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What predicts alumni satisfaction? The impact of investment, involvement, and post -college outcomes

Amy Catherine Barnes

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What Predicts Alumni Satisfaction?
The Impact of Investment, Involvement, and Post-College Outcomes

A Dissertation

Presented to

The Faculty of the School of Education

The College of William and Mary

In Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education

by

Amy Catherine Barnes
November 2007

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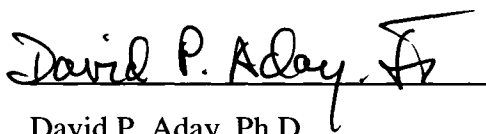
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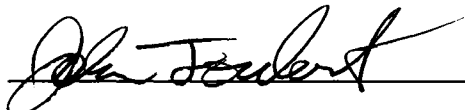
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*This work is dedicated to the love of my life, Pete,
who supported me through this entire process,
to my daughter, Sophia, who inspires me each and every day,
and to my family and friends – who were
encouraging and patient during this journey.*

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WHAT PREDICTS ALUMNI SATISFACTION? THE IMPACT OF INVESTMENT,
INVOLVEMENT, AND POST-COLLEGE OUTCOMES

ABSTRACT

The purpose of this study was to explore the effects of financial investment, involvement, and post-college outcomes on perceived alumni satisfaction. Based on a conceptual framework guided by Alexander Astin's I-E-O model, the researcher developed the "displacement model," which illustrated the possibility that one variable could displace the effect of another. This framework also aided in understanding the joint and separate effects of the independent variables of financial investment, involvement, and post-college outcomes on the dependent variable, alumni satisfaction. The analyses also explored the effect of gender and class year on the variables. The researcher surveyed alumni from the graduating classes of 1994, 1999, and 2002 from a selective, public institution on the east coast. The results of this exploratory research indicated a significant relationship between post-college outcomes (combined measure of satisfaction with career and with salary following graduation) and alumni satisfaction as it both correlated with the dependent variable ($p < .001$) and was the only predictor in the stepwise regression analysis ($p < .001$). The variables of investment and involvement did not correlate significantly with alumni satisfaction and were not predictors in the regression analysis. However, involvement was significantly correlated with post-college outcomes ($p < .05$) indicating a possible indirect link between involvement and alumni satisfaction through post-college outcomes. Given prior research indicating a strong relationship between involvement and student satisfaction (Astin, 1993) and considering the skills gained through involvement for career success (Zekeri, 2004), further research should explore this connection.

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What Predicts Alumni Satisfaction?

The Impact of Investment, Involvement, and Post-College Outcomes

Chapter I: The Problem

Introduction

A college degree is often viewed as a ticket to a better job, better salaries, and to a perceived better life. Even during the college choice process, prospective students and their parents consider the long-term effects of a particular college degree on their lives (Thomas, 2000). They make a financial investment in education hoping for a good educational experience and a lifelong return on their investment. They are likely asking themselves, how will I benefit from this degree? Or what will a college experience at one institution provide me that another will not? Following graduation, alumni experience outcomes from college and are likely to evaluate whether their initial expectations were met. The intention of this study is to examine the impact of three possible factors contributing to alumni satisfaction: financial investment in college, involvement in the experience as a student on campus, and the outcomes following graduation. These variables will be explored through the lens of the displacement model, based loosely upon Astin's I-E-O model (1993). I created the displacement model as the conceptual framework for this study. These variables will be tested to see the extent to which they predict alumni satisfaction and if the impact of one variable may be displaced by the impact of another.

Due to increased pressure from government and the public, higher education institutions have been assessing the educational experiences they offer more intentionally in the past few decades. This shift toward accountability and a greater scrutiny of the funding of higher education continues to be fueled by tuition increases and the media where college rankings have become a way for students and parents to evaluate their college choices (Farrell, 2003; McDonough et al., 1997). Within the higher education community, there is a desire to view students as partners in their intellectual development, instead of as consumers of higher

education. However, the need for institutions to uphold a positive public reputation often means working hard to find a balance between meeting students' expectations and focusing on the importance of education and learning. Therefore, in this environment, it is very important to target assessment efforts toward learning more about how students are evaluating their experience. This study was designed to explore how alumni, in particular, evaluate their college experience, and whether or not factors like cost (investment), involvement, and post-college outcomes affect their satisfaction.

With college costs rapidly increasing and with fierce competition among students to get into the best institutions, a larger percentage of a family's income now must be allocated for higher education. Students who attended college during the decade of the 1990s saw their college costs increase by 51 percent (College Board, 2004) and many were forced to weigh the financial burdens of tuition, fees, and other expenses against the benefits of attending college. According to Rizzo (2006), the reason for the increased financial burden for students is mostly due to a decrease in state funding allocated to higher education during the last quarter of the 20th century. Do alumni who have attended college during these years of high costs experience a diminished sense of return on their investment? In addition, what role does the student experience on campus play in this cost-benefit assessment? And do post-college outcomes override (displace) the effects of investment and involvement in the undergraduate experience and become the principal correlate of alumni satisfaction with college?

Although student satisfaction has been positively related to learning, engagement, and involvement and has also been linked to positive rates of alumni giving following graduation (Astin, 1993; Kuh, 1991; Monks, 2003), the impact of rising costs and post-college outcomes on alumni satisfaction have yet to be assessed. This study will use a multiple regression approach to

test the effects of the variables on alumni satisfaction and whether or not displacement has occurred.

Statement of the Purpose

The purpose of this study is to assess the joint and independent contributions of financial investment, involvement, and post-college outcomes on alumni satisfaction. Alumni satisfaction is important to colleges and universities. Satisfied alumni can lead to greater financial contributions, a positive public image for the institution, and advantages in enrolling the best and brightest students through the perpetuation of a positive reputation. Previous research indicates that involvement leads to greater student satisfaction and that certain post-college outcomes (such as career satisfaction) lead to greater alumni satisfaction with their undergraduate institution (Astin, 1993; Pike, 1990). Thus far, no research has directly related alumni satisfaction with financial investment. Several studies have indicated that loans accumulated by students to finance college had a negative impact on donations to their undergraduate institution as alumni (Clotfelter, 2003; Monks, 2003).

According to consumer behavior research (Oliver, 1996), satisfaction begins with the creation of expectations. With the rising cost of tuition over the last few decades and the increased importance of a college degree in the labor market, public scrutiny and expectations for higher education institutions have increased (Farrell, 2003; McDonough et al., 1997). Students who attended college during this time period saw their costs soar, and often incurred large amounts of debt to finance their degree (College Board, 2004; Thomas, 2000). They likely witnessed a changing educational marketplace with new accountability and new competition in recruiting the best and brightest students (Hartman & Schmidt, 1995).

In addition, increased accountability to public and governmental agencies has forced institutions to distribute enrollment statistics, graduation rates, faculty-to-student ratios, and other measurable data to the public through magazines and other private college-choice enterprises like the *Princeton Review*. Those organizations market the information to students and their families as they make college choices, creating expectations that universities then try to meet through the experiences they create for students on campus – both inside and outside of the classroom.

This new wave of marketing among higher education institutions has changed the way students and families approach college selection and ultimately changed how they conceptualize their college experience (Williams, 2005; McDonough, 1994). These changes may ultimately affect the extent to which alumni are satisfied with the institution they choose to attend. Parents may view a college degree as a product that will create benefits that exceed the costs (Lange & Stone, 2001). Students are internalizing these same views (McDonough). If they do not receive the benefits they expected – either while a student through campus experiences or following graduation in the form of a job or salary – their satisfaction will likely be less than that of students who feel the benefits have outweighed the costs (Hartman & Schmidt, 1995). Also, as is the case with other costly purchases, buyer's remorse could occur as students begin to realize they are not satisfied with their investment in a particular institution (Solomon, 2004).

This study may have important implications for higher education policy in the future. There are many reasons to keep alumni satisfied and happy with their institution – donations and financial support, contributions of time to improve their undergraduate institution, mentoring and/or career advice for undergraduates – all of which contribute directly to the strength of the college or university. And more importantly, the results of this study will point to the challenges

that institutions may encounter with increased expectations and a greater emphasis on the outcomes of college (getting a return on investment). If students and families expect certain outcomes from their degree, what changes need to be implemented on campus to ensure post-college success for students?

Statement of the Problem

This study is based on a conceptual framework guided by Astin's I-E-O model. It will explore how alumni satisfaction is affected by financial investment in college, involvement in campus activities during college, and post-college outcomes. More specifically, self-reported responses to questions of overall satisfaction on an alumni survey from Jackson College, a mid-sized, public, residential university on the east coast, will be related to indicators of financial investment, student involvement, and post-college outcomes. The joint and independent contributions of these three variables to alumni satisfaction will be analyzed using stepwise regression analysis. In addition, the displacement model (explained further in the next section) will be tested by the regression analysis to see if involvement or post-college outcomes displace the effect of investment on alumni satisfaction. In other words, will the experience in college override the impact of investment on the development of alumni satisfaction? Or will post-college outcomes displace any impact that investment or involvement may have on the development of alumni satisfaction?

