student at high-income serving schools tend to view school loans more neutrally (Bell et al., 2009). Part of the problem is the common practice of “just in time” financial aid awareness activities targeted at junior and senior level students and their parents (Bell et al., 2009; Perna 2004). One in four Appalachian Ohio high school seniors who planned to attend postsecondary education had not completed the *FAFSA* by April/May of their senior year (Voinovich School of Leadership and Public Affairs Ohio University, 2007), and one-third of parents surveyed said they had not taken any steps to pay for their child’s postsecondary education (Voinovich School of Leadership and Public Affairs Ohio University, 2009).

Appalachian students consistently, and increasingly, report finances as an important barrier to postsecondary education (Voinovich School of Leadership and Public Affairs Ohio University, 2007). In an Ohio study, the number of high school seniors reporting lack of finances as a problem encountered regarding college grew from 58% in the 1992 sample to 81% in the 2008 sample (Institute for Local Government Administration and Rural Development, 1992). Appalachian Ohio college graduates also ranked finances as the number one difficulty they faced regarding going to college (Voinovich School of Leadership and Public Affairs Ohio University, 2009).

Students and their families are paying an increasingly larger share of college costs (St. John, 2003). Often states respond to budget shortfalls by decreasing funding for higher education (National Center for Public Policy and Higher Education, 2004), which leads to tuition increases. Average incomes and financial aid awards have not kept pace with tuition increases. While problematic for all students, this trend especially impacts low-income students. After adjusting for inflation, tuition rose 91% between 1979 and 1999, while average income of a family with at least one child increased only 17% during the same period (Stiglitz, Tyson, Orszag, & Orszag, 2000). A maximum Pell Grant covered 84% of the costs to attend a public four-year institution in the 1975-76 school year, while in 2001-02, it covered only 42% of the costs (College Board, 2002).

Not only does financial aid influence the decision to enroll in postsecondary education, it also influences the ability to persist in postsecondary education. Students who leave postsecondary education, compared to those who graduate, are more likely to report that they had to personally pay for college. Additionally, the need to work and earn money was the reason cited most often for leaving school (71%), and 52% said they just couldn't afford the tuition and fees. Students who leave college favor proposals that would make college more affordable. Three of their top four proposals concern finances: allow part-time students to qualify for financial aid, cut the cost of attending college 25%, and have the government offer more college loans (Johnson et al., 2009).

Clearly, financial factors, strongly connected to family socioeconomic status and the availability of financial aid, influence the decision and ability to enroll in postsecondary education, the type of institution in which to enroll, and the ability to persist through degree completion for first-generation and Appalachian students.

Family

Familial influences include parents' educational attainment, parental support and encouragement, and parental involvement and guidance. It is not unlikely that families play a strong role in the decision of their children to go to college (Kuh, Kinzie, Buckley, Bridges & Hayek, 2006). Appalachian students have consistently reported parents to be the strongest influence in their decision to attend higher education (Institute for Local Government Administration and Rural Development, 1992; Meehan et al., 2001). Over 70% of the 1,145 high school seniors in the Access & Success—Appalachian Ohio study (Voinovich School of Leadership and Public Affairs Ohio University, 2008) indicated their parents were the most influential person in their decision to attend or not attend college. So it is not surprising that the educational attainment of the parents is a strong factor in predicting postsecondary attendance.

As the level of parent education increases, so does the likelihood of their children enrolling in postsecondary education (Chenoweth & Galliher, 2004; Choy, 2001; Nunez & Cuccaro-Alamin, 1998). Specifically, a strong relationship between father's educational attainment and college plans has been found (Ali & Saunders, 2006; Chenoweth & Galliher, 2004; Stage & Hossler, 1989). There is evidence that parents' educational attainment influences educational expectations as early as 8th grade. Even for students who plan to go to college, parents' education influences whether they actually go to a four-year college, settle on a two-year institution instead, or do not attend postsecondary education. After controlling for all other factors, having a parent with a bachelor's degree remained significant (Choy, 2001). This seems to hold true regardless of student qualifications. Low-income, highly-qualified students enroll at substantially

lower rates than do high-income, highly-qualified students (Ficken & Stone, 2002).

Parents' educational attainment influences not only postsecondary enrollment but also the likelihood that students will persist to degree attainment (Choy, 2001; Mortenson, 2007).

The educational attainment of other family members, such as brothers, sisters, aunts and uncles, is also associated with students' college plans. If a member of the student's family attended college, he or she is more likely to attend (Chenoweth & Galliher, 2004). Additionally, support from community members has been shown to have a positive influence on the decision to attend college. To determine the differences between students who planned to attend college and those who did not plan to attend college, researchers surveyed rural Vermont high school seniors. Support from community members, especially clergy and school personnel, was reported by students as having a positive influence on their decision to attend college (Knisley, 1993).

Parental support is a crucial factor in the decision to attend postsecondary education. Parents are consistently rated as the most important resource students turn to in the college decision process (Bell et al., 2009; Cooper, Cooper, Azmitia, Chavira, & Gullatt, 2002). In a study of West Virginia seventh graders, 92% received information about post-high school choices from their parents, followed by 70% from teachers. Eighty-one percent these students felt their parents wanted them to go to college, yet less than 30% of parents agreed they were familiar with the entrance requirements for postsecondary institutions (Meehan et al., 2001).

Ali and Saunders (2006) found that for Appalachian youth self-efficacy beliefs and perceptions of parental support influence college aspirations more so than their parents' educational attainment. These become important effects because they may be

manipulated in favor of the students; whereas, parent education levels are a discrete entity and cannot be changed. Family and friends' aspirations for the student significantly affect college attendance (Engberg & Wolniak, 2009), and first-generation students receive less support from family and friends for their enrollment (Engle, 2007; Engle et al., 2006; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1995).

Parents who have little or no college experience may not recognize the benefits of higher education or may not believe they can afford to pay for college, thus becoming non-supportive or even obstructive (Engle, 2007; Grodsky & Jones, 2004; Hsaio, 1992; Vargas, 2004). Discouraging messages can lead to alienation from family support (Striplin, 1999). Appalachian students, especially women, are exposed to discouraging messages regarding the pursuit of higher education, with most of these messages originating in the students' own families (Wallace & Diekroger, 2000). Interestingly, Stage and Hossler (1989) found that the frequency with which females discussed college with their parents resulted in a negative effect on their educational plans.

Parental involvement requires interacting with children in college-going activities. Engle (2007) suggests parental involvement is the most important factor influencing college enrollment, regardless of parents' education level. Parents who have not attended college may lack the information necessary for interactive involvement and may be less helpful with college-going decisions, such as making curricular choices in high school, preparing for the ACT/SAT, completing college applications, and going on college visits (Bell et.al, 2009; Choy, 2001; Engle, 2007). Parental involvement in college-going activities may negate other barriers to post-secondary enrollment, such as academic preparation and parents' educational attainment (Engle, 2007; Horn & Nunez, 2000;

Hossler et al., 1999). When parents do not have first-hand knowledge of college-going activities, they may rely on the schools to provide information. Yet, less than half of economically disadvantaged parents report receiving college information from their child's school compared to more than two-thirds of economically well-off parents (Venezia, Kirst, & Antonio, 2003).

These results show familial influences, including parental educational attainment and parental support and encouragement, to be especially significant. While parental education levels have been documented as influencing college aspirations, it is encouraging that parental support, involvement and guidance can lessen the disadvantage of low levels of parental educational attainment. However, the research presented in this regard has variations, as noted.

Persistence

First-generation and Appalachian students are less likely to attend college, and for those who overcome barriers and do enroll, they have difficulty remaining enrolled and are less likely to persist to a degree (Voinovich School of Leadership and Public Affairs Ohio University, 2007; Chen, 2005; Engle, Bermeo, and O'Brien, 2006; Shaw, DeYoung, & Rademacher, 2004). Recent research has provided insight into the characteristics of first-generation students and their experiences with enrolling, participating, and persisting in postsecondary education.

Chen (2005) provided important information about the experiences of first-generation students by analyzing a subset of the National Educational Longitudinal Study of 1988 (NELS:88) focusing on 1992 12th grade students who enrolled in postsecondary education between 1992 and 2000. The author found, as earlier studies have revealed,

that first-generation students were more likely to be Black or Hispanic and to come from low-income families compared to their non-first-generation peers. They were less academically prepared, had taken fewer high-level math courses in high school, and had lower achievement and college entrance examination scores. They were more likely to delay postsecondary enrollment, enroll in two-year institutions, take remedial courses (especially in math), not identify a major after entering, choose a major in a vocational or technical field, earn fewer credits in their first year, have lower first-year grade point averages, withdraw from or repeat courses, and attend part-time and discontinuously. These attributes singularly, let alone in combination, affect persistence and degree attainment: Forty-three percent of first-generation students had left postsecondary education without a degree by 2000, compared to 20% of non-first-generation students. However, Chen's findings differed from earlier studies which found that first-generation students were less likely to persist. After introducing additional postsecondary course-taking and performance variables not available in previous studies, the difference in persistence disappeared. No difference between first-generation students and their non-first-generation peers was found when persistence was broadened to include earning any postsecondary credential or still being enrolled. Yet, first-generation students' likelihood of attaining a bachelor's degree remained lower than their non-first-generation peers.

In addition to the academic disadvantages experienced by first-generation students, they are more likely to have jobs, work more hours, live off-campus, demonstrate greater financial need, spend less time in extracurricular activities and non-academic-related interactions with peers, have less confidence in their academic abilities, and have lower postgraduate aspirations compared to their non-first-generation peers

(Engle et al., 2006; Engle & Tinto, 2008; Pike & Kuh, 2005; Tenerzini, Cabrera, & Bernal, 2001). These factors contribute to lower engagement and interfere with students' academic and social integration, which may explain why these students are less likely to view the campus environment and faculty as supportive (Engle et al., 2006).

Academic and Social Integration

Tinto's (1975) student integration model is one of the most widely recognized works in student attrition. Academic and social integration, both formal and informal, are central to the model, which emphasizes that students' success in their pursuits determines their commitment to their educational goals and to the institution. As levels of academic and social integration increase, so does the student's likelihood of persisting. Academic and social integration also increases student commitment to the institution (Howard & Levine, 2004; Pascarella, Terenzini, & Wolfe, 1986). Institutions with high graduation rates are successful at academically and socially integrating students (Muraskin & Lee, 2004). Additionally, academic performance has been linked to academic and social integration (Carini, Kuh, & Klein, 2006).

Academic integration activities include attending career-related activities on campus; participating in study groups with other students; attending academic events, other than class, on campus; using student support services; and interacting with faculty and advisors about academic matters. Social integration activities include attending social events on campus; spending time with friends on campus; going to local places with friends from campus; participating in school clubs, student associations, sororities, fraternities or other non-academic activities; and participating in or attending extra-

curricular activities, such as athletic events, intramurals, concerts, and plays (Engle & Tinto, 2008; Nunez & Carroll, 1998).

While all students benefit from academic and social integration, research shows that first-generation students derive more benefit than their peers (Engle & Tinto, 2008), including positive effects on thinking skills, degree plans, internal locus of control, and preference for higher-order cognitive tasks (Pascarella, Pierson, Wolniak, & Terenzini, 2004). Yet, first-generation students spend less time engaging in academic and social integration activities (Engle, 2007; Nunez & Cuccaro-Alamin, 1998).

Specifically, they spend less time on campus studying, participating in extracurricular activities, interacting with faculty and other students, and developing close friendships with other students. Additionally, they are more likely to view faculty as unsupportive or unconcerned about them and are more likely to report having experienced discrimination on campus (Engle, 2007; Pascarella, et al., 2004).

Characteristics of first-generation students may contribute to lower levels of academic and social integration, such as being older, living off campus, spending less time on campus, having dependent children, being in a low-income quartile, working full-time, and viewing themselves as employees first and students second (Cook & King, 2004; Choy, 2001; Engle, 2007; Engle & Tinto, 2008; Nunez & Cuccaro-Alamin, 1998; Pascarella, et al., 2004; Pike & Kuh, 2005).

In the Connecting the Dots (CTD) project, researchers analyzed the effects of engagement on grades and persistence using data from the National Survey of Student Engagement, academic transcripts, financial aid information, and ACT/SAT scores for approximately 11,000 students at 18 baccalaureate-granting institutions, including

historically Black and Hispanic institutions. An important result was that “student engagement in educationally purposeful activities during the first year of college had a positive, statistically significant effect on persistence, even after controlling for background characteristics, other college experiences during the first college year, academic achievement, and financial aid” (p.21). Moreover, while all students benefit from engagement, those who have been historically underserved by postsecondary institutions benefit more in terms of grades and persistence (Kuh, Kinzie, Cruce, Shoup, & Gonyea, 2007).

Whether these findings apply to the academic and social integration of Appalachian students is questionable. Bradbury (2008) examined the integration of first-generation, first-term college students from Appalachian Ohio. Among other findings, these students acknowledged as vital to their success the importance of faculty who present themselves as accessible and approachable. Wilson and Gore (2009) hypothesized that students from Appalachia would experience greater academic benefit from school connectedness than students from other regions given that Appalachians value collectivism over individualism. In two studies of college students, the authors found a positive relationship between school connectedness and GPA for students from the Appalachian region in Kentucky but no relationship between school connectedness and GPA for those who were from outside the Appalachian region. This suggests academic and social integration into the college community may be especially important for Appalachian students’ success due to specific culture characteristics.

Summary

Despite overall gains in the percentage of adults attending postsecondary education, educational attainment differs by demographic characteristics and geographic location. Individuals with certain characteristics are substantially less likely to enroll, attend, and persist in higher education, including first-generation and/or Appalachian students. Over the past two decades, a significant amount of research has been conducted to gain a better understanding of the experiences of first-generation college students in the United States. Yet, research on Appalachian students' is modest, and there is more to understand about the effects on the college-going trends for this population.

Research on first-generation college students ranges from qualitative studies with small sample sizes to quantitative analysis of multiple national data sets. Overall these results tend to fall in three general categories. The first category examines pre-college characteristics, such as high school preparation, college expectations, and the college choice process. The second category aims to better understand the transition from high school to postsecondary education, and the third category focuses on college variables, such as persistence, degree attainment, and career outcomes (Pascarella et al., 2004).

The existing research on first-generation college students has been based on a handful of national data sets from the National Center for Education Statistics, including the National Study of Student Learning (NSSL:92) (Terenzini et al., 1995; Pascarella et al., 2004), the National Education Longitudinal Study (NELS:88) (Chen, 2005; Choy, 2001), the Beginning Postsecondary Students Longitudinal Study (BPS:90/94) (Choy, 2001; Nunez & Carroll, 1998), and the Baccalaureate and Beyond Longitudinal Study (B&B: 93/94) (Choy, 2001; Nunez & Carroll, 1998). Other researchers have chosen to

conduct real-time studies. For example, Engle, Bermeo, and O'Brien's (2006) research involved focus groups with 135 first-generation students in Texas. Bui (2002) compared first-generation students at UCLA with students for whom both parents had at least a bachelor's degree and with students for whom both parents had some college experience but no degrees. Recently, Coy-Ogan (2009) compared first-generation students with students from college-educated families on perceived influential factors in the pursuit of higher education at a private university in eastern Maine. These three studies represent varying student populations and geographic locations across the United States.

While much has been written about first-generation students, the existing research on Appalachian students has focused on academic and career aspirations of middle school and high school students (Ali & Saunders, 2006; Chenoweth & Galliher, 2004; Meehan et al., 2001) and factors influencing integration and persistence of Appalachian college students (Bradbury, 2008; Hand & Payne, 2008; Wilson & Gore, 2009). The most comprehensive information available on Appalachian students comes from the Appalachian Access and Success studies of 1992 and 2007. These studies examined Appalachian Ohio students' access to and persistence in postsecondary education. Only one study was identified that investigated students who were both first-generation and Appalachian. Using a phenomenological approach, the researchers sought to understand the factors contributing to the academic persistence of 16 students at one institution of higher education in Appalachia (Hand & Payne, 2008).

While several factors have been identified as influencing first-generation students' decision to transition to and persist in college, there is more to learn about the influences on Appalachian students' decisions, and more specifically about the decisions

of first-generation Appalachian students to transition to and persist in college. Since Appalachia is a region of unique and varying cultural attributes, students may be influenced in different ways than those students from other regions of the United States. Gaining current knowledge and understanding of the various factors impacting college-going decision-making for this particular population can lead to knowing how to best assist and advise these candidates beforehand as well as to know which contextual circumstances might be manipulated in favor of their persistence after they get there.

Additionally, collecting data in real time contexts directly from participants provides greater assurance for obtaining current perceptions of participant's experiences, perceptions and the related factors influencing college going. Consequently, it is the purpose of this investigation to determine the degree of importance given to selected personal-psychological, academic, peer, financial and family background factors regarding the decision by first-generation Appalachian student to transition to college. Additionally, the level of academic and social integration into their college milieus will be assessed as a basis to determine their intention to continue on, or to persist, in college for another academic year or semester.

CHAPTER THREE: RESEARCH METHODOLOGY

This chapter outlines the research methodology for conducting the current study. The purpose of the study, research design, population and sample, procedures, and data analysis are described. Additionally, the survey instrument is detailed from inception to completion including the steps taken to ensure its reliability.

Purpose

The first major purpose of this investigation was to determine the degree of importance given to selected personal-psychological, academic, peer, financial, and family factors regarding the decision to attend college by first-generation Appalachian students. The second major purpose was to determine the degree of academic and social integration that participants experienced while in college and to determine if a relationship existed between their levels of academic and social integration and their likelihood of returning to college the next semester or year. Research indicates academic and social integration are important factors in college persistence and that these factors may be especially important for first-generation students (Engle & Tinto, 2008).