The specific research questions guiding this study are: (a) To what extent does perceived cost affect perceived alumni satisfaction with the college experience? (b) To what extent does involvement in college activities affect perceived alumni satisfaction with college experiences? (c) To what extent do post-college outcomes (career success and salary) affect perceived satisfaction with college experiences? (d) Finally, to what extent and in what order do the

combined effects of these factors (financial investment, involvement, and post-college outcomes) predict perceived alumni satisfaction with college experiences? As will be noted later in chapter III, college experiences are defined through the measure of alumni satisfaction: satisfaction with educational experiences, social experiences, extracurricular experiences, and the decision to attend Jackson College.

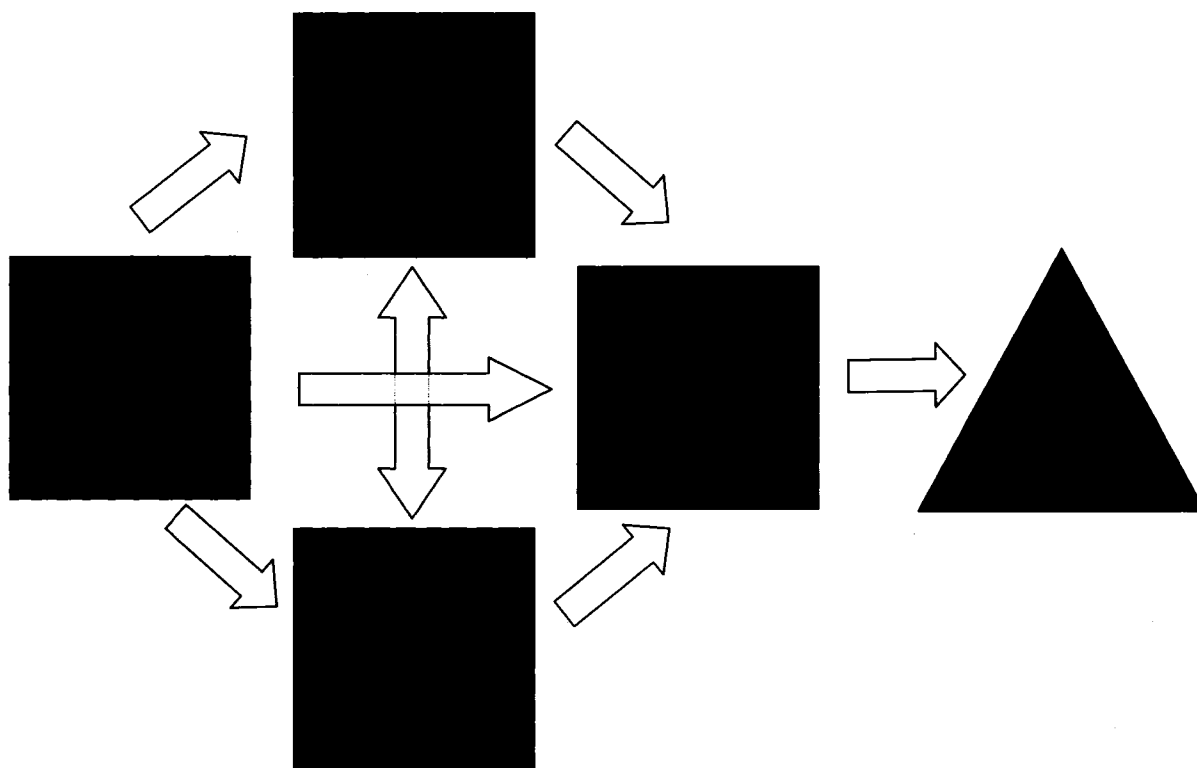
A Conceptual Framework

Figure 1 depicts the relationship among the four variables (with a fifth that will not be addressed directly in this study). It is based loosely on Astin's (1985) input-environment-output (I-E-O) model which focused on the investment of time and energy in student involvement. In this study, the input is financial investment, and the environment is viewed as the process of being engaged and involved in college in campus and co-curricular activities. Outcomes are what the respondents have experienced since graduating including their satisfaction with their career and salary. Each of these factors will be related to alumni satisfaction.

The model also illustrates the idea of displacement, the central construct of this study. The initial investment of money in the costs of college might lead to dissatisfaction if expectations are not met. The creation of expectations based upon cost is supported in consumer satisfaction research (Oliver, 1997). Subsequently, if a student has a positive experience, then these "involvements" might lead to a higher level of satisfaction (thus displacing the initial effect of the investment on the development of satisfaction). Astin's seminal research (1984) indicates that students who are involved in campus life both inside and outside of the classroom are more satisfied. Then, after a student graduates, it is possible that the outcomes associated with a degree could negatively or positively affect the development of satisfaction. Hence, the effect of

those post-college outcomes could displace any earlier effects from investment and involvement on the development of satisfaction.

Figure 1 Conceptual Framework



In the input stage, a student chooses a particular college by considering a number of factors – one of the most important being financial investment (Thomas, 2000). The decision to attend a university leads to the creation of expectations. These expectations are an essential part of determining satisfaction in consumer models of post-purchase satisfaction (Pate, 1993; Oliver, 1997). As students attend a particular college or university, they make choices about their involvement in the campus community (through campus activities, leadership, and time spent on academic pursuits). These involvements lead to varying levels of student satisfaction (Astin, 1993). Ultimately, students graduate with different degrees of satisfaction which could be based upon college experiences or their post-college life. Consumer satisfaction literature suggests that

post-purchase satisfaction is constantly evaluated by students based on their initial expectations (Solomon, 2004).

The “outcomes” part of the model focuses on post-college outcomes which have a relationship with alumni satisfaction in the literature (Gumport, 2001; Hartman & Schmidt, 1995; Monks, 2003; Pate, 1993; Pike, 1993, 1994). Factors like career satisfaction, career success, and salary have been shown to relate to alumni satisfaction (although research on outcomes and alumni satisfaction is limited). These post-college experiences may displace other factors like financial investment and involvement as determinants of satisfaction. For example, a student who worked during college to pay tuition may not have been involved on campus, but may acquire a good job after college and may therefore appreciate the benefit of his/her degree. While his/her student satisfaction may be less than that of a more involved student, his/her satisfaction after graduation may be greater. This suggests that post-college outcomes may displace both post-purchase satisfaction (investment) and involvement as correlates of alumni satisfaction.

The concept of “displacement” is a key aspect of the model. This research explores how each of these factors might displace the previous one as alumni evaluate their satisfaction. As individuals progress through the roles of prospective students, current students, and alumni, so does the context in which they evaluate their experiences. I hypothesized that the experience of college and the outcomes of college may ultimately displace the initial perceived financial sacrifice or *investment* in overall satisfaction of alumni.

Definition of Terms

The terms used in this study are defined as follows:

Financial investment is the self-estimated net cost to alumni while in college (including money borrowed to pay for tuition, textbooks, and additional educational expenses while subtracting the amount of grants and scholarships). This investment may have been in cash or in the form of loans. Respondents were also asked to indicate what percentage of the net cost of their education they paid for themselves, and what percentage was contributed by parents, scholarships, and grants. Only the self-estimated investment by the alumni themselves is included in this research.

Involvement is defined as the number of years spent participating in a variety of campus activity areas (including both co-curricular and extracurricular activities like student government, fraternity/sorority membership, research conducted with a faculty member, volunteer service, intercollegiate athletics, student publications, major-related clubs, or artistic groups) and any leadership positions held in those activities. Astin (1993) defined involvement as the amount of time and energy invested in activities in college. Respondents were asked to estimate the number of activities in which they participated each year that they were students and to indicate if they held leadership positions. Leadership was accounted for by adding extra weight to the measure and will be explained further in Chapter III.

Satisfaction is defined by Bean and Bradley (1986) as a student's emotional response to and evaluation of the educational, social, and extracurricular climate on campus. Consumer satisfaction literature does not agree upon a standard definition of satisfaction and in fact, according to Giese (2000), the inconsistency for a definition lies in the debate of whether satisfaction is a process or an outcome. Giese argues that the researcher must determine a

definition that best suits his/her research. For the purpose of this research, it will be assumed that satisfaction is a response to an evaluation process. This definition is supported by Oliver (1997) and Tse and Wilton (1988) who state that satisfaction is a “consumer’s response to the evaluation of the perceived discrepancy between prior expectations and the actual performance of the product as perceived after its consumption.” In this study, the definition of *alumni satisfaction* adapts these two definitions to simply be the response to the evaluation of undergraduate educational, social, and extracurricular experiences by alumni.

Buyer’s remorse is defined as anxiety or regret associated with a purchase that did not meet expectations (Solomon, 2004). When students invest in college, they do so with an array of expectations about how they will benefit (the more expensive the purchase, the greater the expectations). It is possible that if the college experience does not match the level of expectation created based upon cost, then buyer’s remorse could occur, thus affecting the development of satisfaction.

Displacement is defined as the process by which one variable overrides the impact of another variable in the development of satisfaction. In other words, one of the three independent variables could be a strong predictor of alumni satisfaction, thus lessening the effect of the other two variables. This process will be tested using stepwise multiple regression and will be explained further in Chapter III.