Study Design

This study used a mixed-method survey design with a purposeful, non-random sample of first-generation Appalachian college students from three universities situated in the states of Ohio and West Virginia in the central Appalachian region. There are two important quantitative outcomes: the ratings of importance given to the factors thought to influence the decision to attend college and the likelihood of returning to college—the latter being distinguished by or related to the degree of social and academic integration.

Two open-ended items were also included to gather qualitative information. Participants were given the opportunity to address factors or circumstances that influenced their decision to attend college other than those given in the formal survey. Additionally, students were prompted to describe other ways they were financing college beyond the sources listed.

Population

The population included 3,264 sophomores enrolled in the fall semester of 2011 at Marshall University (1,718) in Huntington, West Virginia, Fairmont State University (829) in Fairmont, West Virginia, and Shawnee State University (717) in Portsmouth, Ohio. First-generation status was defined as neither parent having attended college. Appalachian status was defined as having spent the majority of one's public schooling years in the Appalachian region as defined by the Appalachian Regional Commission (Appalachian Regional Commission, 2009). A map of the Appalachian region is provided in Appendix A.

Instrument and Data Collection

Quantitative and qualitative data were collected by administering the *Transition to College Survey (TCS)* (Appendix B). The TCS is a self-report survey consisting of four parts. Part I consists of 44 items designed for respondents to rank the importance of each factor in their decision to enroll in college. Items were keyed to a 5 point rating scale as follows: 3 = major, significant influence (most important), 2 = moderate influence (somewhat important), 1 = did not influence (not important), NA = did not apply, UC = item is not clear enough in meaning to assess. Part I of the survey also included an open-

ended text box in which respondents could write in additional factors or circumstances thought to influence their decision to attend college.

Part II was designed to collect demographic information, including Appalachian status, age, racial-ethnic heritage, high school GPA, courses taken in high school, highest level of education completed by mother and father, family income, and sources of college financing. This section provides an open-ended text box in which students could indicate other resources used to finance college.

Part III arranged seven items to measure participants' level of *academic integration*. These data were sought to assess the frequency with which participants actively involved themselves in various on-campus academic activities, such as meeting with an advisor, attending career-related activities, participating in study groups, using student assistance centers, and informally talking with faculty outside of class. These items were keyed to a 5-point rating scale: 1 = Never, 2 = Once, 3 = Seldom, 4 = Sometimes, 5 = Frequently.

Part IV arranged six items to assess the level of *social integration* or the frequency with which participants actively engaged in on-campus social activities, such as going to social events on campus, participating in school groups, participating in extra-curricular activities, attending school sponsored events, spending time with friends on campus, and going to local places with friends from campus. Academic and social integration items were keyed to a 5-point rating scale: 1 = Never, 2 = Once, 3 = Seldom, 4 = Sometimes, 5 = Frequently.

Finally, the survey asked respondents to estimate the likelihood of attending college next term/year by indicating one of the following: very unlikely, unlikely, likely, very likely, and uncertain.

The Transition to College Survey (TCS) was created by the researchers of this study. Content for the items was derived from the research literature on factors influencing college decision-making, academic integration and social integration. The **original version of the TCS** consisted of 46 items in Part I, 15 items in Part II, seven items in Part III, and six items in Part IV.

Following completion of the first draft of the survey, it was initially piloted with a group of seven high school students to determine if the instructions and meaning of the items were clear. The participants were provided with a copy of the survey instrument and were directed to silently read the introduction and the instructions. They felt the introduction and the instructions were clear, and they understood what was being asked of them. Next, the researcher read each item one by one and students commented whether they felt the item was clear or needed clarification. Several items were revised for clarity. Item number 46 read *Participation in a course/program in high school that provided information and assistance in going to college*. The students felt the item should include specific examples of courses or programs. The item was revised to read *Participation in a specific course/program, such as Educational Talent Search or College Forward, designed to provide information and assistance in going to college*. Item 10, *Indicate the highest level of education completed by your parents* was revised to read *Indicate the **highest** level of education completed by your parents* to emphasize the word “highest.” Item 13 read *Did you apply for government financial aid by completing*

the FAFSA application? The students felt the question was unclear, and based on their feedback, the item was revised to read *Did you complete a FAFSA application?*

Subsequently, the instrument was evaluated in two pilot studies. The first pilot consisted of 42 sophomore education majors at Fairmont State University. A second pilot was conducted on 93 students in an introductory biology course at Marshall University. These pilots resulted in the following revisions. In Part I, item number 13 *a sister in my family* and item number 14 *a brother in my family* were combined to read *a brother or sister in my family* because the results showed a very large number of “does not apply” responses. Additionally, item number 12 *plans of my girlfriend or boyfriend* was eliminated because of the large number of “does not apply” responses and because the variable was not evident in any manner in the research literature. An additional item was added to Part II, demographics, which was to determine the number of college credit hours the respondent had completed.

Fairmont State Pilot

The second pilot study consisted of 42 students, 12 male and 30 female, enrolled in an introductory special education course for education majors at Fairmont State University. Eighty-one percent of the participants were aged 22 or younger. Fifteen, or 35.7%, of these students were first-generation college students, and 38, or 90.5%, were from Appalachia. Fourteen of the students were both first-generation and Appalachian students. The results of the 46 items in Part I were summarized by the percentage of responses given for “most important influences.” The top 10 most important influences, which were actually the top 12 due to identical frequency percentages in two instances, clearly indicated that the students were perceived to pursue college based on personal-

psychological factors. “Contacts on Facebook and the Internet,” other peer variables, and high school counselors were perceived as not important influences in the decision to pursue college.

Of importance here is whether respondents consistently replied on the scale. Data were analyzed using Cronbach’s Alpha to estimate the reliability of the results. An index of .878 was obtained for the 46 items in Part I, which indicated that candidates responded consistently on the scale. The obtained index is a relatively high measure, considering a minimal industry standard on these kinds of measures of approximately .70 (Pallant, 2007). Additionally, the effect of omitting selected items on the scale was measured to know if the index value would materially change—i.e., be lesser or greater. Overall there was no significant change in the obtained Cronbach index, thus further ensuring the relationship of the items. The final survey is included in Appendix B.

Marshall University Pilot

The third pilot study consisted of 93 students, 38 male and 55 female, in an introductory biology course at Marshall University. Seventy-nine percent of the participants were aged 22 or younger. Thirty-two, or 34.4%, of the students were first-generation college students, and 77, or 83.7%, were from Appalachia. Twenty-nine of the participants were both first-generation and Appalachian students. Again, the results of the 46 items in Part I were summarized by the percentage of responses combined for “most important influences” and “not important influences”. Results were similar: although there was some variation in the order of the items, Fairmont State Pilot participants and Marshall University Pilot participants ranked the same six items as the most important influences. Even though there are variations in the perceived influences,

this sample likewise replied consistently on the scale. Again, data were analyzed using Cronbach's Alpha to estimate the reliability of the results. An index of .915 was obtained for the 46 items in Part I, indicating high internal consistency and reliability.

Procedures

Following completion of the prospectus and its approval by the candidate's doctoral committee, the IRB Research (Protocol) Application, Form #2 (Social/Behavioral) was submitted to and approved by the Marshall University Institutional Review Board. During the fall semester of 2011, following IRB review and subsequent approval, the survey was loaded on to Survey Monkey and an e-mail invitation to complete the survey was distributed to sophomore students at Marshall University, Fairmont State University, and Shawnee State University. Administrative personnel at Fairmont State University and Shawnee State University provided e-mail addresses for all sophomore students at their respective institutions. E-mail addresses for Marshall University sophomores were obtained through the campus directory (Marshall University, 2011).

The survey included a cover letter explaining the purpose and importance of the investigation, giving instructions for accessing and completing the survey and verifying matters of confidentiality, including the option to decline as a participant. The survey invitation e-mail, Appendix C, was sent the first week of December. A follow-up e-mail was sent to all non-respondents on December 12, 2011, and a final request e-mail was sent to all non-respondents on January 17, 2012. The survey closed at midnight January 20, 2012. Although the survey was intended to be available for four weeks, due to delays in IRB approval and the fact that the initial e-mail invitation was sent shortly before

finals and winter break, the survey was kept open and a final request e-mail was sent during the beginning of spring semester 2012. Therefore, the survey was open for seven weeks.

Data collection was accomplished using web-based software, Survey Monkey, which is designed to accomplish common survey needs in the social and behavioral sciences. Survey Monkey is one of several existing popular technical tools, including *Question Pro*, *Survey Gizmo*, *Line Survey Access*, *Snap Survey*, *Checkbox*, *Question Pro*, *Zoomerang*, *Survey Connect, Inc.*, and *Magic Survey Tool*.

One of the main issues with these kinds of tools is “data protection”—i.e., the level of security that is maintained by these providers, including anonymity and privacy. The U.S. Department of Commerce, along with related constituents in the European Community, have established a set of guidelines referred to as a “*Safe Harbor Framework*”. These guidelines are applied to such programs and the Department publishes a “Safe Harbor” approved list. If a tool is not on the list, it essentially means that there is some data security issue. Of the programs noted above only *Survey Gizmo* and *Survey Monkey* are listed at the *Safe Harbor*. Survey Monkey has met Safe Harbor requirements and is on the Department of Commerce's list of such companies (Web Accessibility Center, 2008; SurveyMonkey, 2001).

Data Analysis

Quantitative data was analyzed using the Statistical Package for the Social Sciences (SPSS) Version 20. Related descriptive procedures and statistical techniques used to obtain the needed results are provided below. These are described in regard to each of the research questions posed for the investigation.

1. What is the overall degree of importance given to the various *personal-psychological* factors noted on the Transition to College Survey for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents? (Descriptive visual and numerical summaries, including frequency data in percentage formats, tables or graphed for visual comparison.)
2. What is the overall degree of importance given to the various *academic* factors noted on the Transition to College Survey for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents? (Descriptive visual and numerical summaries, including frequency data in percentage formats, tabled or graphed for visual comparison.)
3. What is the overall degree of importance given to the various *peer* factors noted on the Transition to College Survey for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents? (Descriptive visual and numerical summaries, including frequency data in percentage formats, tabled or graphed for visual comparison.)
4. What is the overall degree of importance given to the various *financial* factors noted on the Transition to College Survey for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents? (Descriptive visual and numerical summaries, including frequency data in percentage formats, tabled or graphed for visual comparison.)
5. What is the overall degree of importance given to the various *family* factors noted on the Transition to College Survey for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents? (Descriptive visual and numerical summaries, including frequency data in percentage formats, tabled or graphed for visual comparison.)
6. What additional factors do college students report as being important in their decision to attend college? (The qualitative summary shows all of responses arranged in the Appendix D. The analysis was to discern and to describe any common threads or themes.)
7. How are *ALL* respondents and FIRST-GENERATION APPALACHIAN (*FGA*) college students financing their education? (The qualitative summary shows all of responses arranged in the Appendix E. The analysis was to discern and to describe any common threads or themes.)
8. To what extent do *ALL*, *OTHER* and FIRST-GENERATION APPALACHIAN (*FGA*) college students report being *academically integrated* into their college experience? (Kruskal-Wallis). These data were examined for significant

differences among the ranks for the 7 items listed on the survey, using a .05 level of significance.

9. To what extent do *ALL*, *OTHER* and FIRST-GENERATION APPALACHIAN (*FGA*) college students report being *socially integrated* into their college experience? (Kruskal-Wallis). These data were examined for significant differences among the ranks for the 6 items listed on the survey, using a .05 level of significance.

10. What, if any, relationship exists between academic and social integration and the likelihood of returning to college next term for *ALL*, *OTHER* and FIRST-GENERATION APPALACHAIN (*FGA*) students? (Frequency percentages for likelihood of returning to college). Chi Square Test of Independence).

CHAPTER FOUR: DATA ANALYSIS AND RESULTS

This chapter presents the data analyses and results for the current research. This investigation used a mixed-method survey design with a purposeful, non-random sample of first-generation Appalachian college students from three universities situated in the states of Ohio and West Virginia in the central Appalachian region.

The first major purpose of this investigation was to determine the degree of importance given to selected personal-psychological, academic, peer, financial, and family factors regarding the decision to attend college by first-generation Appalachian students. The second major purpose was to determine the degree of academic and social integration that participants experienced while in college and to determine if a relationship existed between the degree of academic and social integration and their likelihood of returning to college the next semester or year. The ten research questions that follow were posed to understand more about the degree of importance given to personal-psychological, academic, peer, financial, family, and additional factors influencing college-decision making and the relationship, if any, between academic and social integration and intent to persist.

The Transition to College Survey (TCS) assessed the degree of importance given to various personal-psychological, academic, peer, financial, and family factors in influencing students' decisions to attend college, as well as the degree to which students report being socially and academically integrated into their college experience. The survey comprised four parts. Part I consisted of 44 items designed for respondents to rank the importance of each factor in their decision to enroll in college. Items were keyed to a 3 point rating scale as follows: 3 = major, significant influence (most

important), 2 = moderate influence (somewhat important), 1 = did not influence (not important), NA = did not apply, UC = item is not clear enough in meaning to assess. Part I of the survey also included an open-ended text box in which respondents could write in additional factors or circumstances thought to influence their decision to attend college.

Part II was designed to collect demographic information, including Appalachian status, age, racial-ethnic heritage, high school GPA, courses taken in high school, highest level of education completed by mother and father, family income, and sources of college financing. This section also provided an open-ended text box in which participants could indicate other resources used to finance college.

Part III arranged seven items to measure participants' level of *academic integration*. These data were sought to assess the frequency with which participants actively involved themselves in various on-campus academic activities, such as meeting with an advisor, attending career-related activities, participating in study groups, using student assistance centers, and informally talking with faculty outside of class. These items were keyed to a 5-point rating scale: 1 = Never, 2 = Once, 3 = Seldom, 4 = Sometimes, 5 = Frequently.

Part IV arranged six items to assess the level of *social integration* or the frequency with which participants actively involved themselves in on-campus social activities, such as going to social events on campus, participating in school groups, participating in extra-curricular activities, attending school sponsored events, spending time with friends on campus, and going to local places with friends from campus. Academic and social integration items were keyed to a 5-point rating scale: 1 = Never, 2 = Once, 3 = Seldom, 4 = Sometimes, 5 = Frequently.

Finally, the survey asked respondents to estimate the likelihood of attending college next term/year by indicating one of the following: very unlikely, unlikely, likely, very likely, or uncertain. A copy of the complete instrument is found in Appendix B.

Population

The population for the investigation came from a purposeful selection of all 3,264 sophomore students from Fairmont State University, Marshall University, and Shawnee State University. The students were considered by their respective institutions as sophomores during the fall semester of 2011. Of the total population of 3,264 sophomores, 273 responded to the survey for a response rate of 8%. Twenty-two opted out. Of the 273 respondents, 110 (41%) claimed first-generation student status by answering “yes” to question #46 *Are you a first-generation college student, meaning that neither of your parents attended college?* Appalachian status was true of 214 (78%) respondents, and 90 (33%) identified themselves as both first-generation and Appalachian students.

For research questions one through five, descriptive statistical data analyse were conducted on *ALL* (n=273) participants and on First-Generation Appalachian (*FGA*) respondents (n=90). *ALL* refers to every participant in the *TCS*. *FGA* refers to participants who were first-generation and Appalachian. *OTHER* refers to any combination of generation and Appalachian status *other* than first-generation Appalachian (*FGA*) status. For research questions eight through 10, data analyses were obtained by the Kruskal-Wallace Test and the Chi Square Test of Independence, on *FGA* (n=90) and *OTHER* (n=183). For research question ten, analyses were conducted on *ALL* (n=273), *FGA* (n=90), and *OTHER* (n=183).

Demographic Information

Demographic information collected in Part II of the survey included Appalachian status, age, racial-ethnic heritage, high school GPA, courses taken in high school, highest level of education completed by mother and father, family income, and sources of college financing. Nearly 92% of *ALL* and 93% of *FGA* respondents were white, non-Hispanic. Of *ALL* respondents, 194 were female, 74 were male, and 5 declined to answer. Seventy-four percent were between the ages of 19-22. Of the 90 first-generation Appalachian (*FGA*) respondents, 65 were female and 25 were male. Sixty-nine percent were between the ages of 19-22, while 12% were 34 or greater. Of the 21 non-first generation non-Appalachian (*NFGNA*) respondents, 14 were female and 7 were male and 71% were between the ages of 19-22. Figure 1 shows that over 77% of *FGA* respondents reported a high school grade point average (GPA) of 3.1 or higher compared to 57% of *NFGNA* respondents.

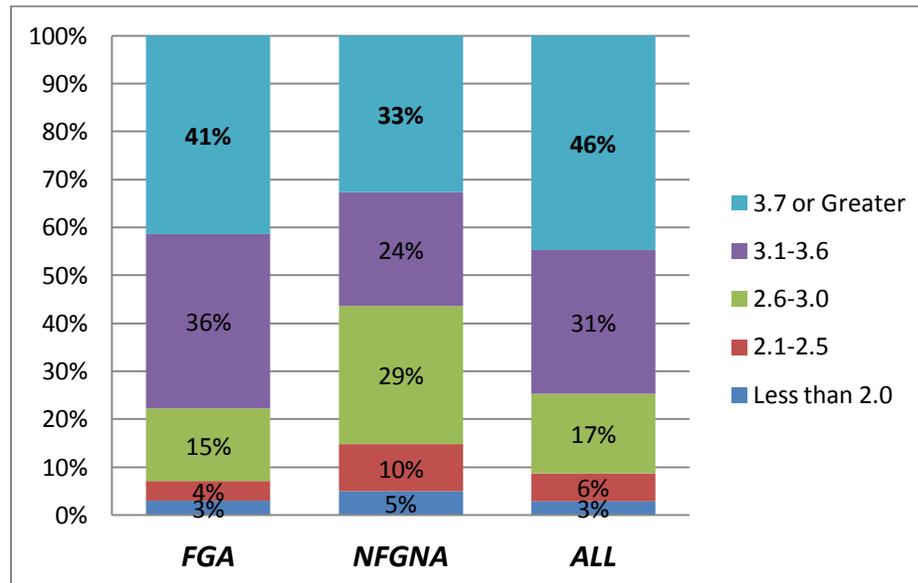


Figure 1. High School Grade Point Average (GPA) by First-Generation Appalachian (*FGA*), Non-First-Generation Non-Appalachian (*NFGNA*) and *ALL*.

Courses taken in high school were similar among the groups. Interestingly, a greater percentage of *FGA* than *OTHER* respondents reported having taken Algebra I, Geometry, Other Advanced Courses and AP Math in high school, although these differences were small. A greater percentage of *OTHER* respondents reported having taken Algebra II and Trigonometry in high school. The largest difference occurred for AP English with 30% of *FGA* and 45% of *OTHER* participants reporting having taken it in high school.

First-generation status was defined as neither parent attending college. Two-thirds of *NFGNA* respondents' mothers and 52% of their fathers had at least a bachelor's degree. Interestingly, as indicated in Figures 2 and 3, 24% of *NFGNA* respondents' mothers and one-third of fathers had some college but no degree.

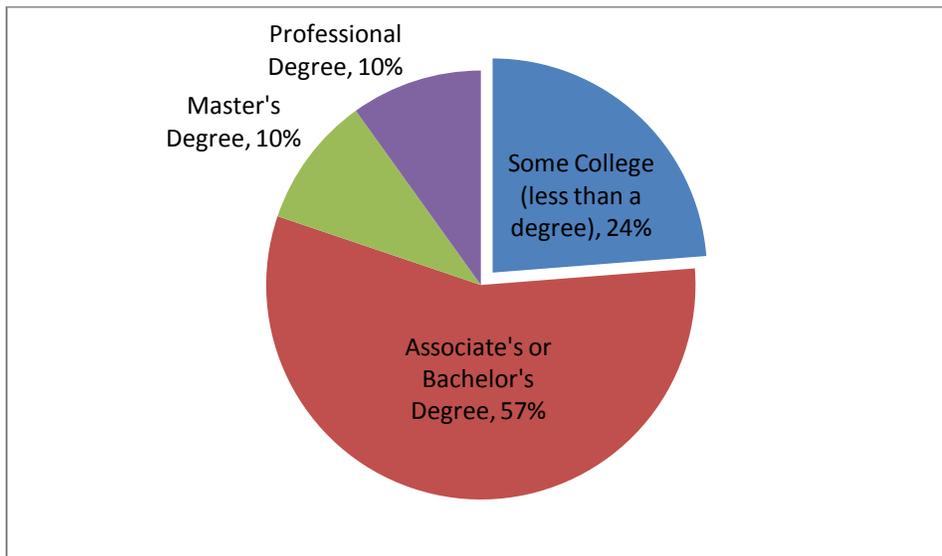


Figure 2. Non-First-Generation Non-Appalachian (NFGNA) Respondents' Mothers' Education Levels.

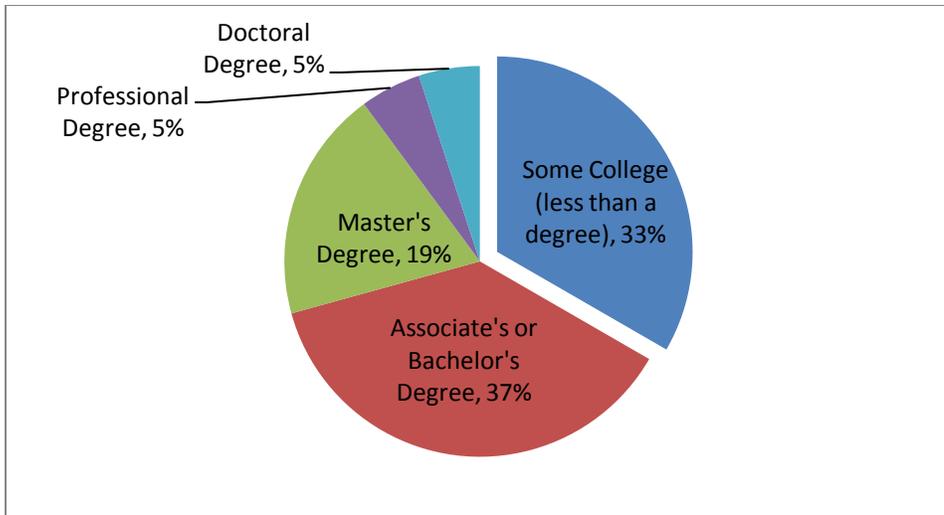


Figure 3. Non-First-Generation Non-Appalachian Respondents' Fathers' Education Levels.

Figures 4 and 5, for ALL respondents, show that over 36% reported family incomes of \$57,000 or more, with 11-14% of respondents estimating at all other income levels. Ten respondents declined to answer this item. Over 43% of FGA students reported family income of less than \$27,000, with 25% reporting less than \$18,000. One FGA participant declined to answer this question. Meanwhile, 47% of NFGNA respondents reported family income of \$57,000 or greater.

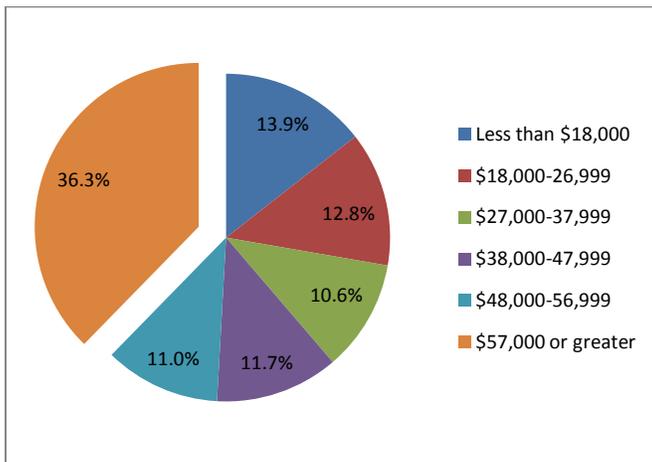


Figure 4. Family Income by ALL Respondents.

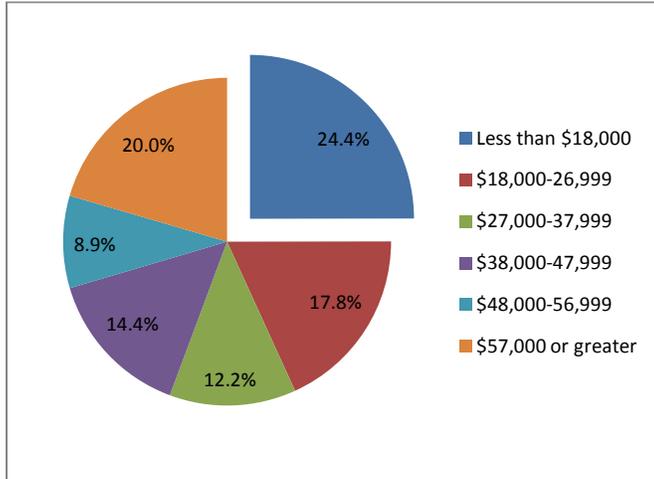


Figure 5. Family Income by *FGA* Respondents

One hundred percent of *FGA* respondents completed a FAFSA application, compared to 88% of *ALL* and 57% of *NFGNA* respondents. Sixty-eight percent of *FGA* and 58% of *NFGNA* students had not much, very little or no difficulty completing the FAFSA application. Almost 37% of *ALL* respondents and just under one-half of *FGA* respondents received grant in aid, while only 14% of *NFGNA* students did. More than two-thirds of *FGA* respondents did not live on campus, whereas two-thirds of *NFGNA* respondents did live on campus. Roughly 70% had completed between 26 and 57 college credit hours.

Research Question One

What is the overall degree of importance given to the various *personal-psychological* factors noted on the Transition to College Survey for *ALL* respondents and for *FIRST-GENERATION APPALACHIAN (FGA)* respondents?

Without question, personal-psychological factors were a major influence on all respondents' decision to attend college. Across all categories, personal-psychological factors made up eight of *ALL* and nine of *FGA* respondents top ten. Every personal-

psychological factor was rated as a major or moderate influence by at least 55% of *FGA* respondents. *My goals for a 'good life,'* a personal-psychological factor, was the most important factor noted by *ALL* respondents (87%) and by *FGA* respondents (88%). Only two of *ALL* respondents rated “My goals for a ‘good life’” as not important or not applicable.

For the most part, as noted in Table 1, personal-psychological factors were similar in importance to *ALL* and *FGA* respondents. However, there were discrepancies among the dyads. Over 70% of *FGA* respondents felt *Faith in my intelligence and abilities* was a most important influence; whereas, only 60% of *ALL* respondents felt this way. *To have a better life than my parents* ranked sixth (61%) among personal-psychological factors as a major influence on *FGA* respondents decision to pursue post-secondary education, but only 41% of *ALL* respondents felt it was a major influence on their decisions. Additionally, slightly fewer *FGA* respondents noted “to prepare myself for graduate or professional school” as a most important influence than did *ALL* respondents. The results for *FGA* and *ALL* corresponded overall and showed that both groups considered their personal goals and motivation to be very important influences.

Table 1

Most Important *Personal-Psychological* Influences by Frequency Percentage for *ALL* Respondents and First-Generation Appalachian (*FGA*) Respondents

Item	<i>ALL</i> Respondents (N=273)	First- Generation Appalachian (<i>FGA</i>) Respondents (N=90)	Difference
My goals for a “good life.”	87.2	88.9	1.7
To get a good paying job later.	82.4	84.4	2.0
The career I desire requires a college degree.	80.2	77.8	-2.4
To help control my future.	78.8	80	1.2
Faith in my intelligence and abilities.	60.1	71.1	11.0
To be on my own-independent of family and others.	58.1	55.1	-3.0
To improve myself socially and personally.	53.7	55.6	1.9
To get a good paying job outside the local region.	53.5	48.3	-5.2
To prepare myself for graduate or professional school.	47.3	42.2	-5.1
To get a good paying job in the local region.	45	46.1	1.1
To have a better life than my parents.	41	61.1	20.1
To learn about the world.	31.9	27	-4.9
Few or no real job opportunities in my home area.	29	30.3	1.3

Research Question Two

What is the overall degree of importance given to the various *academic* factors noted on the Transition to College Survey for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents?

Academic factors were similar in importance to *ALL* and *FGA* respondents. *My scores on the ACT, SAT or other college entrance exam(s)* was rated as a major or moderate influence by 74% of *FGA* respondents. As noted in Table 2, the three most important academic influences for *ALL* and *FGA* respondents were *my scores on the ACT, SAT, or other college entrance exam(s), the overall grades that I achieved in high school, and the grades I achieved in my math and English courses in high school.*

Interestingly, each of these three items relates to personal achievement, compared to the other academic factors which relate more to the influence of school personnel, curriculum and activities. For many of these other academic items, few students rated them as most important influences.

Over 58% of *FGA* respondents rated *support from my high school teachers* as a major or moderate influence; whereas, less than one-third of *FGA* respondents felt *encouragement and support from counselor(s) in high school* was a major or moderate influence. In fact, 68% of *ALL* and *FGA* respondents rated this item as not important or not applicable. Remarkably, 27% of *FGA* respondents rated “help received from high school counselors for completing college applications” as not applicable. Nine out of 13 academic factors were rated as not important or not applicable by over 55% of *ALL* and *FGA* respondents.

Table 2

Most Important *Academic* Influences by Frequency Percentage for *ALL* Respondents and First-Generation Appalachian (*FGA*) Respondents

Item	<i>ALL</i> Respondents (N=273)	First- Generation Appalachian (<i>FGA</i>) Respondents (N=90)	Difference
My scores on the ACT, SAT or other college entrance exam(s).	42.4	44.9	2.50
The overall grades that I achieved in high school.	41.4	44.4	3.00
The grades I achieved in my math and English courses in high school.	26	31.5	5.50
Support from my high school teacher(s).	24.9	30.3	5.40
My participation in tech/college prep curricula in high school.	14.1	20	5.90
Encouragement from high school administrators.	12.8	14.4	1.60
Influence of teachers in junior high/middle school.	11.9	18	6.10
Information about higher education provided by my high school counselor(s).	10.7	13.5	2.80
Encouragement and support from counselor(s) in high school.	10.7	11.4	0.70
Recruitment programs/activities sponsored by colleges.	10.4	9.1	-1.30
Encouragement from my junior high/middle school counselor(s).	8.8	10.1	1.30
Help received from high school counselors for completing college applications.	7	9.2	2.20
Participation in a course/program in high school that provided information and assistance in going to college.	6.2	5.6	-0.60

Research Question Three

What is the overall degree of importance given to the various *peer* factors noted on the Transition to College Survey for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents?

As shown in Table 3, peer factors were similar in importance to *ALL* respondents' and *FGA* respondents' decision to pursue post-secondary education. No peer influence was rated as a most important factor by more than 23% of respondents, which is interesting because peers are generally perceived as influential on social and personal behaviors, especially for teenagers. *Encouragement and support from close friends in*

high school was the peer influence of most importance for *ALL* and *FGA* respondents (22%). All seven peer factors were rated as not important or not applicable by over 41% of *ALL* and *FGA* respondents. Overall, peers were not a strong influence on respondents' decisions to enroll in college.

Table 3

Most Important *Peer* Influences by Frequency Percentage for *ALL* Respondents and First-Generation Appalachian (*FGA*) Respondents

Item	<i>ALL</i> Respondents (N=273)	First- Generation Appalachian (<i>FGA</i>) Respondents (N=90)	Difference
Encouragement and support from close friends in high school.	22.5	22.5	0.0
Discussing future plans in high school with close friends/peers.	21.8	22.5	0.7
A close friend who attends or is attending college.	17.4	19.3	1.9
Being able to attend the same college with my close friends.	14	18.9	4.9
Rooming in college with friends from my home area.	7.4	9	1.6
Contacts on Facebook and Internet.	5.5	6.7	1.2
Being part of a regular study group with friends in high school.	4.1	7.8	3.7

Research Question Four

What is the overall degree of importance given to the various *financial* factors noted on the Transition to College Survey for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents?

As shown in Table 4, financial influences were important to *ALL* and *FGA* respondents. *Being able to obtain financial aid* was the only non-personal-psychological factor in the top ten overall most important influences for *FGA* respondents; *ALL* respondents also rated this item in the top ten most important influence overall. But a large difference occurred between the groups with 57% of *ALL* and 72% of *FGA*

respondents reporting it to be a most important influence. A discrepancy was also found between *FGA* and *ALL* participants for “my parent’s ability to pay tuition and costs,” with 32% of *ALL* and 24% of *FGA* respondents indicating it was a most important influence. Twenty-seven percent of *FGA* respondents indicated “my parent’s ability to pay tuition and costs” was not applicable, compared to 19% of *ALL* respondents.

Table 4

Most Important *Financial* Influences by Frequency Percentage for *ALL* Respondents and First-Generation Appalachian (*FGA*) Respondents

Item	<i>ALL</i> Respondents (N=273)	First- Generation Appalachian (<i>FGA</i>) Respondents (N=90)	Difference
Being able to obtain financial aid.	57.1	72.2	15.1
My ability to pay tuition and costs.	35.6	34.1	-1.5
My parent’s ability to pay tuition and costs.	32.2	24.7	-7.5

Research Question Five

What is the overall degree of importance given to the various *family* factors noted on the Transition to College Survey for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents?

Overall, family factors were not important or not applicable influences on *FGA* respondents’ decisions to enroll in college. As indicated in Table 5, several discrepancies exist between *ALL* and *FGA* participants in their rating of family influences. Family influences were more important to *ALL* than *FGA* respondents.

FGA respondents rated *encouragement and support from my mother* (42%) and *encouragement and support from my father* (40%) as the most important family influences. *ALL* respondents rated parent influences somewhat greater, with 51% for

father and 55% for mother, the latter of which was in the top ten most important influences. *Attending a local college to be able to commute from home* ranked third for *ALL* (27%) and *FGA* respondents (36%), indicating the latter are more likely to be commuters.

Expectedly, a large difference occurred between *ALL* and *FGA* respondents in their rating of *having parents who graduated from college* as a most important influence. Interestingly, only 21% of *ALL* respondents felt it was a major influence. It is worth noting that these respondents are in college and their decision to attend apparently was not influenced by the fact that their parents did or did not graduate from college.

Table 5

Most Important *Family* Influences by Frequency Percentage for *ALL* Respondents and First-Generation Appalachian (*FGA*) Respondents

Item	<i>ALL</i> Respondents (N=273)	First- Generation Appalachian (<i>FGA</i>) Respondents (N=90)	Difference
Encouragement and support from my mother.	55.9	42.2	-13.7
Encouragement and support from my father.	51.8	40	-11.8
Attending a local college to be able to commute from home.	27.7	36.7	9.0
Influence of my grandparents.	24.7	26.7	2.0
A brother or sister in my family	22.8	22.2	-0.6
Having parent(s) who graduated from college.	21.6	2.2	-19.4
Encouragement from others in my community (e.g. clergy, coaches, employers).	21	21.1	0.1
Brother or sister who attends/attended college.	16.9	16.7	-0.2

Research Question Six

What additional factors do college students report as being important in their decision to attend college?