Summary

Research has not adequately explored the effect of multiple factors, especially financial investment, on alumni satisfaction. Institutional reactions to the changing educational marketplace have created a new atmosphere for students in which increased costs and competition consistently influence their college decisions and their expectations. It has long

been assumed by higher education researchers and practitioners that involvement is a contributor to satisfaction during college. Whether it is strong enough to displace potential dissatisfaction associated with investment remains to be assessed. Likewise, the potential for post-college outcomes to displace either of these factors as correlates of alumni satisfaction has not previously been tested. As the model in Table 1 illustrates, this research will explore the impact of the three variables on alumni satisfaction.

Higher education institutions may be able to use the results of this research to inform their work with alumni and perhaps to develop responses for increased student and alumni expectations. Once more is learned about what factors contribute most to the development of satisfied alumni, the knowledge gained may help institutions design an undergraduate experience that can lead to that satisfaction. Chapter II will provide an overview of the current literature on alumni satisfaction, investment and college choice, involvement theory, and post-college outcomes including the costs and benefits of higher education.

Chapter II: Review of the Literature

Introduction

This study tested the separate and joint effects of financial investment, involvement while in college, and post-college outcomes on the satisfaction levels of alumni. This research also explores the idea of displacement (that one or more of the variables could displace another in predicting alumni satisfaction). Amidst rising tuition costs, I hypothesized that students who pay a high price for college might experience regret or dissatisfaction (buyer's remorse) because the experience of college might not be worth the expense. Further, as this chapter will discuss, I anticipated that involvement (which has a strong link to satisfaction in previous literature) and post-college outcomes could be stronger predictors of satisfaction, thus reversing any negative impact of financial investment.

This review of the literature discusses these factors by relating five major areas as previously indicated in the conceptual framework: (a) research on alumni satisfaction; (b) research on college choice, consumer satisfaction, and higher education literature as it relates to financial investment in college; (c) involvement theory and research in higher education on involvement and engagement as they relate to student satisfaction in college; (d) research on factors related to college outcomes like debt accumulation, and job satisfaction; and (e) literature on the costs and benefits of higher education. The goal of this chapter (and this study) is to better understand which factors are associated with alumni satisfaction.

The model outlined in Chapter I illustrated how these areas may hypothetically be related to alumni satisfaction from the initial stage of financial investment in college through to the outcomes of college. This chapter will outline in more detail previous research that has contributed to the creation of that model. As the model illustrates, the hypothesis is that each of

the three independent variables (investment, involvement, and post-college outcomes) will play a role in the development of alumni satisfaction. Extensive literature already links involvement to student satisfaction, and to a lesser extent, it also links post-college outcomes to alumni satisfaction.

In a qualitative study on the student experience, Kuh (1993) supported the need for more research on the long-term effects of the college experience. He wrote, “Because many of the benefits of college persist well beyond graduation, it would be instructive to examine the relationships between involvement in out-of-class activities and the long-term effects of college” (p. 301). Assessing alumni satisfaction becomes an important way to better understand the lasting impact of the college experience and to gain insight into what characteristics of the campus environment contribute most to long-term outcomes for alumni. However, it is unclear how certain factors (financial investment, involvement, and post-college outcomes) affect alumni satisfaction. The remainder of this chapter will explore previous research and possible links between these factors and alumni satisfaction. The extent of literature on each factor varies widely and may or may not explain a direct connection. This literature review will then lead to the study itself and the exploration of alumni satisfaction at Jackson College in Chapter III.

Why Study Alumni Satisfaction?

There are two fundamental reasons to study alumni satisfaction: to assess the potential benefits of the college experience for students and to gain insight into how alumni perceive their experience for the benefit of the institution. Students who are more involved are likely to be more satisfied and are therefore more likely to experience the kind of growth and development the institution intends for them. Alumni who are satisfied with their college experience strengthen the institution by contributing their time, energy, and expertise following graduation.

Satisfied alumni are more likely to support their alma mater and contribute to the advancement of its public image and financial position (Monks, 2003; Pate, 1993). Research on alumni helps to inform the institution about the long-term impacts of the educational experience.

Alumni satisfaction has become increasingly important to institutions of higher education, especially during this time of new focus on outcomes research (Burke & Minassians, 2002). And yet, institutions do not necessarily know what contributes the most to satisfied alumni. Does the rising cost of college and their personal investment in tuition impact their satisfaction? Or do their involvements as students have the most significant impact? Perhaps the outcomes of college are the best predictor of alumni satisfaction. Consumer satisfaction literature would define the assessment of student satisfaction as “post-purchase satisfaction” and consumer research and findings would show that positive post-purchase satisfaction leads to positive post-purchase actions as alumni (like contributing financially to an institution, and recommending the university to others) (Pate, 1993). One study even makes specific recommendations on how enrollment managers can capitalize on alumni perceptions in their recruitment efforts (Haugen & Dallam, 1992). Another study employed the use of consumer satisfaction models to gain a greater understanding of alumni satisfaction. In that study, Hartman and Schmidt (1995) found that “outcomes play a significant mediating role in the satisfaction formation process” (p. 211). This appeared to be true for this research as well and will be explained further in chapters IV and V.

In addition to the benefits of positive post-purchase satisfaction, alumni have a different perspective with which to evaluate their college experience. “Current students may have a different assessment of the service provided by a university than those who have been reaping the benefits (or shortfalls) of their education for several years” (Pate, 1993). In a large study

conducted by Graham and Gisi (2000) using the Alumni Outcomes Survey (AOS) that was distributed between 1992 to 1996 to over 20,000 alumni at a variety of institutions, the authors asked alumni specifically about two areas – instructional climate and student affairs.

“Satisfaction with instructional elements such as instructional strategies, overall quality of instruction, and class size had a dramatic and consistent impact on the overall college rating and on learning outcomes” (Graham & Gisi, p. 288). Findings also indicated that alumni satisfaction with academic advising, registration, personal counseling, and other student services increased their satisfaction with college and their reported learning outcomes.

Pike (1993) analyzed data from institutions in Tennessee and found that alumni who were satisfied in their jobs were likely to be satisfied with college experiences while alumni who were not satisfied with their jobs tended to be dissatisfied with their college experiences. Two studies explored this relationship between job satisfaction and satisfaction with college and incorporated gender differences. Both studies indicated that women were less likely to be satisfied with their jobs (mainly due to their income differential with men), however one study found that gender did not impact their satisfaction with college while the other did find a significant relationship between gender and satisfaction with college (Adelman, 1991; Pike, 1993). Unfortunately, this difference cannot be explored in this study due to the fact that men are largely underrepresented in the sample as will be noted later in chapter IV.

Factors that May Affect Alumni Satisfaction

The three factors (financial investment, involvement in college, and post-college outcomes) explained next are the independent variables used in this study. The first factor, financial investment, is strongly related to the increasing consumer sensitivity to both price and quality in college choice. Over the past two decades universities have faced a new trend of

accountability often set forth by state legislatures and government commissions demanding efficiency and responsible spending on behalf of their constituents faced with higher tuition bills. This only adds to the sentiment by families and students that college should provide a return on their investment because government officials claim to be working to ensure that will happen through increased accountability. Colleges may no longer be viewed as institutions of public service, but as business enterprises responsive to the students and parents who have higher expectations and demand quality for their tuition dollars (Bok, 2003; Seymour, 1988). This culture shift has likely contributed to students placing a greater emphasis on how much they paid for their college experience and what they gained from it both during their years as a student and after they graduated. This price sensitivity was noted in a poll conducted by the American Council on Education in 1998. It found that 65 percent of Americans were worried about paying for college (Heller, 2001).

The initial decision to attend a particular college and to make a financial investment may create varied levels of expectation for students that could affect later satisfaction. Student financial investment alone has not been researched sufficiently as a contributing variable to student satisfaction or to alumni satisfaction, however consumer research would indicate that satisfaction with a product likely would be related to financial investment and the initial creation of expectations (Pate, 1993; Oliver, 1997). Therefore, alumni satisfaction could be negatively affected by rising college costs. Alumni giving also has been found to be positively related to satisfaction, and the accumulation of debt by alumni to pay for college has been associated with negative effects of alumni giving (Monks, 2003). Therefore, I concluded that there could be a negative relationship between financial investment and alumni satisfaction.

Involvement and engagement in the campus community have been shown to contribute to student satisfaction while in college in numerous studies (Astin, 1993; Pascarella & Terenzini, 2005). Therefore, I made the assumption that involved and satisfied undergraduate students would likely become satisfied alumni. In addition, involvement in college has been linked to positive post-college outcomes. For example, involvement in out-of-class activities has been shown to influence interpersonal skills – an area often cited as important from job recruiters (Kuh, 1993).

Alumni who are satisfied with their post-college lives, including factors like career and financial success, will likely transfer those feelings of satisfaction to their undergraduate institution. In fact, college outcomes have been shown to lead to alumni satisfaction both directly (Hartman & Schmidt, 1995; Pate, 1993; Haugen & Dallam, 1992; Pike, 1994) and in research concerning the more general benefits of higher education (Bowen, 1977). Additional research on each of the independent variables will be expanded upon in the following sections.

Financial Investment

Returning to the conceptual framework for this study, financial investment by students is one factor that could affect their satisfaction as alumni. The college choice and the decision to invest thousands of dollars in a particular institution and degree is the time when students create initial expectations and weigh the costs and potential benefits of that decision. Financial investment is the factor with the least amount of research directly related to alumni satisfaction. However, financial investment is important to the study because of the creation of expectations and the effect of those expectations on the development of satisfaction (Oliver, 1997).