Qualitative data was gathered from responses to item #45 on the *Transition to College Survey (TCS)* which asked respondents to *please write in other factors or circumstances that influenced you that are not specifically described in the previous items*. Of the 72 comments, 18 were from *FGA* respondents. Complete results are in Appendix D.

Initially, comments were coded per the influences (personal-psychological, academic, peers, financial, family) covered in Part I of the TCS. Although the item asked participants to offer comments about other kinds of influences, it might be expected that many of the open comments would relate to the decision making factors on the TCS, having just completed that part of the survey. This was the case for the participant noted below, whose comments bridged across several decision-making categories (personal-psychological, family, peers and academic).

I always had a *desire* to further my education, but as a college student that is *non-traditional* it is obvious that I took a long way around to getting to and through college. The determination of *family and friends* to help me achieve the *goals* I had set for myself early on is what helped me stay motivated to go back to college. *My desire* to learn more about the areas and subjects that interests me is what keeps me coming back for more and more degrees and more and more knowledge. I will say this though, when I was in high school my *counselors* did not talk with me one on one about what my goals in life were and they did not guide me in ways I could go about achieving those goals no matter what came my way. I only knew who my high school counselor was because she also coached the majorettes in my school and since I worked with them I knew who she was.

Other than that she in no way guided me as to how, when, or where to apply, let alone go to college.

Overall, twenty-nine responses related to *personal-psychological* influences. These replies were exemplified by words and phrases such as “desire,” “self-control,” “fulfill a lifelong dream”, “self-driven,” “desire to be knowledgeable,” “dreams for the future,” “lower job opportunities,” “independent,” “feeling accomplished,” “survive in the real world,” “drive,” “goals,” and “to better and support myself.”

Twenty-two responses indicated *family* was an important influence on the decision to attend college. In addition to parents, grandparents and siblings, spouses and children were frequently mentioned, sometimes from an encouragement and support standpoint and sometimes from a financial standpoint: “better job to take care of my wife and kids,” “...to support my family,” “...I wanted to give him (son) a better life,” “to provide a better life for my daughter,” “...my two children...,” “...four daughters who are college graduates...inspired and encouraged me to attend college...,” “husband and kids...,” “I saw the struggles that my family had by not having a college degree...,” “to better and support myself and future family,” “...I want more in life than what my mother has had with her life. So I am going to be as successful in my life as possible to give her the best senior life as possible.”

In addition to the many replies indicating supporting one’s self (personal-psychological) and one’s family (family) as important influences, other financial factors were identified, such as scholarships and future income opportunities. Being able to pay for college was an important financial factor: “...my scholarships. I cannot pay for it (college) without them and would have to drop out...,” “I became interested in golf

because I knew there were many scholarship opportunities for females who played golf. Otherwise, I would have a hard time affording college,” “the Montgomery GI bill,” “given aid as a displaced worker.” Future financial concerns were also identified as an important influence: “...my desire to earn a specific lifestyle for myself...those include traveling, owning a nice home, and continuing to figure skate which is a costly hobby,” and “to be competitive outside in the real world,”

Peers were specifically mentioned twice in the replies: “I have a few close friends who were very encouraging to me about getting my degree...,” and “the determination of family and friends to help me achieve the goals I had set for myself.” Peers were considered not important overall, but appear to be important to certain individuals, who specifically mentioned the influence of *friends*.

Counselors, an academic factor, were also mentioned twice, in a negative light. A participant referenced previously, indicated that a high school counselor did not help or guide him/her in ways to “go about achieving goals...she in no way guided me about how, when or where to apply [for college].” The first response indicated that his/her high school counselor did not help him/her and can be found in the complete quote near the beginning of this section. The second response mirrors the first:

My high school counselor told me that I did not have the ‘brain power’ to be a nurse. I am now an LPN and working towards my RN. High school did not help me at all! I have furthered my education without the help from so called high school teachers and counselors.

After coding items from the five categories of influence, other factors identified in the responses were coded. Six respondents indicated that *athletics* were an important

influence on the decision to attend college. Six respondents also indicated that they were attending college to *retrain* to reenter the workforce: “recently unemployed from my plant shutting down,” “medical problems which prevent me from doing the type of work I had done the past 25 years forced me into another field which required additional educational skills,” “helping to *transition from military service* into a rewarding civilian career,” “new career for non-traditional student,” “non-traditional student who was given aid as a displaced worker,” and

I was a waitress. I got carpal tunnel syndrome and could no longer lift trays. This was the #1 reason for going to college: between the two to three jobs I kept at all times, my income always relied on the health and strength of my body. I wanted to rely on my mind, which is much stronger and far more enduring.

Societal pressure was identified by three respondents as follows: “my boss told me to,” “mainly societal pressure to obtain a college degree,” and

“It was just the next thing to do, finish high school go to college. Then figure out what I wanted to do with my life and get a degree for that. That’s the basic idea I got from everyone, I’d go to college and then after that an awesome job that I’d want to do would appear before me.”

Networking was mentioned by three respondents, “desire to make connections with those who are important contributors in my field of study,” “expand networking capabilities,” “meeting new people.” Also, three respondents indicated that their decision was *college specific*: “the school has a history that shows that they can produce a good number of graduates...they have degrees that aren’t in my home area,” “the town and community it was centered around,” “...the specific one (college) I [chose].” Religion

was mentioned by two respondents and working for a charity organization and being homeschooled were each mentioned once.

As noted previously, many of the open comments were related to one or more of the five decision-making categories, with *personal-psychological* influences most frequently mentioned. This confirms the results of the quantitative analysis, which showed *personal-psychological* factors were the most important influences on the decision to attend college. *Family* factors were also important influences, with spouses and children mentioned frequently. *Financial* factors were commented on as important influences by many respondents, which was consistent with the overall quantitative data regarding the importance of financial factors. As reported, *academics* were considered not important or not applicable in the overall survey, with many respondents specifically indicating help from counselors was not applicable. This sentiment was echoed by two respondents in their replies previously noted. *Peers* were not considered an important influence in the quantitative analysis, but were specifically mentioned twice in the responses to item #45.

Beyond the decision-making categories, additional factors were identified by respondents as important influences in their decisions to attend college. Notably, *athletics* and *retraining/transitioning* to reenter the workforce were mentioned frequently. *Attending a specific college* and *networking* were also identified as important influences by several respondents.

Research Question Seven

How are *ALL* respondents and FIRST-GENERATION APPALACHIAN (*FGA*) college students financing their education?

Students were directed to indicate the ways in which they were financing college. Table 6 indicates the frequency percentages of *ALL* and *FGA* respondents for various financing options. Financial aid package was the most common form of college financing, with 52% of *ALL* and 64% of *FGA* participants reporting using this method, yet the nearly 13% difference between the groups is striking. Family was the second most common financing option for *ALL* respondents (40%) but the sixth most common financing option for *FGA* respondents (21%), the largest difference between groups (19%). *FGA* respondents (49%) were more likely to finance college using grant in aid than *ALL* subjects (37%). A greater percentage of *ALL* (34%) than *FGA* respondents (26%) reported financing college with a general academic scholarship. Interestingly, personally financing college was only reported by 26% of *ALL* participants and 27% of *FGA* respondents.

Table 6

College Financing by Frequency Percentage for ALL Respondents and First-Generation Appalachian (*FGA*) Respondents

How are you financing college?	<i>ALL</i>	<i>FGA</i>	Difference
Financial Aid Package	51.6%	64.4%	12.8
Family	39.9%	21.1%	-18.8
Grant in Aid	36.6%	48.9%	12.3
Specific Scholarship	36.3%	40%	-3.7
General Academic Scholarship	33.7%	25.6%	-8.1
Personally	26.4%	26.7%	0.3
Other	13.2%	16.7%	-3.5

Students who marked “other” as a college financing method, were asked to “briefly describe below” in an open-ended comment box. Of the 36 *ALL* respondents

who marked “other,” 34 made comments, of which nine were *FGA* participants. Complete results are in Appendix E. Thirteen responses included loans, making it the most common remark followed by military and family, each listed in five comments. Financial aid was mentioned four times. Scholarships and government aid were each included in three comments, work study and athletic scholarship twice, and employer once.

Research Question Eight

To what extent do *ALL*, *OTHER* and *FIRST-GENERATION APPALACHIAN (FGA)* college students report being *academically integrated* into their college experience?

Part III of the *Transition to College Survey (TCS)* arranged seven descriptors to measure participants’ level of *academic integration*. These data were sought to assess the frequency with which participants actively involved themselves in various on-campus academic activities. These descriptors were keyed to a 5-point rating scale: 1 = Never, 2 = Once, 3 = Seldom, 4 = Sometimes, 5 = Frequently. Mean scores were determined for each descriptor by *OTHER*, *FGA*, and *ALL* respondents. These data can be seen in Table 7.

Overall, *FGA* participants had lower mean scores for six of the seven descriptors. *FGA* respondents reported they *Participate in study groups with friends/peers* more often than *OTHER* respondents. *Attend career-related activities on campus* was the least frequently engaged in academic integration activity by both *OTHER* and *FGA* respondents, 2.33 and 2.09 (mean scores) respectively. *Meet with my advisor to discuss academic planning/scheduling* was the most frequently engaged in academic integration activity by both *OTHER* and *FGA* respondents, 3.53 and 3.46 (mean scores) respectively.

Table 7

Academic Integration Mean Scores by *OTHER*, *FGA* and *ALL*

Generation and Appalachian Status		Meet with my advisor to discuss academic planning / scheduling.	Attend career- related activities on campus.	Participate in study groups with friends/ peers.	Contact faculty for advising or assistance.	Attend/ participate in academic events (other than class) on campus (lectures, debates, convocations).	Use student assistance centers or help-desk resources for academic assistance.	Informal talk with faculty outside of class about academic matters.
<i>OTHER</i>	Mean	3.5345	2.3333	2.9657	3.4830	2.5114	2.7429	3.1761
<i>FGA</i>	Mean	3.4607	2.0889	3.0333	3.4494	2.4444	2.6889	3.0000
<i>ALL</i>	Mean	3.5095	2.2500	2.9887	3.4717	2.4887	2.7245	3.1170

As indicated in Table 7, the three descriptors for “faculty” had the highest ratings (mean scores), followed by “studying with friends” (mean score). Lower ratings occurred for attending/participating in campus activities and using student help resources (mean score). Notwithstanding the differences and similarities among and within the groupings, the frequencies were relatively modest given, for example, that a mean score of 3.5 is midway between “seldom and sometimes.” Consequently, no engagement descriptors approached the “frequently” value (5) for either grouping. To refine these outcomes, the data were further examined by confining frequency output for “sometimes” and “frequently” ratings of the academic engagement descriptors. An abridged version of that data is shown in Table 8. The aggregates are percentage averages for the four groupings noted. “Faculty Engagement” refers to the descriptors associated with the kinds of contacts made with faculty; The “Study Group” is simply the descriptor for “studying with friends on campus”; “Participate Campus” refers to extra-curricular

involvement, school clubs, and student associations. “Use Help” refers to contacts for academic assistance.

In general, these data do show more refinement about the actual frequency of engagements being made compared to the mean score data in Table 7. Particularly, *ALL* respondents had higher levels of academic engagement than did their *FGA* peers.

Table 8

Aggregate Data of Academic Integration Combined Descriptors for “Frequently” and “Sometimes”

	<i>ALL</i> Participants		<i>FGA</i> Participants	
	Frequently	Sometimes	Frequently	Sometimes
Faculty Engagement	25%	67%	29%	32%
Study Group	56%	67%	34%	33%
Participate Campus	74%	72%	26%	28%
Use Help Resources	17%	60%	26%	40%
Averaged %	(43)	(67)	(29)	(33)

In general, *FGA* participants, showed lower levels of aggregate engagement across the academic integration descriptors compared to *ALL*.

Tests of significance for differences in academic integration among *FGA* and *OTHER* samples were conducted for each of the seven academic integration descriptors with the Kruskal-Wallis H Test. Null hypotheses were tested for each academic integration descriptor that the distributions were the same across the samples. None of the seven descriptors were significantly related, based on a pretest level of .05. These results mean that no significant difference in academic integration was found between

OTHER and *FGA* respondents. Surprisingly, generation and Appalachian status had little relationship to academic integration.

Research Question Nine

To what extent do *ALL*, *OTHER* and FIRST-GENERATION APPALACHIAN (*FGA*) college students report being *socially integrated* into their college experience?

Part IV arranged six items to assess the level of *social integration* or the frequency with which participants actively involved themselves in social activities. These descriptors were keyed to a 5-point scale: 1= Never, 2 = Once, 3 = Seldom, 4 = Sometimes, 5 = Frequently. Mean scores were obtained for each descriptor by *OTHER*, *FGA* and *ALL* respondents, and these data can be seen in Table 9. All social integration descriptors were rated more highly by *OTHER* respondents than by *FGA*. Both *OTHER* and *FGA* respondents rated *participate in extra-curricular activities, such as athletic events, intramurals, concerts, and theatrical performances* the lowest, with mean scores of 2.75 and 2.11 respectively. The social integration descriptor most frequently engaged in by both *OTHER* and *FGA* respondents was *spend time with friends on campus*, with mean scores of 3.89 and 3.46 respectively.

Table 9

Social Integration Mean Scores by *OTHER*, *FGA* and *ALL*

Generation and Appalachian Status		Go to social events on campus with peers or friends.	Participate in school clubs, student associations, sororities, fraternities or other non-academic activities.	Participate in extra-curricular activities, such as athletic events, intramurals, concerts, and theatrical performances, etc.	Attend school sponsored events, such as athletic events, concerts, theatrical performances, etc.	Spend time with friends on campus.	Go to local places with friends from campus.
<i>OTHER</i>	Mean	3.0971	2.8506	2.7457	3.3429	3.8895	3.6243
<i>FGA</i>	Mean	2.6136	2.3483	2.1136	2.9888	3.4607	3.3483
<i>ALL</i>	Mean	2.9354	2.6806	2.5326	3.2235	3.7433	3.5305

Again, notwithstanding these differences in mean scores, the overall level of engagement is modest—no items approached the 4 and 5 levels. To refine these outcomes, the data were examined by combining frequency output for “sometimes” and “frequently” ratings per the descriptors and groupings. An abridged version of the results is presented in Table 10.

“Social-Friends” descriptor refers to socializing with friends on campus, going to local places with friends, and spending times with friends on campus. The aggregate is an average of the percentages for three items on the Social Integration scale. Results show “friends” to be the more frequent kind of social integration for both groupings compared to attending and participating in “School Social”, i.e. school sponsored activities such as clubs, fraternities/sororities, athletics, theatre and concerts. Also, overall aggregates were greater for *ALL* compared to their *FGA* peers. In general, these

data do show more refinement about the actual levels of engagement and contacts being made compared to the associated mean scores noted in Table 9.

Table 10

Aggregate Data of Social Integration Combined Descriptors for “Frequently” and “Sometimes”

	<i>ALL</i> Participants		<i>FGA</i> Participants	
	Frequently	Sometimes	Frequently	Sometimes
“Social Friends”*	70%	70%	24%	32%
“School Social”**	66%	80%	34%	20%
Average	(68%)	(75%)	(29%)	(26%)

* Descriptor Item #'s 1, 5, and 6, ** Item #'s 2, 3, and 4

The relationship between social integration and generation/Appalachian status was tested with the Kruskal-Wallis H Test. Each social integration descriptor was analyzed separately, and these results can be seen in Table 11. Four of the six social integration descriptors were significantly related to generation and Appalachian status: *go to social events on campus with peers or friends* ($p = .010$), *participate in school clubs, student associations, fraternities or other non-academic activities* ($p = .015$), *participate in extra-curricular activities, such as athletic events, intramurals, concerts, and theatrical performances* ($p = .002$), and *spend time with friends on campus* ($p = .004$). *OTHER* respondents reported significantly more frequent engagement in these social integration activities than did *FGA* respondents. Overall, *OTHER* respondents are more socially integrated in their college experience.

Table 11

Relationship of Social Integration and Generation Status

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Go to social events on campus with peers or friends. is the same across categories of Generation and Appalachian Status.	Independent-Samples Kruskal-Wallis Test	.010	Reject the null hypothesis.
2	The distribution of Participate in school clubs, student associations, sororities, fraternities or other non-academic activities. is the same across categories of Generation and Appalachian Status.	Independent-Samples Kruskal-Wallis Test	.015	Reject the null hypothesis.
3	The distribution of Participate in extra-curricular activities, such as athletic events, intramurals, concerts, and theatrical performances, etc. is the same across categories of Generation and Appalachian Status.	Independent-Samples Kruskal-Wallis Test	.002	Reject the null hypothesis.
4	The distribution of Attend school sponsored events, such as athletic events, concerts, theatrical performances, etc. is the same across categories of Generation and Appalachian Status.	Independent-Samples Kruskal-Wallis Test	.056	Retain the null hypothesis.
5	The distribution of Spend time with friends on campus. is the same across categories of Generation and Appalachian Status.	Independent-Samples Kruskal-Wallis Test	.004	Reject the null hypothesis.
6	The distribution of Go to local places with friends from campus. is the same across categories of Generation and Appalachian Status.	Independent-Samples Kruskal-Wallis Test	.318	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Research Question Ten

What, if any, relationship exists between academic and social integration and the likelihood of returning to college next term for *ALL*, *OTHER* and *FIRST-GENERATION APPALACHIAN (FGA)* students?

Results in Table 12 show that a large portion of both groupings are “very likely” to return to college the next term or year, including 83% of *OTHER* and 87% of *FGA* respondents.