According to consumer research, the *expectancy disconfirmation model* explains that if a product performs the way that a consumer believes that it will, then he/she may not think very

much of it. However, if a product fails to live up to expectations a negative result may occur. Similarly, if the performance of a product exceeds expectations, then the consumer will likely be satisfied and pleased (Oliver, 1997; Solomon, 2004). Therefore, if admissions counselors continue to “sell” an institution and create higher levels of expectations for students, then students (or alumni) are less likely to be satisfied with the actual experience.

Also, as a student chooses a particular institution and decides to invest a certain amount of money in the cost of that education, expectations are likely influenced by the price. If a student must invest more, then expectations are higher. Following the “purchase” students could have anxiety or regret as they consider other rejected alternatives. A remorseful buyer – the student – is more likely to be dissatisfied with the purchase. Because this study does not account for every possible scenario with regards to investment in higher education due to the difficulty in measuring for that data in survey research, I acknowledge that the application of consumerism to higher education may be problematic to interpret.

Setting the Stage for Investment in College

As the model indicates, the initial decision to attend college and invest in higher education is made and expectations that will later affect alumni satisfaction are established. During the solidification of college choice, the atmosphere of the college recruitment process is one that sets expectations high. In fact, in many ways, consumerism has permeated colleges and universities in the past several decades requiring students to navigate a maze of marketing schemes, rankings, and advertisements when making a choice of which college to attend. Students read college brochures highlighting prestige and institutional status, subjectively assess the prospective educational experience, visit the campus to learn its culture, and analyze the benefits that a degree may offer post-graduation. This analysis, much like the decision-making

process of purchasing a product, has become the norm according to college choice research (Bers, 2005; Hossler, Braxton, & Coopersmith, 1989). Students are now using their purchasing power to define what they want to learn inside the classroom and what they hope to experience outside the classroom.

One researcher, McDonough (1994), argued that students learn in high school how to behave and make decisions by watching their older peers and through interactions with college admissions officers. The development of a culture of consumerism has been created by “a college admissions industry made up of enrollment marketers, independent entrepreneurs, and cash cow students. High school seniors have become, not merely students, but rather, they have been ‘commodified’ by enrollment managers” (McDonough, p. 443). This new culture of college choice applies mainly to middle to high socioeconomic backgrounds. Students from low socioeconomic backgrounds are more influenced in college choice by their limited financial resources (Bers, 2005; McDonough, 1994).

This new focus on competition and the “selling” of an institution to prospective students sets the stage for increased expectations and the idea that students will receive something worth at least the price of their investment from the institution they select. Catsiapis (1987) states that “prospective college students, typically high school seniors, are assumed to form expectations of the relevant costs and benefits, based on the information that they have at that time” (p. 33). Catsiapis found that students have reasonable expectations when they evaluate the costs and benefits of a college degree and that these factors are a significant part of their enrollment and investment decisions.

Tuition Increases

Students today spend time during the college choice process evaluating the costs and benefits of the education they are seeking. For some students, this might be purely a financial decision, and for others it may be about the potential value-added benefits that they will receive as an educated citizen. Research has indicated the net cost of college is the most significant financial factor in choosing a college (Hossler et al., 1989). Either way, there are costs and benefits involved in the decision to attend a particular institution or college. With tuition increasing dramatically over the past twenty years, students are evaluating the cost relative to their own expectations about what it should cost and relative to what they expect in terms of long-term payoff (factoring in financial aid and their own ability to pay). “Over the past decade, from 1997-98 to 2007-08, published tuition and fees for full-time in-state students at public four-year colleges and universities rose 54 percent in inflation-adjusted dollars — an average of 4.4 percent per year. This increase compares to 49 percent for the preceding decade and 21 percent from 1977-78 to 1987-88” (College Board, 2007).

During the time period of this study (1993 – 2001), paying for a child’s college tuition cost a middle income family 17 percent of their household income as compared to 14 percent in 1980. For a low-income family, the burden was nearly 62 percent as compared to 50 percent in 1980 (Clayton, 1999). According to the State Council for Higher Education where Jackson college is located, tuition rose dramatically between 1981 and 1991. In 1981-82, the average tuition was \$1,155 per year. In 1991-92, the average was \$2,985 per year – an increase of 158% (2001). In the late 1990s, tuition costs actually began to drop in the state due to a reduction imposed by the then Governor, but the costs were still much higher than a decade earlier (Nardo, 2000).

Another result of higher tuition has been an increase in student reliance on loans. Students are graduating with significant amounts of debt associated with their education (Thomas, 2000). During the 1990s, the average debt burden for a college student grew from \$8,200 to \$18,800 (Karabel, 1998). In many cases, students expect to take out loans to pay for college, adding to the burden of the financial investment they may feel at the time of their college choice.

On the national level, the public's price sensitivity has been affected by the increased burden placed on students and families to pay progressively higher tuition and fee rates. However, even amidst attacks about skyrocketing costs, the general public opinion of higher education remains high. Middle class families throughout the country are encouraging their children to attend college because they believe it will provide them with a better financial future (Lucas, 1996; Kinzie et al., 2004). This speaks directly to the cost/benefit analysis that students and their families calculate when they consider rising tuition bills. At the beginning of the process, they are still willing to take the risk and pay high tuition prices in the hopes of getting more in return.

In order to meet increased public expectations for higher education in a time of relatively declining state support, institutions are relying on increases in tuition dollars and for now, that trend will most likely continue. It is essentially a catch-22. Tension exists between providing families with the quality they expect (living accommodations, state of the art facilities, etc.) at ever-increasing costs and the pressure to hold down prices in order to compete for students. Solutions such as deferring capital maintenance and improvements, retaining aging equipment through repeated service, hiring part-time faculty, freezing salaries, increasing class sizes, and reducing course offerings are taking their toll (Lucas, 1996). Each year, institutions must wrestle

with this tension between cutbacks and tuition increases and ultimately there will be no more room for cutbacks without damaging the quality of education and students and parents will pay increasingly more of the difference.

Research Regarding Expectations

As students attempt to predict the benefits of their college degrees, they are already in the process of evaluating their satisfaction. Once the college choice is made and a student arrives on campus, the process of the college experience will affect how satisfaction is later modified (Richins & Bloch, 1991). Schmidt and Sedlacek (1972) focused on expectations from a first-year student perspective. “New students expect to find that instructors, faculty, and administrators care about individual students, that courses will be stimulating and exciting, and that channels for expressing complaints will be readily available” (Schmidt & Sedlacek, p. 237). Their results indicated that first-year students were less satisfied than older students and they attributed that dissatisfaction to a level of expectation. The authors attributed the dissatisfaction to “a natural or expected part of adapting to a new setting” (p. 237). While Schmidt and Sedlacek did not elaborate beyond that conclusion, the high expectations may also be attributed to pre-admission marketing as colleges attempt to compete for these new students.

Ripple (1983) attributed optimistic expectations by first-year students to the fact that admissions counselors (the first college administrators that prospective students interact with) are consistently positive about the institution as they attempt to “sell” the school. “After a student has enrolled, he/she encounters other administrators not necessarily charged with the same public relations responsibility” (Ripple, p.80). Students, once they arrive, are also faced with the reality of their experience. Adjusting to living in residence halls, eating meals in dining halls, managing relationships with roommates, learning how to interact with professors, adjusting to college

academics, and difficulty in time management are all areas that could lead to dissatisfaction from these high expectations.

Students Share the Responsibility of Cost with their Families

Parents are increasingly involved in the decisions that their college age offspring make. In fact, in the recent past, parents have become more involved in all aspects of their children's college experience (Bers, 2005; Daniel, Evans, & Scott, 2001; Lange & Stone, 2001). However, while they may participate extensively in decisions, they are not always taking on the entire burden of the costs associated with college. In a study sponsored by the Sallie Mae Foundation in 1996, parents were surveyed from across the country about their high school junior or senior and their plans to pay for tuition. Ninety-two percent of parents felt that the investment they were about to make in their child's college education was the most important investment they would ever make. Additionally, students were asked if they felt directly responsible for financing their own college education. Forty-three percent of students felt that the financial responsibility was a shared responsibility with their parents and 19 percent responded that it was their own responsibility entirely. In addition, only 7 percent of students responded that they were unlikely to take out a loan to pay for college (Gallup & Robinson, Inc., 1996). This analysis indicates that most students understood, even in high school, that they would be accruing some debt from their investment in higher education, and emphasizes that students are sharing part of the "purchase" themselves. In this study, when students self-estimated their net costs for college, 28.5% did not share any of the burden for college expenses. The remaining 71.5% paid for at least some of their college costs.

Students Consider the Costs and Benefits

Underlying a college choice is the notion that upon graduation, students are likely to receive some sort of return on their college degree (Bowen, 1977; Thomas, 2000). Presumably, this would be a greater return than if they had chosen another path post-high school. “While attributes such as location, size, social orientation, and academic quality have been identified consistently as the most important non-financial factors in the college choice process, the net cost of college has been identified as the most important financial determinant” (Hossler et al., 1989). In addition, in one study conducted by Gallup and Robinson, Inc. (1996), a survey of high school juniors and seniors and 95% of college-bound respondents agreed that college was the most important financial investment they would make in their future.