Table 12

Likelihood of Returning to College by *OTHER* and First-Generation Appalachian (*FGA*) Status

		Based on your current status, estimate the likelihood that you will attend college next term/year.					Total
		Very unlikely	Unlikely	Likely	Very Likely	Uncertain	
Generation and Appalachian Status	<i>OTHER</i>	15 8.5%	0 0.0%	9 5.1%	146 82.5%	7 4.0%	177 100.0%
	<i>FGA</i>	8 8.9%	1 1.1%	2 2.2%	78 86.7%	1 1.1%	90 100.0%
Total		23 8.6%	1 0.4%	11 4.1%	224 83.9%	8 3.0%	267 100.0%

The data in Table 12 show that candidates are likely to return to college next term or year. Further, the data show that there was little difference among the groupings. Based on that data, a Chi Square Test of Significance was obtained to confirm the descriptive results. That result showed no significant differences among *FGA* and *ALL* respondents in regard to returning to college ($X^2, (4 n=267) = .298, p>.05$).

Of further interest was to know if the likelihood of returning to college was related to social and academic integration among the participants. A Chi Square Test of Independence was obtained to estimate their likelihood of attending college next term or year related to each academic integration and social integration descriptor. No academic or social integration descriptor was significantly related to the likelihood of returning to college next term/year for *ALL* or *OTHER* respondents. However, for *FGA* respondents, a significant relationship was found between the likelihood of returning and “*spend time with friends on campus,*” ($x^2, 40.972, n = 90$) = $p.001$. Whether this was simply a random effect is not certain but does point to the importance of social aspects.

CHAPTER FIVE: SUMMARY DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

Summary of Purpose

The first major purpose of this investigation was to determine the degree of importance given to selected personal-psychological, academic, peer, financial, and family factors regarding the decision to attend college by first-generation Appalachian (*FGA*) students. The second major purpose was to determine the degree of academic and social integration that participants experienced in college and to determine if a relationship existed between their levels of academic and social integration and their likelihood of returning to college the next semester or year.

Summary of Demographics

Participants were 3,264 sophomores from Fairmont State University, Marshall University, and Shawnee State University. They were identified by their respective institutions as sophomores during the fall semester of 2011. Two-hundred seventy-three responded to the survey, for a response rate of 8%. Twenty-two opted out. A sample size of 344 was sought in order to maintain a 95% confidence level with a 5% margin of error. The lower return rate was a significant limitation of the current investigation.

In the sample, 110 (41%) claimed first-generation student status by answering yes to question #46 “Are you a first-generation college student, meaning that neither of your parents attended college?” Appalachian status was true of 214 (78%) respondents, and 90 (33%) identified themselves as first-generation and Appalachian students.

Nearly 92% of *ALL* and 93% of *FGA* respondents were white, non-Hispanic. Of *ALL* respondents, 194 were female, 74 were male, and 5 declined to answer. Seventy-

four percent were between the ages of 19-22. For the 90 first-generation Appalachian (*FGA*) respondents, 65 were female and 25 were male. Sixty-nine percent were between the ages of 19-22, while 12% were 34 or greater. Of the 21 non-first generation non-Appalachian (*NFGNA*) respondents, 57% reported a high school grade point average (GPA) of 3.1 or higher compared to over 77% of *FGA* respondents. Two-thirds of *NFGNA* respondents' mothers and 52% of their fathers had at least a bachelor's degree. Interestingly, 23% of *NFGNA* respondents' mothers and one-third of fathers had some college but no degree.

For *ALL* respondents, over 36% reported family incomes of \$57,000 or more, with 11-14% of respondents estimating at all other income levels. Ten respondents declined to answer this item. Over 43% of *FGA* students reported family income of less than \$27,000, with 25% reporting less than \$18,000. One *FGA* participant declined to answer this question. Meanwhile, 47% of *NFGNA* respondents reported family income of \$57,000 or greater. This is consistent with research which indicates that first-generation students were more likely than their non-first-generation peers to come from low-income families (Chen, 2005). Every *FGA* respondent completed a *Free Application for Federal Student Aid (FAFSA)* application, compared to 88% of *ALL* and 57% of *NFGNA* respondents. Sixty-eight percent of *FGA* and 58% of *NFGNA* students had not much, very little or no difficulty completing the *FAFSA* application. Almost 37% of *ALL* respondents and just under one-half of *FGA* respondents received grant in aid, compared to 14% of *NFGNA* students. More than two-thirds of *FGA* respondents did not live on campus, compared to two-thirds of *NFGNA* respondents who lived on campus. Roughly 70% of *ALL* respondents had completed between 26 and 57 college credit hours.

Summary of Methods and Instrument

Quantitative and qualitative data were collected by administering the *Transition to College Survey (TCS)*. The *TCS* is a self-report survey consisting of four parts created by the researchers. Content for the items was derived from the research literature on factors influencing college decision-making, academic integration and social integration. A combination of descriptive and inferential techniques was used to analyze data related to each research question.

Part I of the *TCS* consists of 44 items designed for respondents to rank the importance of each factor in their decision to enroll in college. Items were keyed to a 3 point rating scale as follows: 3 = major, significant influence (most important), 2 = moderate influence (somewhat important), 1 = did not influence (not important), NA = did not apply, UC = item is not clear enough in meaning to assess.

Data from Part I of the *TCS* (Items 1-44) were analyzed for reliability estimates via Cronbach's Alpha for internal consistency. The reliability estimate for the sample yielded an overall value of .92, which was substantial compared to a minimal acceptable level of .70 with these kinds of self-report assessments and indicates that scale items had a good level of internal consistency (Pallant, 2007). Additionally, the reliability for items in each category was analyzed to determine if consistency existed within the nestings. The results, in Table 13, indicate a range from acceptable (.73) to very good (.91), with the exception of the *financial* category. This does not indicate that financial factors were less important than others. It means that the items structured as a "construct" to be correlated with *financial* were not all internally consistent, thus resulting in greater

variability. Its value (.428) was not unexpected given that the *financial* category was limited to three, possibly unrelated, descriptors.

Table 13

Reliability Estimates for Categories

	Overall Scale (n=44)	Personal- psychological (n=13)	Academic (n=13)	Peer (n=7)	Financial (n=3)	Family (n=8)
Cronbach's Alpha	.923	.757	.911	.850	.424	.729

In addition to reliability estimates, frequency analysis was conducted on the data resulting from the responses to the 44 items to answer research questions one through five.

The main data analysis included frequency distribution and mean score comparisons of the survey items in Part I of the *TCS*. These data were analyzed and summarized to address research questions 1-5.

Part I of the *TCS* also included an open-ended text box in which respondents could write in additional factors or circumstances thought to influence their decision to attend college. The qualitative data were analyzed for themes to answer research question number six.

Part II was designed to collect background demographics, including Appalachian status, age, racial-ethnic heritage, high school GPA, courses taken in high school, highest level of education completed by mother and father, family income, and sources of college financing. This section provided an open-ended text box in which students could indicate other resources used to finance college. Demographic information collected from Part II was used to filter the sample into groups. Financial data and the responses collected from

the open-ended text box were analyzed to better understand how students are financing college (research question number seven).

Part III arranged seven items to measure participants' level of *academic integration*. These data were sought to assess the frequency with which participants actively involved themselves in various on-campus academic activities, such as meeting with an advisor, attending career-related activities, participating in study groups, using student assistance centers, and informally talking with faculty outside of class. These items were keyed to a 5-point rating scale: 1 = Never, 2 = Once, 3 = Seldom, 4 = Sometimes, 5 = Frequently. Descriptive measures, such as mean scores, and the Kruskal-Wallis H Test, an inferential technique, were employed to analyze data collected relevant to research question eight.

Part IV arranged six items to assess the level of *social integration* or the frequency with which participants actively involved themselves in on-campus social activities, such as going to social events on campus, participating in school groups, participating in extra-curricular activities, attending school sponsored events, spending time with friends on campus, and going to local places with friends from campus. Academic and social integration items were keyed to a 5-point rating scale: 1 = Never, 2 = Once, 3 = Seldom, 4 = Sometimes, 5 = Frequently. Data collected from Part IV were analyzed using descriptive measures, such as mean scores, and the Kruskal-Wallis H Test, an inferential technique, to answer research question nine.

Finally, the survey asked respondents to estimate the likelihood of attending college next term/year by indicating one of the following: *very unlikely*, *unlikely*, *likely*, *very likely*, or *uncertain*. Descriptive and inferential statistics were used to analyze these

data. Additionally, a Chi Square Test of Independence was conducted to determine what, if any, relationships exist between academic integration (Part III) and social integration (Part IV) and the likelihood of attending college next term/year.

Summary Research Questions and Related Discussion and Conclusions

Research Question One

What is the overall degree of importance given to the various *personal-psychological* factors noted on the Transition to College Survey for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents?

The results of the *TCS* echoed the sentiments of Ayala and Striplen (2002): “research has shown for first-generation students, the motivation to enroll in college is a deliberate attempt to improve their social, economic, and occupational standing” (p. 57). Personal-psychological factors in this investigation were a major influence on respondents’ decision to attend college. Across all categories, personal-psychological factors made up eight of *ALL* and nine of *FGA* participants top ten. Given that importance aside, differences did occur between *ALL* and *FGA* respondents. Specifically, 71% of *FGA* participants rated *faith in my intelligence and abilities* as a major influence compared to 60% of *ALL* and 48% of *NFGNA* participants. Research suggests that self-efficacy plays an important role in educational aspirations of all youth (Yang, 1981) and for Appalachian youth specifically (Ali & Saunders, 2006). Appalachian youth have also demonstrated a lack of academic self-esteem (Institute for the Local government Administration and rural Development, 1992; Chenoweth & Galliher, 2004) and are less likely to attend college (U.S. Census Bureau, as cited by Ali & Saunders, 2006). So it makes sense that given the importance of self-efficacy on the decision to attend college,

the few *FGA* students who go to college would rate *faith in my intelligence and abilities* as a major influence.

Another relatively large difference occurred in the ratings for “to have a better life than my parents,” with 61% of *FGA*, 41% of *ALL*, and 29% of *NFGNA* respondents rating it as a most important influence. The latter confirms research by Engle et al. (2006) who found having a better life than their parents was a very important motive for first-generation students for enrolling in postsecondary education. In Hand and Payne’s (2008) study of first-generation Appalachian (*FGA*) students, all participants cited personal-psychological factors as their motivation.

The overall conclusion is that personal goals and motivation are very important influences on college decision-making and may be even more so for *FGA* students specifically. First-generation Appalachian (*FGA*) students who go to college, who continue through their sophomore year, and who intend to persist demonstrated a strong sense of self-efficacy by the high importance given to *faith in my intelligence and abilities* and *to help control my future*. Additionally, *FGA* students are strongly motivated to attend college to improve themselves financially, with high importance given to “my goals for a good life” and “to get a good paying job later.” They report lower family incomes, less reliance on parental financial support, and more importance on having “a better life than their parents.” In this study, enrollment in college appears to be a deliberate attempt to improve one’s self and future social and personal status and well-being.

Research Question Two

What is the overall degree of importance given to the various *academic* factors noted on the Transition to College Survey for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents?

Academic factors were grouped into two categories: (1) academic preparation and achievement and (2) encouragement and support from high school personnel. Overall, students rated academic preparation and achievement, such as grades and scores on college entrance exams, as the most important *academic* influences on their decisions to attend college. Literature indicates that student's grade point average (GPA) is associated with college plans (Chenoweth & Galliher, 2004), and a combination of high school GPA and ACT scores is a strong indicator of postsecondary enrollment and bachelor's degree completion (Smalley, Lichenberger & Brown, 2010). In the current investigation, 77% of *FGA* respondents reported a high school grade point average (GPA) of 3.1 or higher compared to 57% of *NFGNA* respondents. This conflicts with research which indicates that first-generation students report lower achievement than non-first-generation students (Chen, 2005). Courses taken in high school were similar among the groupings. Interestingly, a greater percentage of *FGA* than *OTHER* respondents reported having taken Algebra I, Geometry, Other Advanced Courses and AP Math in high school, although these differences were small. Additionally, a greater percentage of *OTHER* respondents reported having taken Algebra II and Trigonometry in high school. The largest difference occurred with respect to AP English with 30% of *FGA* and 45% of *OTHER* respondents reporting having taken it in high school. Research indicates, and results from this investigation confirms, that first-generation students are

less academically prepared for college having taken fewer high-level math courses in high school (Chen, 2005; Thayer, 2000; Wartburton, Bugarin, Nunez, 2001).

Research has documented that teachers and counselors influence educational aspirations, especially for students from disadvantaged groups (Cabrera & LaNasa, 2000; King, 1996; McDonough, 2005, as cited by Hahn & Price, 2008). In the current investigation, encouragement and support from high school personnel items were rated as not important or not applicable for *ALL* and *FGA* participants. While slightly more *FGA* respondents rated these items as important influences, the differences between groups was small. Interestingly, less than half of these participants reported that overall grades achieved in high school, including grades in math and English, were not important factors. Yet the research shows a strong relationship with completion of higher and intermediate math courses in high school and subsequent enrollment in college. However, within this category, a fair percentage of *FGA* participants (45%) marked scores on college entrance exams and overall grades, but not math and English grades, as major influences. So it is a mixed effect: the majority does not put much emphasis on grades and scores but a large minority do.

Overall, academic factors were similar in importance for *ALL* and *FGA* respondents. This confirms research by Choy (2001) who found no differences in the percentage (43%) of first-generation and non-first-generation students reporting receiving help from teachers or counselors with applying to college. The lack of assistance, encouragement and support from high school personnel noted in the results of this investigation were unexpected and contradicted literature about the positive influence high school teachers and counselors can have on educational aspirations. Although most

research points to the positive influence high school teachers and counselors can have on educational aspirations, research has also shown that high school counselors do a poor job of helping students with the college application process (Johnson et al., 2009), which was confirmed by the present investigation. In addition to the quantitative data resulting in a lack of encouragement and support from school personnel, qualitative remarks by several students expressed their frustration with the lack of help they received from counselors in high school. The major conclusion is that academic factors were not important influences on college decision making. This was largely because of a lack of assistance and support and encouragement given by teachers, counselors and administrators in high school. Such an outcome was certainly not expected.

Research Question Three

What is the overall degree of importance given to the various *peer* factors noted on the Transition to College Survey for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents?

Surprisingly, peers were not a strong influence on participants' decisions to enroll in college, which is interesting given that peers are generally perceived as influential on social and personal behaviors, especially in the teenage years. Additionally, students have consistently ranked friends as a major influence on the decision to attend college in prior research, in contrast to the results of the current investigation. Specifically, research conducted on Appalachian students ranked peers as the second most influential group in their higher education decisions, just behind parents and ahead of teachers, counselors, relatives, siblings, and even self (Institute for the Local Government Administration and Rural Development, 1992; Voinovich School of Leadership and Public Affairs Ohio University, 2009). This certainly was not the case in the current investigation where *FGA*

respondents rated *self* as the most influential effect on their higher education decisions, followed by *parents, teachers, grandparents, friends and siblings*. These rankings were similar among *ALL* and *FGA* participants. This may support findings that both first-generation and rural students tend to receive less encouragement and support for college enrollment from friends and peers (Nunez & Carroll, 1998; Poole & More, 2001). In fact, Poole and More (2001) found that rural youth are often discouraged by their peers from going to college. These findings may help explain, in part, why less than one-fourth of respondents considered peers an important influence in contrast to nearly one-half who rated peers as not important or not applicable. Peers, many of which will not go to college, may be silent or even discouraging. It should be noted, however, that two participants specifically mentioned friends in their responses to the open-ended textbox about what additional factors influenced their decision to attend college.

Several researchers have found the *Internet* to be an important source of information for college decision-making (Bell et al., 2009; Vargas, 2004). The current investigation sought to know whether *contacts on Facebook and Internet* influenced the decision to attend college. Six percent of *ALL* and seven percent of *FGA* respondents rated these contacts as a most important influence, while 80% of *ALL* and 82% of *FGA* rated these not important or not applicable. Apparently Facebook and Internet contacts were not important influences, although this study did not address the Internet as a source of information, which may or may not have been of importance to participants.

The results point to the general conclusion that peers, including contacts on Facebook and the Internet, are not important influences on the decision to attend college. This is interesting because *spending time with friends on campus* was found to be

significantly related to *persistence* for *FGA* students. Perhaps the physical aspect of contact and engagement with friends and peers in an actual college context is a more qualitative kind of interaction and influence compared to a virtual milieu. While peers and friends may not be a significant influence on the decision to go to college, they may be an important influence on staying in college and persisting to a college degree.

Research Question Four

What is the overall degree of importance given to the various *financial* factors noted on the Transition to College Survey for *ALL* respondents and for *FIRST-GENERATION APPALACHIAN (FGA)* respondents?

The cost of education is a major barrier in the decision to enroll and to persist in college for all students (College Forward, 2009) and specifically for Appalachian students (Institute for Local Government and Administration and Rural development, 1992; Voinovich School of Leadership and Public Affairs Ohio University, 2009; Voinovich School of Leadership and Public Affairs Ohio University, 2007). Financial influences were important to *ALL* and *FGA* respondents. *Being able to obtain financial aid* was a top ten overall most important influence for respondents, but a notably larger percentage of *FGA* (72%) than *ALL* participants (57%) rated it a most important influence. Only 12% of *FGA* respondents rated it as not important or not applicable. Every *FGA* respondent completed the *Free Application for Federal Student Aid (FAFSA)*, as did 90% of *ALL* respondents. Recent changes to the *FAFSA* form aimed to reduce the complexity and difficulty of the process may have been successful, as 68% of *ALL* and *FGA* participants reported *not much, little or no difficulty* in completing the *FAFSA*.