Students today are keenly aware of the potential return on the investment made in their college education. Thomas (2000) found that prospective college students believed that a high cost education would usually lead to a higher salary following graduation. This belief sets up the expectation that the benefits will outweigh the cost. Contrary to this perception, Thomas found in his research that salaries earned by students post-graduation were in no way related to the amount of money they invested in tuition costs. Regardless of the actual returns on their investment, students today still believe that they will reap larger returns for a larger investment (Thomas, 2000).

In addition, the “quality” of the institution from which a student graduates and his/her major are important components of private returns (Pascarella & Terenzini, 2005; Thomas, 2000). Students expect to earn more as a result of a college education, and those expectations are higher if a student attends a prestigious institution. “It is desirable that this investment in a college education yield financial returns over the course of one’s lifetime that will exceed those

of the costs of the investment itself” (Thomas, p. 283). Thomas’ research also indicated that students weigh the costs and benefits associated with different majors and professions before making a decision. This shows that financial investment is not simply a factor in the decision to attend a particular college or university. It even becomes a factor in decisions made after enrollment (Thomas). As students evaluate options and choose a particular institution, buyer’s remorse could occur if a student regrets not choosing another institution or another major.

Private colleges are earning a reputation in the public eye of generating a better return on investment. Many students who choose to attend them are willing to invest many more dollars in their education with the expectation that they will benefit more from that degree than from one from a public institution. Private colleges are also perceived by students as offering a higher quality education (Betz, Starr, & Menne, 1972). These viewpoints appear to be supported by evidence confirming that the benefits of attending private colleges do actually outweigh the costs. For example, Thomas (2000) found in his study of 1,728 graduates from 209 institutions, that factors such as graduating from a private versus a public institution meant higher earning potential and highly selective institutions did have graduates with higher earning potential than less selective institutions. So while there may be some truth in the perception that private colleges lead to a higher return on investment, the perception is still the most powerful contributor to the competition among institutions for the best students and those increased expectations. Although students likely would not realize this at the time of college choice, the flip side of the previous finding is that because they invested more, the graduates from private institutions had a 57 percent higher debt ratio than those who graduated from public institutions. Financial outcomes could also be based on the prior experiences brought to college by the students. If they have money to pay for a private education at the time of college choice, then

they also may have the desire and expectation to earn more money, therefore choosing majors and careers with higher incomes.

Students Accrue Debt to Meet the Cost

The benefits associated with higher education come at a much greater cost than they did in the 1970s. The costs have increased to such an extent that many students are assuming large debts in order to share in those benefits (College Board, 2004). Thomas (2000) found that in his sample, half of the graduates had borrowed money to attend college and their average debt load following graduation was \$10,000. He also concluded that “regardless of field of study, many students are willing to borrow relatively large amounts of money to finance their college education” (p. 306). In addition, he concludes that “graduates from the lower earning fields were either unaware of or unconcerned about the magnitude of this debt relative to their potential earnings upon graduation, or alternately that graduates were both aware and concerned but felt few if any alternatives to borrowing existed” (p. 306). Because at the time of college choice, students may not be concerned with the potential debt they are accruing, it could have an even greater impact on their satisfaction as alumni if they are surprised following graduation at how much they owe.

Since 2001, undergraduate students have received slightly more loan aid than grant aid. The number of private student loan programs is growing and loans for parents have increased rapidly (College Board, 2004). In 2003-2004 after adjusting for inflation, grant aid increased by 6 percent while loan volume rose by 16 percent. Students and their families are relying more heavily on loans to pay for increased tuition costs. In addition, recent estimates show that as many as 25 percent of college students rely on credit cards to finance their college education (College Board). A lack of alternatives is a reality for many students today and as Thomas

(2000) notes, many students do not understand the implications of borrowing at high levels for college. Higher paying jobs require a college degree, however, achieving that degree comes at a great cost to students and/or their family.

In another related study, 12,225 seniors from 27 private, selective colleges were surveyed, and the results indicated that 20 percent of respondents agreed that loans had caused them to postpone graduate or professional school. Fifty-five percent of the students surveyed had accumulated debt associated with the cost of their education and the average debt among the borrowers was \$16,025. Twenty-five percent acknowledged that undergraduate loans had impacted their decisions of which graduate school to attend (factoring in financial aid), and ten percent acknowledged that they had chosen their major because of their increased debt. Thirty percent felt that their debt caused them to explore only higher paying careers during their job search (Monks, 2000). Some might argue that \$16,025 is a small investment to make when the lifetime earnings advantage of someone with a college degree often exceeds \$1,000,000 (College Board, 2004). However, increased contributions by students combined with higher levels of student debt create a scenario where greater expectations for both the college experience and its results may affect satisfaction.

How This Literature Contributes to the Understanding of Financial Investment

Many of the findings outlined here about financial investment indicate that rising costs for education are not necessarily scaring away prospective students and that the perception that the benefits will outweigh the costs has become the norm. The perceived benefits by these students could be about the experience of college or about the outcomes of their degree. Still, several questions remain. Is financial investment related to their satisfaction? And if buyer's remorse occurs, then is cost, the experience of college, or post-college outcomes most predictive

of alumni satisfaction? In other words, will involvement or post-college outcomes displace the impact of financial investment?

Student Involvement

Astin and others theorize that student involvement and investment of time in campus activities are an important factor in students' overall growth, development, and satisfaction (Astin, 1993, 1996). Once students arrive on campus, Astin (1993) argues, their assimilation into campus life, their level of involvement in their academic pursuits, and their memberships in organizations have a significant effect on the outcomes of their college experience, and on their satisfaction with it. Astin's research leads to the hypothesis that involvement may displace cost as an influence on how students evaluate their experience. While cost and financial investment may be the initial calculation in college choice, once students arrive on campus, their experience may be enhanced by their involvement.

Involvement theory in higher education was developed in the mid-1980s out of research conducted as a response to student retention concerns (Astin, 1985; Tinto, 1987). Findings from both studies indicated that students who left an institution often had no feelings of connection to the community there. Students who were more involved remained at the institution. Factors that positively affected retention according to Astin (1985) included: living on campus, joining a fraternity or sorority, participating in athletics, membership in honors programs, and participating with faculty in research. Astin also asserts that research on involvement is focused on the behavior of the student and what the students "do" on campus. In fact, Astin proposed that assessment of the effectiveness of higher education should stress student cognitive and affective development from admissions through graduation. He linked this assessment to his model of involvement in terms of inputs, experiences, and outcomes.

Astin's Involvement Theory

Astin's theory, often described as the input – process – output (I-E-O) model, was a major contribution to research on student development. He theorized that the amount of time and energy students invested in their collegiate environment directly affected the results generated. He defined involvement in his initial published article on the theory as “the amount of physical and psychological energy that the student devotes to the academic experience” (Astin, 1984, p. 297). He also stated that “students learn by becoming involved” (1985, p. 133). This learning, however, depends on the student and the extent to which they take advantage of resources provided by the institution.

Astin described five basic postulates of involvement theory. They are:

1. The investment of physical and psychological energy in various objects (could be as broad as the student experience or as specific as preparing for a chemistry exam)
2. Involvement occurs on a continuum (different for different students)
3. Involvement has both quantitative and qualitative features (hours spent studying vs. comprehension)
4. The amount of student learning and personal development associated with any program is directly proportional to the quality and quantity of student involvement in the program.
5. The effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement

(Astin, 1984, p.298)

Pascarella and Terenzini (2005) point out that Astin has created a conceptual orientation, but there is some argument as to whether it is truly a theory: “Astin offers a general dynamic, a principle, rather than any detailed, systemic description of the behaviors or phenomena being predicted, the variables presumed to influence involvement, the mechanisms by which those variables relate to and influence one another, or the precise nature of the process by which growth and change occurs” (p. 54).

The Importance of Involvement

Involvement has been linked to student persistence in college, student satisfaction, a continued relationship with the institution post-graduation, and an increased likelihood of attending graduate school (Pascarella & Terenzini, 2005). These findings (that involvement has positive results for students as well as the institution) have led to the creation of campus programming initiatives and to a focus by campus administrators on discovering ways to encourage students to become involved in campus life.

Schuh (1991) begins his discussion of student involvement by pointing out the number of hours that students have to fill per week outside of the classroom. Given the number of hours typically spent in class, sleeping, and eating, there are still around 50 or so hours each week that are unaccounted for in the typical student schedule. How a student decides to fill that extra time is often critical to their development in college. Similarly, Williams and Winston (1985) concluded that “students who did not elect to become involved outside of the classroom in either organized student activities or work are developmentally less mature than participants” (p. 58). These conclusions are supported by more recent research (Astin, 1985; Cooper, Healy, and Simpson, 1994; Kuh, 1995).

Cooper, Healy, and Simpson (1994) found that involvement was related to student development. Students in their study who were members of clubs or organizations had greater gains on developmental tasks -- as defined by Chickering and Reisser (1993) -- such as *developing purpose* or *autonomy* by their junior year. They also found that taking on a leadership role often advanced the development of students even further. Involvement also has been shown to have positive effects on the cognitive and affective development of students (Astin, 1996).