Research suggests first-generation, low-income students are less likely to receive financial support from their parents (Engle & Tinto, 2008). In the current investigation,

“*my parent’s ability to pay tuition and costs*” was reported as a most important influence by 32% of *ALL*, compared to 25% of *FGA*, respondents. Fifty-four percent of *FGA* participants rated this item as not important or not applicable, possibly because of lower family incomes and less encouragement and support from their parents. *ALL* and *FGA* respondents rated “*my ability to pay tuition and costs*” similarly. No notable differences occurred between the groups in the ratings of importance.

The overall conclusion is that financial factors are important influences on college decision-making, and may be even more so for *FGA* students. *FGA* students have lower family incomes, less financial support from parents, and greater reliance on financial aid. However, the kinds of sources reported for financing their education varied considerably among the participants. A major conclusion is that, for the most part, *FGA* students did not rely on their parents and family for financial support; they primarily financed their college costs using governmentally-sponsored financial aid packages.

Research Question Five

What is the overall degree of importance given to the various *family* factors noted on the Transition to College Survey for *ALL* respondents and for FIRST-GENERATION APPALACHIAN (*FGA*) respondents?

Overall family factors were more important to *ALL* than to *FGA* subjects.

Research indicates parents are consistently rated as the most important resource students turn to in the college decision process (Bell et al., 2009; Cooper et al., 2002), and Appalachian students have reported parents to be the strongest influence in their decision to attend higher education (Institute for Local Government Administration and Rural Development, 1992; Meehan et al., 2001). The data here showed a greater percentage of *ALL* participants report encouragement and support from their mothers (56%) and fathers

(52%) as a major influence than did *FGA* respondents (42% and 40% respectively). *Encouragement and support from my mother* was a top ten most important influence overall for *ALL* participants. Surprisingly, *encouragement and support from my mother* was considered as not important or not applicable by 23% of *ALL* and 37% of *FGA* respondents. Likewise, *encouragement and support from my father* was rated as not important or not applicable by 31% of *ALL* and 45% of *FGA* participants. One *FGA* student commented, “My mom was somewhat encouraging. My dad, I believe, doesn’t think I’m [going to] finish.” These sentiments support existing research which indicates that first-generation students receive less support and encouragement from family for enrolling in college (Engle, 2007; Engle et al., 2006; Terenzini et al., 1995).

Parental involvement has been shown to be a more important influence than parents’ educational level in influencing college decision-making (Engle, 2007) and may negate other barriers to postsecondary enrollment (Engle, 2007; Horn & Nunez, 2000; Hossler et al., 1999). But parental involvement is difficult when parents do not know what to do, which previously has been reported by parents in low-income groups (Akerhielm, Berger, Hooker, & Wise, 1998).

Support from community members has been shown to have a positive influence on the decision to attend college (Knisley, 1993). Yet, in the current investigation, over one-half of *ALL* and *FGA* participants rated *encouragement from others in my community* as not important or not applicable. This could be because community members in Appalachia have lower levels of educational attainment and may, like some parents, not know how to encourage and to support youngsters’ college decision-making; or it could

relate to literature which found that rural youth are often discouraged by their peers from going to college (Poole & More, 2001).

FGA students receive less encouragement and support from family for enrolling in and paying for college compared to *ALL* participants. *ALL* participants (over 50%) considered support and encouragement from parents as important factors in their decision to attend college, compared to about 40% of *FGA* counterparts. Additionally, community members are not important influences on college decision-making. So, the major conclusion is that *FGA* college-going students quite likely received varying support and encouragement from their families to attend college, which also varied considerably between the mother and the father. It is also very likely there was little support received from those in the community.

Research Question Six

What additional factors do college students report as being important in their decision to attend college?

Qualitative data was gathered from responses to item #45 on the *Transition to College Survey (TCS)* which directed participants to “*please write in other factors or circumstances that influenced you that are not specifically described in the previous items.*” Of the 72 comments offered, 18 were from *FGA* participants.

Overall, 29 responses related to *personal-psychological influences*, which by far were the most frequently mentioned by respondents. Many of these, such as “goals,” “drive,” and “myself,” echoed the verbiage given by first-generation Appalachian students in Hand and Payne’s (2008) study, which found these students to have an internal locus of control and to be internally motivated. Twenty-two responses indicated *family* was an

important influence on the decision to attend college. In addition to parents, grandparents and siblings, spouses and children were frequently mentioned, sometimes from an encouragement and support standpoint and sometimes from a financial standpoint. Nunez & Cuccaro-Alamin (1998) found that providing their children with better opportunities was an important motive for enrolling in post-secondary education, especially for first-generation students. Results of the current investigation support their findings. Eleven participants indicated that providing their children with a better life was an important influence in their decision to attend college.

Financial factors, including supporting one's self and one's family, were important influences, as were associated financial factors such as scholarships and future income opportunities. Nunez & Cuccaro-Alamin (1998) found that first-generation students were more likely than their non-first-generation peers to cite *being very well off financially* as an important motive for enrolling in post-secondary education.

Qualitative analysis supported the survey findings that personal-psychological factors are most important influences. Participants were motivated by a sense of self, personal efficacy and belief in their abilities, and future goals, notwithstanding high school grades, test scores or lack of encouragement or assistance from high school personnel. Additionally, *spouses* and *children* were noted as important influences. A major conclusion is that these students relied primarily on themselves, including existing internal motivators (self-esteem; self-efficacy) and external drives motivated by the desire for the "good life."

Financially, participants are concerned about securing a good future for themselves and their families and financing a college education becomes an important

priority faced each term and year of enrollment. The “*financial aid package*” is a major source of funding for *FGA* students, and they need that information and know-how long before high school graduation.

Finally, the data show that these participants were not helped or assisted much at all by high school personnel responsible for providing information and guidance needed in preparing for post-secondary planning and decision-making.

Research Question Seven

How are *ALL* respondents and FIRST-GENERATION APPALACHIAN (*FGA*) college students *financing* their education?

Research shows the cost of education is a major barrier in the decision to enroll and persist in college for all students (College Forward, 2009) and especially for Appalachian students (Institute for Local Government and Administration and Rural development, 1992; Voinovich School of Leadership and Public Affairs Ohio University, 2009; Voinovich School of Leadership and Public Affairs Ohio University, 2007). In Part I of the *TCS*, 57% of *ALL* and 72% of *FGA* participants indicated being able to obtain financial aid was a major influence (top ten overall for both groups) on their decision to pursue post-secondary education.

In addition to identifying the importance of financial factors from Part I of the *TCS*, respondents were asked in Part II to indicate the various *methods* they used to finance college. “*Financial aid package*” was the most commonly reported method of financing college, with 57% of *ALL* and 64% of *FGA* participants reporting this method. The greater percentage of *FGA* respondents using this method is consistent with the importance of being able to obtain financial aid reported in Part I. More *FGA* students

(49%) reported using “*grant in aid*” compared to *ALL* (37%). Slightly more *FGA* (40%) participants than *ALL* (36%) cited “*specific scholarship*,” while a greater percentage of *ALL* (34%) than *FGA* (26%) participants reported a “*general academic scholarship*.” Nearly the same percentage of *ALL* (26%) and *FGA* respondents (27%) reported “*personally financing*.”

“*Family*,” as a source of financing college, was reported by 40% of *ALL* compared to 21% of *FGA* respondents, which is consistent with the level of importance given by each group in the survey. Current literature suggests first-generation, low-income students are less likely to receive financial support from their parents (Engle & Tinto, 2008). Thirteen percent of *ALL* and 17% of *FGA* students marked “*other*,” methods which included loans (13), military (5), family (5), financial aid (4), scholarships (3), government aid (3), work study (2), athletic scholarship (2), and employer (1). About one-fourth of participants are personally financing their education.

A major conclusion is that, for the most part, *FGA* students did not rely on their parents and family for financial support; they primarily financed their college costs using governmentally-sponsored financial aid packages.

Research Question Eight

To what extent do *ALL*, *OTHER* and *FIRST-GENERATION APPALACHIAN (FGA)* college students report being *academically integrated* into their college experience?

Research strongly suggests that navigating the college experience is fraught with difficulties, if not outright obstacles, particularly for *FGA* students. Important aspects of that navigation are one’s academic and social integration into a college milieu such that a

level of comfort is maximized. These concepts are noted in the research literature as important achievements for all college matriculates and especially critical for the adjustment of *FGA* students. Accordingly, research further predicts that *FGA* students, compared to their non-first-generation counterparts are at a greater risk for making such adjustments and inclusions. Moreover, if not made, it is likely to affect the likelihood of remaining in college and persisting through to completion.

Academic integration activities include attending academic and career-related activities, participating in study groups with other students, and interacting with faculty and advisors about academic matters. Academic integration has been found to have a positive effect on academic performance (Carini, Kuh, & Klein, 2006), commitment to the institution (Howard & Levine, 2004; Pascarella, Terenzini, & Wolfe, 1986), and persistence (Tinto, 1975). Accordingly, first-generation students derive more benefits from academic integration than their peers (Engle & Tinto, 2008; Pascarella et al., 2004). For the current investigation, the overall level of academic integration was very modest—with no items rated higher than 3.5 (mean score), which is midway between “seldom” and “sometimes.” Notwithstanding overall relatively low ratings *ALL* and *OTHER* respondents reported higher levels of academic integration compared to their *FGA* counterparts on six of the seven descriptors. The exception was *participate in study groups with friends/peers*. However, no significant differences in academic integration were found between *OTHER* and *FGA* respondents.

Bradbury (2008) examined the integration of first-generation, first-term college students from Appalachian Ohio and found that students acknowledged the importance of faculty who present themselves as accessible and approachable as vital to their success.

While no significant differences in the current investigation were found among *ALL*, *OTHER* and *FGA* participants, “faculty” descriptors were rated the highest (mean scores) among academic integration descriptors.

Descriptors involving *faculty* were engaged in more frequently than other academic integration activities such as attending and participating in academic events and using school resources for academic assistance. Although no significant differences in academic integration were found between *OTHER* and *FGA* respondents, the latter reported lower levels of academic integration for all descriptors with the exception of *participating in study groups with friends*. Overall, generation and Appalachian status had little relationship to academic integration, which is not consistent with current literature.

The general conclusion is that students are only moderately academically integrated, with mean scores topping out at 3.5 or midway between “seldom” and “sometimes.” Although these candidates showed overall modest levels of academic integration, it is not known if they were “invited” to do so, informally or formally, or personally did not avail themselves of the opportunities. No matter, the lack of engagement did not appear to affect their academic performance or intention to continue in college beyond the current period.

Research Question Nine

To what extent do *ALL*, *OTHER* and FIRST-GENERATION APPALACHIAN (*FGA*) college students report being *socially integrated* into their college experience?

Social integration into a college milieu is thought to be an important achievement for all college matriculates and especially critical for the adjustment of *FGA* students, yet *FGA* students experienced less social integration than their counterparts. Social

integration activities include spending time with friends from college and attending and participating in social and extracurricular activities on campus, such as school clubs, student associations, athletic events, intramurals, concerts, and plays.

Social integration has been found to have a positive effect on academic performance (Carini, Kuh, & Klein, 2006), commitment to the institution (Howard & Levine, 2004; Pascarella, Terenzini, & Wolfe, 1986), and persistence (Tinto, 1975). First-generation students have been found to derive more benefits from social integration than their peers (Engle & Tinto, 2008; Pascarella et al., 2004). For the current investigation, the overall level of social integration was modest—with no items rated overall between four (“*sometimes*”) and five (“*frequently*”). *OTHER* and *ALL* respondents reported higher levels of social integration than did *FGA* respondents on all six descriptors. Four of the six social integration descriptors were significantly related to generation and Appalachian status: *go to social events on campus with peers or friends; participate in school clubs, student association, fraternities or other non-academic activities; participate in extra-curricular activities, such as athletic events, intramurals, concerts, and theatrical performances; and spend time with friends on campus.* *OTHER* participants reported significantly greater engagement in social integration activities than did *FGA* participants. Overall, *OTHER* respondents are more socially integrated in their college experience than are *FGA* respondents, which is consistent with research comparing these groups (Engle et al., 2006; Engle & Tinto, 2008; Pike & Kuh, 2005; Terenzini, Cabrera & Bernal, 2001). However, no significant difference occurred between the groups for persistence, despite *FGA* respondents lower levels of social integration.

The general conclusion is that *FGA* students are significantly less likely to engage in social integration activities than their peers. But when they do, engaging with friends is chosen over participating in clubs, fraternities/sororities, and extracurricular activities. This is somewhat related to survey results of over 55% of *FGA* who indicated that to *improve myself socially and personally* was an important motive for attending college.

Research Question Ten

What, if any, relationship exists between academic and social integration and the likelihood of returning to college next term for *ALL*, *OTHER* and *FIRST-GENERATION APPALACHIAN (FGA)* students?

First-generation and Appalachian students are less likely than their non-first-generation peers to attend college. Those who overcome barriers and do enroll have difficulty remaining enrolled and are less likely to persist to a degree (Voinovich School of Leadership and Public Affairs Ohio University, 2007; Chen, 2005; Engle, Bermeo, and O'Brien, 2006; Shaw, DeYoung, & Rademacher, 2004). However, Chen (2005) found that after introducing additional postsecondary course-taking and performance variables not available in previous studies, such as more credits completed in the first year, higher grades earned in the first year, and a lower proportion of withdrawn or repeated courses, the difference in persistence disappeared. Results from the *TCS* found that 83% of *OTHER* and 87% of *FGA* participants were very likely to return next term or year. There were no significant differences among these groupings in regard to returning. Since these students were half-way through their sophomore year when they completed the *TCS*, a portion of the non-persisters previously may have dropped out.

Several researchers have linked academic and social integration with academic performance and persistence (Carini, Kuh, & Klein, 2006; Howard & Levine, 2004;

Muraskin & Lee, 2004; Pascarella, Terenzini, & Wolfe, 1986; Tinto, 1975). Wilson and Gore (2009) found a positive relationship between school connectedness and GPA for students from the Appalachian region but not for those who were outside the Appalachian region. Additionally, research shows that while all students benefit to an extent from academic and social integration, first-generation students derive more benefit than their peers, yet they spend less time engaging in academic and social integration activities (Engle, 2007; Engle & Tinto, 2008; Nunez & Cuccaro-Alamin, 1998), which is consistent with the results of the current investigation.

Results of this study indicate that *ALL*, *OTHER* and *FGA* respondents report modest academic and social integration, yet a large percentage intend to persist to the next term/year. Further analysis revealed that no academic or social integration descriptor was significantly related to the likelihood of returning to college next term/year for *ALL* or *OTHER* participants. However, for *FGA* respondents, a significant relationship was found between the likelihood of returning and *spending time with friends on campus*.

The major conclusion is that *FGA* sophomore students are just as likely to plan on returning next term/year as their peers. Additionally, academic and social integration is not related to the likelihood of returning to college, with the exception of *spend[ing] time with friends on campus* which is significantly related to *persistence* for *FGA* students. In general, *friends* appear to be the more frequent kind of source for social engagement but social (and academic) engagement did not mirror the effects on college adjustment and inclusion reported in the literature.

Implications and Recommendations

Findings from the current investigation indicate that various factors influence college decision-making, and these factors are affected by generation and Appalachian status. Personal-psychological factors, such as motivation, self-efficacy, self-esteem, locus of control and hopes for a better life, are the most important influences on *ALL* and *FGA* students' decision to attend college, and may be more so for *FGA* students specifically. Personal-psychological influences are difficult to cultivate. How do you teach someone motivation or self-efficacy? Perhaps it can be cultivated through career exploration "to spark the pursuit of dreams that too often get extinguished by the practical minded or non-supportive families of the first-generation student population" (Ayala & Striplen, 2002). Educating students about the role of education on quality of life may encourage students to give college a greater consideration. Providing students with opportunities to explore careers and college options may influence their motivation to attend college. Additionally, providing students with opportunities to participate in college-level courses may, if the students are successful, increase beliefs in their ability to be successful at college, which has been shown to influence the decision to attend college (College Board, 2005; Karp, Calcagno, Hughes, Jeong, & Bailey, 2007; King, 1996).

Research indicates a high school curriculum of high academic intensity and high quality has a strong influence on college enrollment and bachelor's degree completion (Adelman, 1999; Chenoweth & Galliher, 2004; Engberg & Wolniak, 2009). This underscores the need for access to rigorous courses and more extensive counseling and guidance in middle and junior high schools. Results of the current investigation indicate that *FGA* students take fewer advanced math courses, with the exception of AP Math,

and are notably less likely to take AP English in high school. Encouraging academically capable *FGA* students to take higher level math courses, Advanced Placement and dual-enrollment courses while in high school would improve their academic preparation and may instill beliefs in their academic abilities both of which have been linked to college enrollment and persistence.

Overall grades and scores on college entrance exams are strong indicators of postsecondary enrollment (ACT Inc., 2007; Chenoweth & Galliher, 2004; Smalley, Lichenberger & Brown, 2010). Participants confirmed that their overall grades and scores on college entrance exams were important influences on their decision to attend college. However, first-generation students are significantly less likely to take the ACT or SAT in high school (Choy, 2001). To counter this, high schools could offer to pay for college entrance exams and provide test preparation to students and/or mandate the ACT or SAT as part of statewide testing, which is currently practiced by Colorado, Illinois, Kentucky, Michigan, North Dakota and Wyoming.

In this investigation, support for these students from high school personnel was not evident. This may be a result of high student-to-counselor ratios which restricts the availability of time and resources. But it is especially problematic for *FGA* students who report lower levels of encouragement and support from family members and who may rely more heavily on school personnel to help with college decision-making. Increasing opportunities for counselors to work with students on career and college goals may influence more academically capable students to enroll in college. Another implication is the potential existence of a bias among high school counselors for helping and assisting

those who are perceived as “college material” because of family status or other socio-economic factors.

The results of the current investigation show that peers were not important influences on college decision-making for the majority of students. In effect, peers and friends are not being relied on significantly as important influences on college decision-making as might be assumed from extant literature. However, for a minority of participants, friends were rated as very important influences. Perhaps providing students with opportunities to interact with other college-going peers could positively affect college decision-making. In effect, peers and friends are not being relied on significantly as important influences on college decision-making as might be assumed from extant literature.

Financial factors, strongly connected to family socioeconomic status and availability of financial aid, influence the decision and ability to enroll in postsecondary education, the type of institution in which to enroll and the ability to persist through degree completion. Study participants indicated financial factors were a major influence on college decision-making. *Being able to obtain financial aid* was a top ten most important influence for *ALL* and *FGA* students, but notably more *FGA* respondents rated it as a major influence. Students are paying an increasingly larger share of college costs (St. John, 2003). Average incomes and financial aid awards have not kept pace with tuition increases. A maximum Pell Grant covered only 42% of the costs to attend a public four-year institution for the 2001-02 school year (College Board, 2002). Early access to financial aid and loans is imperative to ensuring students are able to enroll in and persist through post-secondary education. It is especially important for *FGA* students, who

reported less financial support from parents, in this investigation, which is also confirmed in the extant literature. Additionally, college financing concerns need to be addressed well before the current practice of the junior and senior years of high school.

Parents', family and community members' educational levels and encouragement and support have been found to be important influences on college decision-making. A notably larger percentage of *ALL* than *FGA* participants rated encouragement and support from parents as major influences. This discrepancy may be the result of parents not knowing how to help their children. To promote encouragement, support and involvement from parents, they need to be provided information to assist their child with college decision-making. This process should begin much earlier than the current practice of the last two years of high school. In addition to information about college and the college going process, parents should be provided with college cost information and financial aid estimates.

It is quite clear that these participants did not receive significant levels of support and encouragement to attend college beyond themselves. To some extent, parents were influential, although variant from the mother and father. An implication is that parents may not have the necessary knowledge and understanding, or know where to get help. Also, they may be bound up in day to day personal efforts to provide basic needs for the family.

Research indicates that while all students benefit from academic and social integration activities, first-generation students derive more benefit than their peers (Engle & Tinto, 2008), yet they are less likely to engage in academic and social integration activities (Engle, 2007; Nunez & Cuccaro-Alamin, 1998). Results of the current

investigation indicate that while *FGA* participants report lower levels of academic and social integration, no significant differences were found among the groups for academic integration descriptors, whereas two-thirds of social integration descriptors were significantly related to generation and Appalachian status. First-generation Appalachian (*FGA*) respondents experience significantly less social integration than *ALL* or *OTHER* respondents. For this investigation, no academic integration descriptors were found to be significantly related to persistence for these students, and the only social integration descriptor found significantly related to persistence was “spend time with friends on campus” for *FGA* participants.

Given the introduction of academic and social integration activities at universities, such as college integration courses required of incoming freshmen, one would expect respondents to express more engagement in these types of activities. If social and academic integration are important influences on persistence, which was not the case in the current investigation, then students should be reporting more frequent engagement in these types of activities. Encouraging, or even requiring, students to use student assistance centers and attend academic and career related activities on campus may increase academic integration. Providing students more in-class time for discussion and encouraging them to participate in or attend extracurricular activities may help students build social relationships and improve their social integration. Moreover, creating opportunities for *FGA* students to have contact and interaction with faculty members who are first-generation college graduates might be an effective approach. Too, causing these students to have opportunities to make acquaintances and friendships may also be fruitful.

Although research has consistently shown that first-generation and Appalachian students are less likely to persist to a degree, results of this study found no significant difference among *OTHER* or *FGA* participants perceived likelihood of returning to college next term/year, with a large portion of both groupings reporting they were “very likely to return,” 83% and 87% respectively. However, it may be that students who expect to persist to next term/year are more likely to participate in a survey about their college experience.

Recommendations for Further Research

The two major purposes of this study were to determine the overall degree of influence given to selected personal-psychological, academic, peer, financial and family factors on college-decision making and to determine the level of academic and social integration experienced while in college. Therefore, the researchers chose to survey sophomore students who were not too far removed from the college decision-making process but have had enough time in college to adequately experience academic and social integration.

Personal-psychological factors were by far the most important influences on college decision-making and financial factors were also most important influences. Additionally, a large percentage of participants intended to return to college next term/year. Given this data, it could be that personal-psychological factors are related to persistence, that those students who are likely to place importance on personal-psychological factors on college decision-making are the ones who will persist through their freshman and sophomore years, and therefore be available, and willing, to participate in a survey about their experiences. Conducting the survey on incoming

freshmen and monitoring the relationships between the importance given on selected influences and persistence could produce telling results. Following-up with those participants who drop out to determine what influenced their decision to exit college may also help clarify the picture.

The lack of importance given to academic factors, including teachers and counselors, was surprising. Further research should include examining, in depth, the perceptions and beliefs of high school and/or junior high school teachers and counselors about academic and personal/social factors essential for college enrollment by *FGA* students (or “marginalized” students) who show some interest in attending college. Also, it may be informative to know how they assist and guide these youngsters in the college decision making process, including, for example, the allocation of time given to these students, the specific strategies employed to assist and to encourage, and the relationships forged with their parents.

A limitation of this study was the low response rate. It may be that students willing to respond to an e-mail invitation and complete an online survey are those who report high levels of motivation and self-efficacy. Conducting the research in live settings would likely improve response rates and represent a broader view of the population.

Colleges and universities, through financial and governmental pressures, have become increasingly concerned with persistence and therefore with academic and social integration. Many initiatives and interventions have been put in place to help students acclimate to the college milieu. One would expect students to report more frequent engagement in academic and social activities than was reported in this study. That is not

to say that these initiatives and innovations are not beneficial. Perhaps the moderate frequency reported would be even lower if these policies were not in place. Nonetheless, it would serve institutions to assess the success of these initiatives and innovations and make meaningful modifications to best allocate resources.

This study focused on students from three university settings. Results may vary with community college students and replicating this study with community college students and determining differences and similarities among groupings may be insightful. There have been several large-scale research studies over the past several years regarding college attendance by first-generation students and others at risk for not attending. Conducting a meta-analysis study to collectively examine and analyze these efforts and to pinpoint more precise effects to compare and contrast and to learn if these outcomes are distinguished by regional variables is recommended. In addition to a “moral” stake in furthering the education of “marginalized” students, colleges and universities are looking for and needing increased enrollments and the related revenues that ensue consequently; they have a “pragmatic” stake in specifically attracting the *FGA* student into college and monitoring and tracking their persistence and progression.

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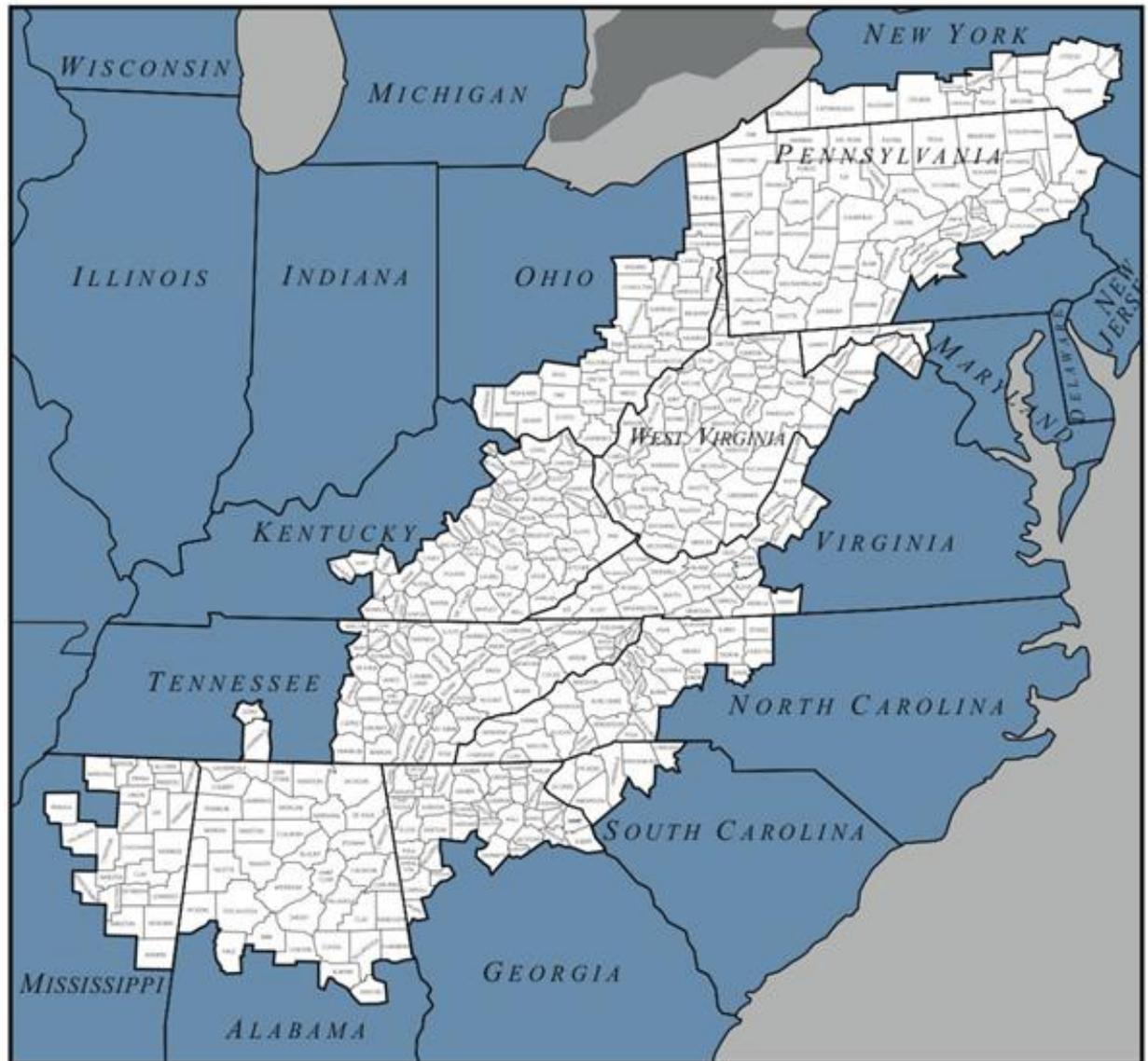
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APPENDICES

APPENDIX A

Appalachian Counties



http://www.arc.gov/images/appregion/Appalachian_Region_Map.pdf_map1.jpg

APPENDIX B

Transition to College Survey (TCS)

Transition to College Survey

Introduction.

This survey is designed to identify the factors or reasons that may influence a person's decision to continue their formal education following high school graduation. There are no "right or wrong" replies, and your responses simply **identify who and what influenced you most importantly**. Replies are strictly anonymous, and these records are destroyed after tabulation and analysis.

☺ Thank you for taking the time to help with this project. ☺

Part I: Influences

Directions:

Place the number **3** next to each item that was a *major, significant influence (most important)*.

Place the number **2** next to each item that was a *moderate influence (somewhat important)*.

Place the number **1** next to each item that did *not* influence you (**not important**).

Place **NA** next to each item that does not apply to you.

Place **UC** next to each item that is not clear enough in meaning to reply to.

Again, you are replying to what extent the following factors influenced your decision to enroll in college.

1. ____ Encouragement and support from my mother.
2. ____ Encouragement and support from my father.
3. ____ My goals for a "good life."
4. ____ To get a good paying job later.
5. ____ Encouragement from my junior high/middle school counselor(s).
6. ____ To improve myself socially and personally.
7. ____ The overall grades that I achieved in high school.
8. ____ Support from my high school teacher(s).
9. ____ To have a better life than my parents.
10. ____ Faith in my intelligence and abilities.
11. ____ Influence of teachers in junior high/middle school.
12. ____ A sister or brother in my family.
13. ____ Encouragement and support from counselor(s) in high school.
14. ____ Encouragement from high school administrators.
15. ____ To learn about the world.

16. ____ To be on my own-independent of family and others.
17. ____ Influence of my grandparents.
18. ____ Contacts on Face book and internet.
19. ____ My participation in tech/college prep curricula in high school.
20. ____ The grades I achieved in my math and English courses in high school.
21. ____ Encouragement from others in my community (e.g. clergy, coaches, employers).
22. ____ Being able to attend the same college with my close friends.
23. ____ Rooming in college with friends from my home area.
24. ____ Discussing future plans in high school with close friends/peers.
25. ____ Attending a local college to be able to commute from home.
26. ____ Encouragement and support from close friends in high school.
27. ____ Brother or sister who attends/attended college.
28. ____ Recruitment programs/activities sponsored by colleges.
29. ____ Information about higher education provided by my high school counselor(s).
30. ____ To prepare myself for graduate or professional school.
31. ____ Having parent(s) who graduated from college.
32. ____ Few or no real job opportunities in my home area.
33. ____ A close friend who attends or is attending college.
34. ____ Being part of a regular study group with friends in high school.
35. ____ To help control my future.
36. ____ Help received from high school counselors for completing college applications.
37. ____ My ability to pay tuition and costs.
38. ____ My parent's ability to pay tuition and costs.
39. ____ Being able to obtain financial aid.
40. ____ My scores on the ACT, SAT or other college entrance exam(s).
41. ____ The career I desire requires a college degree.
42. ____ To get a good paying job in the local region.
43. ____ To get a good paying job outside the local region.

44. ____ Participation in a course/program in high school, such as Educational Talent Search or College Forward, designed to provide information and assistance

Please write in other factors or circumstances that influenced you that are not specifically described in the previous items.

Part II: Background Demographics

Directions.

To put your assessments above into context, we would like to have some background demographic information. Of course, this information will remain confidential and is only be used by two researchers. These records are destroyed after tabulation and analysis. Thank you again for helping with this project. Place a checkmark in the space next to your choices.

1. Are you a first-generation college student, meaning that **neither** of your parents attended college?

____ Yes ____ No

2. What is your sex:

____ Male ____ Female

3. Were you in a gifted or talented program in high school?

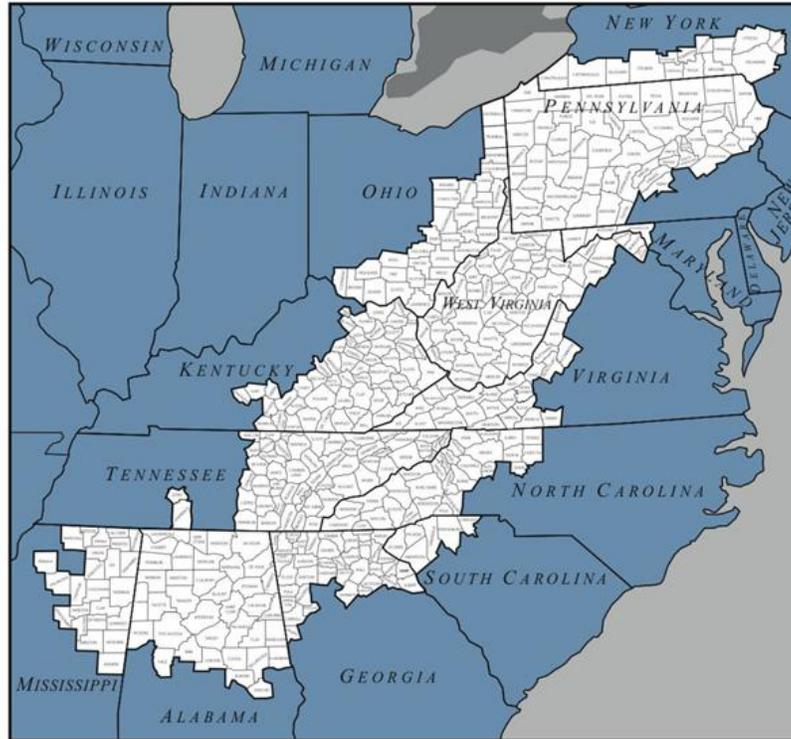
____ Yes ____ No

4. Do you live on campus?

____ Yes ____ No

5. Did the majority of your public schooling years take place in one or more of the *white* areas shown on the map?

____ yes ____ no



Source: Appalachian Regional Commission, 2008

6. What is your age?
- 18 years or less
 - 19-22
 - 23-26
 - 27-29
 - 30-33
 - 34 or greater
7. Which of the following best describes your racial-ethnic heritage? (Check all that apply.)
- White, Non-Hispanic
 - Black, Non-Hispanic
 - Hispanic
 - Asian-Pacific Islander
 - American Indian
 - Alaskan Native

8. Which of the following categories best indicates your final GPA in high school?
(Based on a four-point scale)?

- Less than a 2.0
- 2.0-2.2
- 2.3-2.5
- 2.6-2.8
- 2.9-3.0
- 3.1-3.3
- 3.4-3.6
- 3.7-3.9
- 4.0 or greater

9. Check all courses in which you participated in high school:

- Remedial/Developmental English courses
- Remedial/Developmental math courses
- Algebra I
- Algebra II
- Trigonometry
- Geometry
- Other advanced courses
- AP courses in math
- AP courses in English

10. Indicate the highest level of education completed by your parents.

- Mother**
- Less than a high school diploma
 - GED
 - High school diploma
 - Less than one year of college
 - One year but less than two years
 - Two or more years (no degree)
 - Associate's degree
 - Bachelor's degree
 - Master's degree
 - Professional degree (medicine, law)
 - Doctorate (PhD, Ed.D)

- Father**
- Less than a high school diploma
 - GED
 - High school diploma
 - Less than one year of college
 - One year but less than two years
 - Two or more years (no degree)
 - Associate's degree
 - Bachelor's degree
 - Master's degree
 - Professional degree (medicine, law)
 - Doctorate (PhD, Ed.D)

11. How are you financing college? (Check all that apply.)

- Family financed
- Personally financed
- Financial Aid package (including work study)
- General Academic Scholarship
- Grant in aid
- Specific scholarship
- Other (Briefly describe below.)