At the institutional level, the opportunities that a university provides for students to become involved, and the type of environment created by the staff and faculty at the institution can have a great impact on students. Institutions that have a successful framework in place to support involvement by students were described by Kuh et al. (1991) as *Involving Colleges*. These colleges share certain factors and conditions:

1. A clear, coherent mission and philosophy
2. Campus environments with human-scale attributes that use their location to educational advantage
3. Campus cultures that value student involvement
4. Policies and practices consistent with the institution's mission and students' characteristics
5. Institutional agents who acknowledge the contribution of learning outside the classroom to achieving the institution's educational purposes

(Kuh et al., 1991, p. 11)

Many other studies have shown that involvement is beneficial for student success and retention (Abrahamowicz, 1988; Hatcher, Kryter, Prus, & Fitzgerald, 1992; Knox, Lindsay, & Kolb, 1992; Kuh, et al., 1991).

Involvement has also been shown to affect job placement and success. Astin (1993) found that students involved in extracurricular activities not only developed skills that transferred effectively into a job, but they also increased their marketability by showing that they could balance various responsibilities while taking classes. This indicates a potential direct link between involvement and alumni satisfaction in terms of career success. Astin also found that participation in extracurricular activities significantly enhanced interpersonal and leadership skills important to job success.

In a different study on the effects of the out-of-classroom experience, Kuh (1993) used qualitative methods with a sample of 149 students at 12 colleges and universities and asked them to reflect on what they had learned outside of the classroom. The study found that extracurricular experiences were particularly important for the development of appreciation for people from diverse backgrounds (different from their own). Out-of-class activities also contributed to the development of interpersonal skills needed to relate to all types of people – thus contributing further to their ability to work in a diverse workplace after college. These findings could indicate that involvement can lead to positive post-college outcomes and may indirectly affect alumni satisfaction through post-college outcomes. Kuh also found that *within college differences* (what the students were involved in) were greater than *between college differences*. This indicates that participation in activities at any institution will result in many of the same benefits (and that choice of a specific college may not really matter).

Some researchers have cautioned against putting too much emphasis on involvement. In a review of literature on student involvement, Moore et al. (1998) raised a concern about the biased nature of this particular area of research. “It is also important that we note that the vast majority of literature in the area of involvement is written by student affairs researchers who operate on the premise that involvement has a positive effect on development and learning” (p.15).

The Impact of Employment While in College

Students work in a variety of different settings and for a variety of different reasons. Some students work to help pay for tuition, and others work for spending money. Still others might participate in a work-study program related to their financial aid package. Students who do work while in school may work a lot or a little and may choose to work on-campus or off-campus. These varying scenarios contribute in different ways to student involvement and academic success in the university setting.

Working full time while attending college has a negative effect on the completion of a bachelor’s degree (Astin, 1993). Astin also found that working part-time on-campus had a positive effect on self-reported cognitive and affective growth – similar to the growth and development achieved from involvement on campus. On-campus employment is seen as an opportunity for students to connect to campus resources, faculty, and staff (Astin, 1999). “On a more subtle psychological level, relying on the college as a source of income can result in a greater sense of attachment to the college” (Astin, p. 523). Research is somewhat mixed on whether working part-time off-campus has a positive or negative affect on student growth (Astin, 1984, 1993, 1999; Hernandez et al., 1999; Kuh 1995). For the purpose of this research, working is an activity that could be linked to investment (if a student has to work to pay for college) and it

could have a positive or negative impact on involvement (depending on the location and duration of work hours). However, student employment is not directly analyzed in this research. It only is viewed as a potential mitigating factor.

Student Satisfaction

Involvement has been found to be related to student satisfaction (Astin, 1993, 1996; Bean & Bradley, 1986; Knox, Lindsay, & Kolb, 1992; Pike, 1991, 1993). “Students who are involved in powerful out-of-class experiences are likely to have a much more satisfying college experience than those who do not participate (Schuh, 1991). As previously mentioned, research has shown that involvement leads to a higher impact experience for students and one in which those experiences may in fact displace the importance of investment. In other words, involvement may be more closely associated with alumni satisfaction than financial investment is. While there is less research on alumni satisfaction, there is a great deal of research in the area of student satisfaction and the possible contributors to it during college. Research on alumni seems to be more focused on the amount of money alumni contribute and their giving patterns. Research on financial giving to higher education institutions has linked involvement to a greater likelihood that alumni will contribute (Thomas & Smart, 2005). But, financial giving aside, in order to explore alumni satisfaction, it is important to consider how satisfaction develops during college.

For nearly three decades, studies of student satisfaction have been applied to the practice of student affairs and to meeting the needs of students in college, and these studies have shown that variables including gender, pre-college characteristics, and academic achievement are related to satisfaction (Abrahamowicz, 1988; Bean & Bradley, 1986; Beltyukova & Fox, 2002; Benjamin & Hollings, 1997; Betz, Starr, & Menne, 1972; Knox, Lindsay, & Kolb, 1992).

Higher education has placed emphasis on the assessment of outcomes of the college experience. However, some assessments overlook the importance of the measure of student satisfaction when considering outcomes (Astin, 1993).

This area covers the student's subjective experience during the college years and perceptions of the value of the educational experience. Given the considerable investment of time and energy that most students make in attending college, their perceptions of the value of that experience should be given substantial weight.

Indeed it is difficult to argue that student satisfaction can be legitimately subordinated to any other educational outcome (Astin, p. 273).

Astin (1993) completed the most comprehensive study of student satisfaction to date in higher education. His sample of 24,847 students from over 400 institutions nationwide included entering freshmen in 1985 and the same students were given a follow-up survey in 1989 four years later.

The study reduced 27 different areas of student satisfaction into five general factors. These included relationships with faculty, curriculum and instruction, student life, individual support services, and facilities. Astin also ran a separate regression analysis on satisfaction with the overall college experience. The highest levels of satisfaction related to the individual variables of courses in the major field, opportunities to participate in extracurricular activities, and the overall college experience. Regulations governing campus life were associated with the lowest levels of satisfaction as was the individual support services factor. (Encounters with both arenas could indicate that a student is not adjusting well to campus life). The other four factors were associated with moderate levels of satisfaction in the combined analysis.

Similar to the findings described by Astin (1993) on involvement, Abrahamowicz (1988) found involvement to be positively related to satisfaction. Relationships with faculty, administrators, and students were found to be more positive for students involved in campus organizations, and 65 percent of organizational members reported being enthusiastic about college while only 17 percent of non-members reported the same enthusiasm.

Holland and Huba (1991) also found that students who were involved on campus were generally more satisfied with their college experience, specifically those involved in service programs. Students who interacted with faculty more frequently and who had frequent peer interaction were found to be more satisfied (Pike, 1991). Pike's study was focused on college seniors and he argued that seniors provided a better measure of involvement than studies focusing on data collected earlier in college. In addition, research has indicated that Greek-affiliated students are more satisfied than non-Greek students and that Greek students tend to give more money to the university as alumni (Pennington, et al., 1989; O'Neill, 2005).

Environmental factors that Astin (1993) found to be significant positive predictors of satisfaction include leaving home to attend college, distance from home, institutional diversity emphasis, a positive faculty attitude toward the general education program, incorporating a minority or Third World course requirement into the curriculum, majoring in education, involvement with faculty outside of class, and involvement in extracurricular activities. Negative predictors of satisfaction included lack of student community, institutional emphasis on resources and reputation, majoring in engineering, receiving counseling, hours per week spent watching television, and holding a part-time job off campus.

Knox et al. (1992) utilized the National Longitudinal Study of the Class of 1972 to follow the same students from 1979 to 1986. The questionnaire, which asked students about a wide

variety of college experiences and satisfaction, resulted in a total sample size of 2,702 students. They found that a larger student enrollment on a campus resulted in higher levels of satisfaction with recreation and sports facilities. Students who spent more time commuting were found to have lower satisfaction levels than students who lived on campus (House, 1998). The study also found that a higher number of full-time students on campus led to greater satisfaction with social life.

Due to a more extensive body of literature on student satisfaction as opposed to alumni satisfaction, and because of the idea that satisfaction is a continuous concept, it is important to consider the research findings in the area of student satisfaction. The strong links in the literature between involvement and student satisfaction led to my hypothesis that involvement might displace financial investment as a source of satisfaction for alumni. I expected that involvement would have a positive relationship with alumni satisfaction and would displace the effects of financial investment in the predictive analysis. I also expected a positive relationship between involvement and post-college outcomes because involvement has been linked to career success as discussed earlier in chapter I. In conducting this research, I acknowledge that students have varied motivations and experiences that may affect how they “value” the college experience. These differences may impact their overall satisfaction.

Post-College Outcomes

Post-college outcomes are measured in this study by the respondents’ satisfaction with their career and their current salary. By testing the model, I explored whether these outcomes ultimately displaced effects of financial investment and involvement on alumni satisfaction. In essence, I expected the outcomes to be the realization of the perceived benefits that the student originally factored into the cost/benefit analysis during the college choice process. By testing the

model at this stage, I asked if, after the student graduates from college, the satisfaction associated with those outcomes outweighed the importance placed on cost or involvements while in college.