12. What is your estimated family income?

- Less than \$18,000
- \$18,000-\$26,999
- \$27,000-\$37,999
- \$38,000-\$47,999
- \$48,000-\$56,999
- \$57,000 or greater

13. Did you apply for governmental financial aid by completing a FAFSA application?

- Yes No

14. If you answered yes to item #13 above, please indicate the degree of difficulty experienced by you and/or your parents in completing the application.

- No difficulty
- Very little difficulty
- Not much difficulty
- Some difficulty
- Great difficulty
- Extreme difficulty

15. How many college credit hours have you completed?

- 0-25
- 26-57
- 58-89

_____ 90 or more

Part III: Academic Integration

Directions.

The following items are designed to measure your academic integration while in college. Estimate the frequency with which you are or have been involved in the various academic activities outlined below using the following number scale. Place a number in the space next to the each item.

Never	Once	Seldom	Sometimes	Frequently
1	2	3	4	5

Again, indicate the frequency with which you participate in the following activities.

- A. _____ Meet with my advisor or an advisor to discuss academic planning/scheduling.
- B. _____ Attend career-related activities on campus.
- C. _____ Participate in study groups with friends/peers.
- D. _____ E-mail or telephone with faculty for advising or assistance.
- E. _____ Attend/participate in academic events (other than class) on campus (lectures, debates, convocations).
- F. _____ Use student assistance centers or help-desk resources for academic assistance.
- G. _____ Informally talk with faculty outside of class about academic matters.

Part IV: Social Integration**Directions.**

The following items are designed to measure your social integration while in college. Estimate the frequency with which you are or have been involved in the various academic activities outlined below using the following number scale. Place a number in the space next to each item.

Never	Once	Seldom	Sometimes	Frequently
1	2	3	4	5

Again, indicate the frequency with which you participate in the following activities.

- A. ____ Go to social events on campus with peers or friends.
- B. ____ Participate in school clubs, student associations, sororities, fraternities or other non-academic activities.
- C. ____ Participate in extra-curricular activities, such as athletic events, intramurals, concerts, plays.
- D. ____ Attend school sponsored events, such as athletic events, concerts, plays.
- E. ____ Spend time with friends on campus.
- F. ____ Go to local places with friends from campus.

Based on your current status, estimate the likelihood that you will attend college next term/year.

- ____ Very unlikely
- ____ Unlikely
- ____ Likely
- ____ Very likely
- ____ Uncertain

APPENDIX C

E-mail Invitation

Greetings:

My name is Kristy Wood, and I am currently a doctoral student at Marshall University Graduate College conducting a research study. I am writing to ask for your help in a study of college students being conducted as part of the requirements for completing my doctorate. Your opinions will be very important to the success of the study.

It is my understanding that you are currently a sophomore college student. You are being asked to complete a survey regarding the transition to college.

Your answers are completely confidential. Data will be reported in aggregate form only, with no identification of individuals. The identifying PIN number you are asked to fill in on the survey will only be used as a method to send follow-up surveys to non-respondents. When you return your completed survey, your name will be deleted from the mailing list. Your name is not connected to your answers in any way. This survey is completely voluntary and you may decline to participate without penalty. If you have any questions concerning your rights as a research participant you may contact the Marshall University Office of Research Integrity at (304) 696-4303.

Please answer all questions as honestly and accurately as possible. Please complete the online survey by DATE. This survey will take approximately fifteen minutes to complete. Go to the following website to complete the *Transition to College Survey*:

<https://www.surveymonkey.com/s/tcs1>

After reading the directions, you will be asked to enter your PIN# _____. If you have technical problems with the survey, please contact me wood25@mctc.edu.

Completing the on-line survey indicates your consent for use of the answers you supply. If you have any questions about the study or would like a summary of the results, you may contact Dr. Samuel Securro at 204-746-8948 or securro@marshall.edu, or me at the (304) 696-4326 or wood25@mctc.edu.

Please accept my gratitude in advance for your cooperation and timely participation in this research study.

Kristy L. Wood
Marshall University Graduate Student

APPENDIX D

Qualitative Responses to Other Influential Factors

<p>Please write in other factors or circumstances that influenced you that are not specifically described in the previous items.</p>
All four of my grandparents went to college and both parents. Not attending college was never an option.
All of the above
Another factor that influenced me was having a baby young. I wanted to give him a better life.
athletics helped instill in me desire, being homeschooled as a child taught me self control and good study habits.
Baseball, good paying job outside of my area and a secure job that requires further education
Becoming more independent.
better job to take care of my wife and kids.
Charity invents helped me to decide to further my education and go to nursing school, because through them I found that I love to help people and realized what I wanted to do for the rest of my life.
church, pastor, and other religous facilities
college athletics
Desire to make connections with those who are important contributors in my field of study
Encouragement and support from professors in college are also important. Some professors are annoying.
Feeling accomplished
fraternities, make new friends, expand networking capabilities
Get away from my small town and see if I could survive in the ""real world.
Hard life growing up with parents with no college degree working average jobs. Not the life I picture for myself and don't want the financial struggle in the future.
Having a child and being a single mom.
Helping to transition from military service into a rewarding civilian career.

<p>I always had a desire to further my education, but as a college student that is non traditional it is obvious that I took a long way around to getting to and through college. The determination of family and friends to help me achieve the goals I had set for myself early on is what helped me stay motivated to go back to college. My desire to learn more about the areas and subjects that interests me is what keeps me coming back for more and more degrees and more and more knowledge. I will say this though, when I was in high school my counselors did not talk with me one on one about what my goals in life were and they did not guide me in ways I could go about achieving those goals no matter what came my way. I only knew who my high school counselor was because she also coached the majorettes in my school and since I worked with them I knew who she was. Other than that she in no way guided me as to how, when, or where to apply, let alone go to college.</p>
<p>I am 58 years old with four daughters who are college graduates. They inspired and encouraged me to attend college and fulfill a lifelong dream. I have cleaned houses for over twenty years and with a business degree I have a better chance of starting a cleaning business and running it successfully.</p>
<p>I am a "non traditional student". this survey is geared more toward young students.</p>
<p>I am a member of a twelve step recovery program in my community which allowed me to break away from a horrible life and make a new one.</p>
<p>I am a nontraditional student. My sister went back to college and is now an RN. I always said when my children started school that I would go back. My sister pushed me and helped me get started.</p>
<p>I am a transfer student from a community college.</p>
<p>I am not "just out of high school." I filled out your application in case you need an "older" point of view. I am 54 years old recently unemployed from my plant shutting down.</p>
<p>I am taking online classes to wrap up a degree that I started 25 years ago. Good luck</p>
<p>I became interested in golf because I knew there were many scholarship opportunities for females who played golf. Otherwise, I would have a hard time affording college.</p>
<p>I didn't want to get stuck in the hick town I grew up in. I wanted to be the first of my family to make something of themselves.</p>
<p>I dropped out of high school my senior year in 2000. I was not interested in school when I was younger. Going back to school had nothing to do with my high school grades, teachers or counselors because I did not apply myself. After being a part of the real world, I decided that I needed more education to support my family. I hope my survey was helpful.</p>
<p>I had the drive to come to college.</p>
<p>I have a few close friends who were very encouraging to me about getting my degree. My mom was somewhat encouraging. My dad I believe doesn't think I'm gonna finish.</p>
<p>I have a large family, 14 children total.</p>
<p>I highly dislike college because I feel like I'm just constantly battling to earn an A in every class so I can keep my scholarships. I cannot pay for it without them and would have to drop out. If I wasn't under such constant pressure perhaps I would enjoy it. But, that's never going to happen so.</p>
<p>I like learning</p>

I saw the struggles that my family had by not having a college degree and I knew that I would never be happy having that life. My goals were much larger than that.
I use the Montgomery GI bill I ether have use it or I loose it.
I was a waitress. I got carpal tunnel syndrome and could no longer lift trays. This was the #1 reason for going to college: between the two to three jobs I kept at all times, my income always relied on the health and strength of my body. I wanted to rely on my mind, which is much stronger and far more enduring.
I wasn't completely influenced by people to go. I just always knew I wanted to go to college.
I went to college because that was the logical next step in life. The only thing my high school encouraged me to do was pass standardized tests to secure their funding. The was little to no emphasis on college during these years.
Insanity
It was just the next thing to do, finish high school go to college. Then figure out what I wanted to do with my life and get a degree for that. That's the basic idea I got from everyone, I'd go to college and then after that an awesome job that I'd want to do would appear before me.
It's part of my next step in life to better and support myself and future family.
Just the desire to be able to give my future family anything they will need. I want to be completely sure that i can do that
Mainly societal pressures to obtain college degree, and the hope I can obtain work experience required in my field while still attending a higher educational institution. Have I mentioned that life, in general, is a terrible thing? Not anyone's specifically, but I'm just gonna throw that out there.
Medical problems which prevent me from doing the type of work I had done the past 25 years forced me into another field which required additional educational skills.
Meeting new people. The desire for higher education
Mostly my Parents were a huge influence, and my OWN self-driven personality.
Mostly my personal decision that I wanted a college education, and that I wanted to become a teacher and that requires a college degree.
My boss told me to.
my decision to attend college was my two children to better further my education to give them a good home and a better life for them
My high school counselor told me that I did not have the ""brain power"" to be a nurse. I am now an LPN and working towards my RN. High school did not help me at all! I have furthered my education without the help from so called high school teachers and counselors.
My husband and kids had a great influence in my decision to attend college and also the specific one I choose.
My main drive to go to college came from my desire to earn a specific lifestyle for myself, from my desire to be knowledgeable. I take pride in being able to carry an intelligent conversation with someone, and I have a lot of dreams for the future. Those include travelling, owning a nice home, and continuing to figure skate which is a costly hobby.

My mom went here, and it's close enough to home that I can visit when I want, but not more than I want.
My parent's success and support has fueled mine.
Myself, I want more in life than what my mother has had with her life. So I am going to be as successful in my life as possible to give her the best senior life as possible.
n/a
N/A
New Career for a non-traditional student
Non traditional student who was given aid as a displaced worker. None of the high school questions applies to me.
None
Religious beliefs.
Scholarships available
Sports
Sports teams
The fact that I love animals and hate being a cashier at 28 years old at a crappy grocery store was a big motivational factor in me finally getting my head out of my ass and going somewhere with my life. Now I'm glad I finally made myself go to college again because I love my courses and all the people in my Vet Tech program with me.
The lack of professional employment opportunities in the surrounding area
The school has a history that shows that they can produce a good number of graduates. They have degrees that aren't in my home area.
The state of the economy, the lack of career professionals in my local area, the financial struggles seen through out my local community and experiences of financial struggles in my own family. Lower job opportunities within my local area. (Also note the financial stability of ones area greatly effects ones decision of attending a higher learn institute after high school.)
The town and community it was centered around.
to get well educated and be able to be competitive outside in the real world.
To provide a better life for my daughter.

APPENDIX E

Qualitative Responses to Other Financing Methods

Other (please specify)
almost all aid in the form of federal loans.
Athletic scholarship
Athletic Scholarship from working in the Equipment room
Chapter 30 Montgomery GI Bill
displaced worker program
employer paid
Federal Loans
Financial aid and family/personally
financial aid without work study and a tuition waiver/scholarship for a program called HSTA
GI Bill
I am currently paying for college on my own. My family cannot afford to help me pay for college. Whatever money is not provided from my financial aid, is paid out of my pocket.
I get student loans.
I have used financial aid, loans and at one point scholarships
Loan
Loans
Loans
LOANS
Loans & I work for HRL as an RA
Loans and a tuition plan set up by my father. I also get financial aid from WVDRS.
Loans taken out by me and my parents
LOANS!!!!
Math Field Day Award Scholarships
Military education assistance
Montgomery GI Bill
My college is payed thur a trustfund left to my mother, and additional funds from my Grandparents CD investments and inheritance.
One of those baby things my mom and dad did when i was little is paying for half of it. We still have to pocket books and a class.
Parents
PROMISE, Small Marshall University sponsored scholarships
RA position
ROTC
Student Loans
Student loans and state grants

Trade monies through Community Action (TAA)

West Virginia Promise Scholarship

APPENDIX G

Curriculum Vitae

Kristy Lynn Wood

*Assistant Professor of Business, Information Technology, and Transportation Technology
Transportation Technology Program Coordinator
Mountwest Community & Technical College*

I. CONTACT INFORMATION

E-mail: wood25@mctc.edu
Phone: (304) 617-2193
Address: 1910 Enslow Avenue, Huntington, WV 25701

II. CAREER OBJECTIVE

To participate in research and grant writing opportunities to improve and enhance curriculum and instruction.

III. EDUCATION

Doctorate of Education, Curriculum and Instruction, expected May 2012
Marshall University Graduate College, South Charleston, WV
Dissertation: Factors Influencing College Decision-Making for
First-Generation Appalachian Students
Committee Chair: Samuel Securro

Master of Art in Teaching, Business Education, May 2004
Marshall University Graduate College, Huntington, WV

Bachelor of Science, Economics, May 2000
West Virginia University, Morgantown, WV

IV. RESEARCH INTERESTS

Experiences of marginalized students, such as low-income, first-generation, Appalachian, minority, and learning disabled students.
Transition to postsecondary education
On-line program development

V. TEACHING INTERESTS

Economics
Marketing
Entrepreneurship
Management
Information Technology
Communications
Word
Excel
PowerPoint
Desktop Publishing

VI. PROFESSIONAL EXPERIENCE

Transportation Coordinator/Business & Information Technology Assistant Professor

Mountwest Community & Technical College (formerly Marshall Community & Technical College); 2011-present

- Coordinate a new Transportation Technology program
- Teach business and information technology courses

Business and Technology Instructor

Collins Career Center/Dawson-Bryant High School; 2004-2011

- Teach business and computer courses
- Recruit students into the Business Tech Prep program

Adjunct Instructor

Mountwest Community & Technical College (formerly Marshall Community & Technical College); 2003-Present

- Teach two to four IT 101 courses per semester, including live and on-line courses

Adjunct Instructor

Ohio University Southern; Fall 2004

- Taught Keyboarding I

Graduate Assistant, Marshall University's Higher Education for Learning Problems (H.E.L.P.) Program; 2002-2009

Tutored undergraduate and graduate students with learning disabilities and/or ADHD in a variety of subject areas, served as an assistant teacher for the summer program, received the Tutor of the Year Award—2003

VII. PRESENTATIONS

“DOs and DON'Ts of Survey Research,” *9th Annual Hawaii International Conference on Education, Honolulu, Hawaii, January 2010.*

“Digital Yearbook 101: Capturing the Profits and Pitfalls of Entrepreneurship,” *National Career Pathways Network Annual Conference, Louisville, KY, October 2007.*

“IT Club as Entrepreneurs,” *24th Annual Entrepreneurship Education Forum, Phoenix, AZ, November 2006.*

“Intercultural Submission, Destination Cuba,” *Global Education Opportunities Program Committee, Morgantown, WV, April 2000.*

VIII. SCHOLARSHIP

Course Development: “21st Century Learning”; (2009)

Collaborated with Marshall University Graduate College faculty and doctoral students to create a professional development course.

Research Study: We Teach Survey of Dawson-Bryant Teachers; (2009)

Analyzed the quality and results of the We Teach Survey of Dawson-Bryant Teachers.

Research Study: Understanding the Experiences of Students with Learning Disabilities at Marshall University's Higher Education for Learning Problems (H.E.L.P.) Program; (2009)

Conducted a qualitative study of three H.E.L.P. Program students.

IX. GRANTS

Foundation for Appalachian Ohio, “College Daze,” \$2,155, funded August 2010.

Ohio South Tech Prep Consortium, “Video Production Club,” \$3,000, funded January 2009.

Ohio South Tech Prep Consortium, “College Daze Program,” \$5,000, funded January 2008.

Best Buy Teach Award, “IT Club—Digital Yearbook,” \$2,500, funded February 2007.

Consortium for Entrepreneurship Education, “IT Club as Entrepreneurs,” \$3,000, funded March 2006.

Ohio South Tech Prep Consortium, “Business Tech Prep,” \$1,000, funded December 2006.

Ohio South Tech Prep Consortium, “Interactive Media Tech Prep,” \$1,000, funded December 2006.

Ohio South Tech Prep Consortium, “Networking Tech Prep,” \$1,000, funded December 2006.

Ohio South Tech Prep Consortium, “Business Tech Prep,” \$1,500, funded December 2005.

Ohio South Tech Prep Consortium, “IT Club Grant,” \$1,500, funded December 2005.

Global Educational Opportunities Program Committee, “Intercultural Submission, Destination Cuba,” \$500, funded April 1999.

X. CERTIFICATIONS

Ohio Department of Education, “Career Technical (Age 8-Adult) License in Integrated Business”

Certiport, “IC3 (Internet and Computing Core Certification)”

Microsoft, “Microsoft Office Specialist—Word”

Microsoft, “Microsoft Office Specialist—Excel”

Microsoft, “Microsoft Office Specialist—PowerPoint”

Microsoft, “Microsoft Office Specialist—Outlook”