Certainly post-college outcomes are more extensive than just job satisfaction and salary as measured in this study. Post-college outcomes are the activities and achievements of alumni after they graduate. Outcomes can include measures of careers, salaries, community contribution and involvement, and civic engagement “Measuring the outcome of a college education, in the end, is an assessment of the institution” (Boyer, 1987). This form of assessment was emphasized by accrediting agencies in the 1990s and has been pursued by government agencies, accrediting institutes, and the general public in order to evaluate the effectiveness of higher education (Hartman & Schmidt, 1995). In fact, there was a shift in the early nineties from assessment based mainly upon quantity of campus resources, quality of admitted students, and the reputation of faculty research to a more outcomes-based approach (Burke & Minassians, 2002).

In his seminal research, Bowen (1977) identified three main goals of higher education: the development of cognitive abilities, affective characteristics, and practical competence. Other benefits of a college degree include job placement assistance, post-graduation employment, and a higher salary associated with an increased educational attainment. There is a great deal of research on the non-monetary benefits of education and it generally indicates that more education leads to better access to health care, better health practices, longer lifespans, more continuing education, greater use of the internet, greater participation in leisure and artistic activities, higher voting rates, more book purchases, greater community service, greater tolerance, greater community leadership, etc. (Bowen, 1977; Gumpert, 2001; Postsecondary Education Opportunity, 2000).

According to Olsen (1974), the purpose of higher education in society was to secure the national defense, and to promote the transmission of knowledge, skill development, sociability and citizenship, and employability. Obviously, monetary returns on higher education for the individual also contribute to the economic state of the country in terms of employment rates and spending practices. The average annual earnings for college graduates in 2003 between the ages of 25 and 34 were \$14,700 greater than the earnings of a high school graduate (Baum and Payea, 2004). In addition, Bowen also identified societal goals of higher education including the productivity of individuals in the national arena, social progress, economic productivity, and advancements through research.

From the results of an analysis conducted by the Postsecondary Education Opportunity organization (2000), a simple ratio of benefits divided by costs (increased lifetime income/four years of institutional charges) showed that:

- Males graduating from a public 4-year institution in four years with a bachelor's degree received a return of \$34.85 for every dollar spent on tuition in increased lifetime income.
- Females graduating from a public 4-year institution in four years with a bachelor's degree received a return of \$18.06 for every dollar spent on tuition in increased lifetime income.
- Males graduating from private 4-year institutions in four years with a bachelor's degree received a return of \$13.83 for every dollar spent on tuition in increased lifetime income.

- Females graduating from private 4-year institutions in four years with a bachelor's degree received a return of \$7.17 for every dollar spent on tuition in increased lifetime income.

This study also found that the rate of return was steady from 1967 through 1999. As a result they concluded that college education was at least as good an investment in 1999 as it was three decades before and that the only thing more expensive than attending college is “not attending college” (p. 2). This study also points out that beyond the obvious financial benefits of college, people with more education live longer and happier lives than those with less formal education.

Many studies have calculated both the private and social rates of return on investments in higher education (Pascarella & Terenzini, 2005). This private rate of return index is the difference between post-tax earnings of college and high school graduates divided by the sum of unsubsidized costs of college plus foregone earnings (Pascarella & Terenzini). Most of the studies have yielded the same results -- positive private rates of return in the 8 to 15 percent range (Bowen, 1977). Pascarella and Terenzini (2005) synthesized some of the more prominent studies on rate of return and estimated the average private rate of return on a bachelor's degree to be around 12 percent (p. 459).

The two areas of career satisfaction and satisfaction with salary level were chosen as measures for outcomes for this study because they are the two areas most cited in the college choice research as factoring into the decision to invest financially in college (Hartman & Schmidt, 1995). Also, they both have been related to alumni satisfaction (Haugen & Dallam, 1992; Pike, 1993; Pike, 1994). In fact, Pike (1993) stated in his research on work experience and alumni satisfaction that the lack of research that related those two areas was “striking” (p. 5). Pike's (1994) research on alumni satisfaction, surveyed 828 individuals who graduated from the

University of Tennessee at Knoxville. He found that satisfaction with post-college work was positively related to satisfaction with the undergraduate institution. “Individuals who were satisfied with the types of work they were performing, satisfied with the pay they were receiving, and/or were not looking for another job held more favorable opinions of their college experiences than did individuals who were dissatisfied with their work” (p. 118).

While research has continued on college student outcomes (Astin, 1991; Jacobi, Astin, and Ayala, 1987; Knox, Lindsay, and Kolb, 1993), how students perceive the cost/benefit relationship of a college degree once they have graduated has not been explored extensively. Only a few studies have attempted to explore the relationship between career and salary satisfaction (post-college outcomes) and alumni satisfaction (with the college experience). This research aims to add to that knowledge base. I hypothesized that post-college outcomes would have a positive relationship with alumni satisfaction and would displace the effects of financial investment and involvement in the predictive analysis.

Summary

Throughout this chapter, research has been cited including literature on the process of college choice and financial investment; the involvement of students while in college and how involvement and engagement has been related to student satisfaction; and literature on post-college outcomes and the costs and benefits of higher education. The idea of displacement is supported by each area of literature.

Financial investment in higher education is greatly influenced by rising costs and a competitive marketplace, and this leads to the creation of expectations that may have a direct impact on the development of satisfaction. The expectations and the promise of future success may also lead students to invest more in their education as they weigh the costs and benefits. If

expectations are not met once on campus, students could experience buyer's remorse, thus leading to dissatisfaction with their college experience.

However, research indicates strong connections between involvement, engagement and student satisfaction. Involvement also has been linked to greater career preparation and success. This leads me to hypothesize that involvement will have a positive relationship with alumni satisfaction and could displace the effects of financial investment on alumni satisfaction.

As noted in the review of literature, the monetary returns of a college degree are significantly higher than for a high school diploma. There are also numerous non-monetary benefits of a college degree including career satisfaction. Both of these areas, satisfaction with salary (monetary) and satisfaction with career (non-monetary), were analyzed in this research. Alumni who are satisfied with their careers and salary may relate that feeling of satisfaction back to their college degrees and therefore, may reflect positively on their college experience (even if they might not have done so as students). Also, it is possible that because post-college outcomes were the most proximate experiences for the respondents as they answered the survey questions, they would have the strongest relationship to the development of alumni satisfaction. Chapter III will outline the plans for testing the displacement model and for conducting the study.

Chapter III: Methodology

Introduction

Is there a relationship between financial investment in college, involvement in campus activities while a student, post-college outcomes, and satisfaction of alumni with their college experience? Little previous research has shown what factors contribute most to the development of alumni satisfaction. This research aims to enhance the understanding of what factors most influence the development of alumni satisfaction, specifically exploring the independent and joint contributions of financial investment, involvement, and post-college outcomes. This chapter outlines the specific methods that were used to determine the extent to which those variables contributed to alumni satisfaction and whether involvement and post-college outcomes may have displaced the effects of financial investment on alumni satisfaction. For this study, the dependent variable was alumni satisfaction. The independent variables were a) total investment represented by the self-estimated net cost by the alumni of their college expenses, b) their level of involvement in campus activities in college, and (c) their post-college outcomes. This chapter outlines the research questions, research context, procedures, limitations and delimitations of the study, and ethical safeguards.

Research Questions

This research explored the effects of three variables on alumni satisfaction: investment, involvement, and post-college outcomes. The research also addressed whether one of the variables could displace the impact of another on alumni satisfaction. What is the impact of the financial investment in college, and could other variables like involvement or post-college outcomes ultimately displace investment in determining alumni satisfaction? As noted in the literature, involvement and student satisfaction were linked in numerous studies, but there has

been little research on alumni satisfaction. Previous studies of student satisfaction have not included variables such as financial investment or in the case of alumni satisfaction, post-college outcomes.

The following research questions guided this study: (a) To what extent does perceived cost affect perceived alumni satisfaction with the college experience? (b) To what extent does involvement in college activities affect perceived alumni satisfaction with college experiences? (c) To what extent do post-college outcomes (career success and salary) affect perceived alumni satisfaction with college experiences? (d) Finally, to what extent and in what order do the combined effects of these factors (financial investment, involvement, and post-college outcomes) predict perceived alumni satisfaction with college experiences?

The Research Context

This study examined the self-reported experiences and overall satisfaction of alumni who graduated from Jackson College (a pseudonym), a mid-sized public institution on the East Coast. A primarily residential campus, the current enrollment of Jackson College is 5,560 full-time undergraduates. Most students are of traditional age (17-22 years old) and the institution has a 95% retention rate between freshmen and sophomore year (Office of Institutional Research, 2005). During the final year in which the research participants attended the institution (from the three graduating classes of 1994, 1999, 2002), tuition expenses were as follows:

Table 1: *Tuition and Fees*

Semester/Year	In-State	Out-of-State	Room
Fall 1993/Spring 1994	\$4,414.00	\$12,604.00	\$2,208.00
Fall 1998/Spring 1999	\$5,178.00	\$16,138.00	\$2,672.00
Fall 2001/Spring 2002	\$4,780.00	\$17,808.00	\$3,052.00

(Undergraduate Course Catalog, 1993, 1998, 2001)

In the decade prior to this study, tuition in the state more than doubled. However, in 1999, as a response to the increases, tuition in the state was frozen. In 2002, the governor decreased tuition by 20 percent. While these numbers reflect the decrease just after the year 2000, the 20-year trend had been a steady increase in total costs. At Jackson College, tuition more than doubled between 1980 and 1990, and continued to increase until the freeze in 1999 (Office of Institutional Research, 2005). In the analysis in Chapter IV, the tuition is adjusted for inflation. These numbers reflect actual costs during the years indicated.

Procedures

Sample

For this study, alumni satisfaction, financial investment, post-college outcomes, and undergraduate involvement were examined using responses from a survey distributed to recent alumni of the institution. Scheaffer, Mendenhall, and Ott (2006) indicate that survey research is appropriate for descriptive and exploratory studies of large populations. The data were collected from a sample of graduates from the classes of 1994, 1999, and 2002.

The Assessment Office at the institution granted space for my questions on an already existing on-line survey that was distributed in October of 2004. This allowed for the survey to be distributed to the total population of students who graduated in 1994, 1999, and 2002.

Instrument

The Alumni Survey is a multi-item quantitative survey that addresses a wide array of college experiences using simple inventories and Likert scale questions.

Table 2

Overview of the Alumni Survey

Major Headings	Content Areas
Net cost of college	includes costs for tuition, books, and other educational expenses by student, by parent, and by grants/scholarships in order to distinguish (scale of estimated cost) – only student costs included in this study
Was the investment worthwhile?	Yes/No
Participation in academic (co-curricular) activities	Indicate involvement in: study abroad, internship/externship, mentoring relationship with faculty member, senior departmental honors, independent study/research with a faculty member, social interaction with faculty
Participation in campus activities	Indicate involvement in: student government, social fraternity/sorority, service clubs/volunteer activity, intercollegiate sports, club sports/intramurals, publications, concentration-related clubs, artistic groups (performance or visual), religious organizations, multicultural organizations, honorary organizations, student staff positions, etc.
Current job satisfaction	Likert scale of satisfaction
Post-college salary satisfaction	Likert scale of satisfaction
Overall satisfaction	with social experiences, with educational experiences, with extracurricular experiences, and with the decision to attend Jackson College

There were a total of 34 questions on issues pertaining to academic and social experiences while in college, campus involvement, costs associated with college, post-graduation experiences, and overall satisfaction. Copies of the instrument are included in Appendix A and Table 2 provides

an overview of the parts of the instrument that were used in this study. I gained access to the instrument and the resulting data by working in conjunction with the Assessment Office in the design of the survey.

Financial investment. The first part of the survey (as indicated in Table 2) asked the respondents to estimate their costs associated with college. The answers provided alumni with the option to choose a range – asking them to estimate within \$5,000 -- the total cost of their education per year. This range proved to be sufficient in a pre-test of the survey as no respondents had difficulty estimating the cost within the ranges provided. The range size was necessary to allow for a reasonable number of responses on the survey since the costs could be as high as \$30,000.

Respondents were also asked to indicate whether those costs were incurred by their parents, themselves, or paid for by scholarships or grants. This information allowed me to analyze the data for students who paid for 100% of their education as well as for students who paid for 0%, 25%, 50%, or 75% of their education. There are difficulties in surveying alumni (like the ability of alumni to recall the amount they invested or not knowing how much parents truly contributed) and I acknowledge that the range size and inexact measure of investment could impact the results of the study.

Involvement. The next section of the survey asked students to respond to questions about their involvement in campus activities while they were students. Astin (1985) states that involvement is a “continuous concept” with different amounts of time and energy applied to different tasks (p. 35). I was interested in the extent of their involvements. Therefore, they were asked to indicate not only their participation in the various categories of activities and the number of years they participated in each activity, but also whether they held any leadership

positions in the organizations. This is an imperfect measure of involvement because the amount of time they spent in each activity could vary – some activities require one weekly meeting while others require daily involvement. In addition, the survey did not measure the extent to which two students might be involved in the same organization with different intensity. The survey only indicates if a leadership position was held.

Post-college outcomes. The next survey questions (as indicated in Table 2) asked respondents to indicate their current satisfaction with their careers and their salary. These responses were used to assess the extent to which post-college outcomes were related to alumni satisfaction. This aspect of the research is based on Bowen’s research (1977) on the costs and benefits of higher education as well as Thomas’ (2000) research on salary and career expectations. The questions are similar to those asked on a survey of Tennessee college alumni in a study by Pike (1993) that looked at alumni satisfaction. If students are primarily interested in how a degree will “pay off” following graduation, then students who are satisfied with their salaries and careers will be more satisfied with their overall college experience.

Alumni satisfaction. The final questions asked respondents to indicate on a Likert scale their level of satisfaction with their educational, extracurricular, and social experiences and with the decision to attend Jackson College. The sum of the individual scores became a single measure of alumni satisfaction (see section about data analysis for details). These responses make up the measure of the dependent variable of alumni satisfaction.

Pilot Survey

A pilot survey was distributed to two groups of alumni in order to pre-test items on the survey and to check for clarity and length of completion time. The first pilot group was a test of the on-line instrument and was sent to 35 alumni via email. The respondents for the pilot survey

received the same on-line instrument that the actual sample received with the same introduction and instructions for completion. The second pilot was a focus group of seven alumni convened together as a group who took the paper version of the survey and then provided verbal feedback about the instrument. The focus group was asked the following questions:

1. Did you find the items clear and easy to understand? If not, which items were confusing and how?
2. Did you feel comfortable answering all of the items? If no, why not and on which items?
3. Did you have difficulty finding an answer that you wanted to give among the listed responses?
4. What do you think of the length of the survey?
5. Did you find any additional errors in the survey instrument?
6. Do you have any other questions, comments, or feedback?

Results of Pilot Survey: Focus Group. After the 7 alumni who completed the paper version of the survey were done taking the instrument, I followed up with the list of questions indicated above. Most of the points of clarification were with regards to wording or response choices. These were easily corrected in the writing of the final draft of the instrument. Questions regarding involvement both in the academic and extracurricular experiences led the group to suggest more response options. For example, a “special interest” group category was added to the list of activities since several of the focus group respondents had been involved with activities like resident advising and the activities programming board located in the student union.

One respondent felt that the question regarding current employment discriminated against parents who stay home with children full-time. That question was re-worded to reflect the

feedback. The group discovered several formatting errors and was very helpful in assessing their comfort level regarding questions about current salary and college debt. All respondents in the focus group indicated that the length of the survey was appropriate – it took them anywhere from 10-15 minutes to complete.

Results of Pilot Survey: On-line version. The on-line survey was distributed to 35 alumni of Jackson College in the same format that respondents would receive it in the actual sample. They received an email with a link to the web survey. However, I did contact the pilot sample prior to the email to request their participation and to ensure them that their responses would be anonymous and only used for the pilot study. This not only notified them in advance that this was a pilot, but also helped to encourage their participation.

Seventeen alumni (48.6%) responded to the pilot survey and each was asked to indicate comments or concerns at the end of the instrument. Only one respondent felt that the survey was too lengthy so no adjustment was made to the length. Most completed it in less than 15 minutes. There seemed to be confusion on the questions regarding the financial contributions so some slight changes were made to the organization and wording of those questions to make them clearer. A “prefer not to answer” option was also added to the financial questions to provide respondents a higher level of comfort with the survey instrument. The statement regarding confidentiality and anonymity in the email was also bolded and italicized in the text to emphasize it before the respondent links to the survey.

Reliability and Validity

Much of the survey data used in this research was designed by the Assessment Office at Jackson College. The instrument has not been validated. I explored the internal reliability for the measure of alumni satisfaction because there were four separate scales included in the

measure. The reliability coefficient was calculated using Cronbach's alpha ($\alpha = .76$). The variable of post-college outcomes was based upon two combined Likert scales: satisfaction with career and satisfaction with salary. The reliability coefficient for this measure (using Cronbach's alpha) was only .24. However, I kept the measure as part of the study based upon a review of the literature that supported including both constructs (salary and career satisfaction had been shown to both contribute to the development of alumni satisfaction). The variables of investment and involvement were based up a single measure.

Data Collection

The on-line survey was distributed initially via email in October 2004 by the Assessment Office at Jackson College with a follow-up survey by mail to non-respondents. Each respondent received an email with a link to the on-line survey and a brief cover letter. This letter explained the purpose of the study (see Appendix A) and why their responses would provide a significant contribution to the research (Gall, Borg, & Gall, 1996). Non-respondents were sent a postcard by the Assessment Office at Jackson College reminding them of the link to the electronic survey. Alumni who still had not responded to the on-line survey after receiving the post card were mailed a paper version of the instrument in November. Staff in the Assessment Office consistently monitored responses, kept track of forwarding addresses, and redistributed surveys to alumni for whom new address information was provided (either by the respondents themselves or by the United States Postal Service). Responses from the alumni survey were entered into a database by the Assessment Office at Jackson College and were made available to me as the researcher as well as to departments, faculty, and staff who have an interest in the survey responses. The response rate was 32% with the survey sent to 3,671 alumni and 1191 responses. According to Fowler (2002), there is no agreed upon minimum acceptable response

rate. The greatest issue with a low response rate is the potential for error with the exclusion of non-responders. The lower the response rate, the stronger the basis for criticism of the survey and the credibility of the data. For this research, a low response rate could indicate that the less satisfied alumni did not respond.

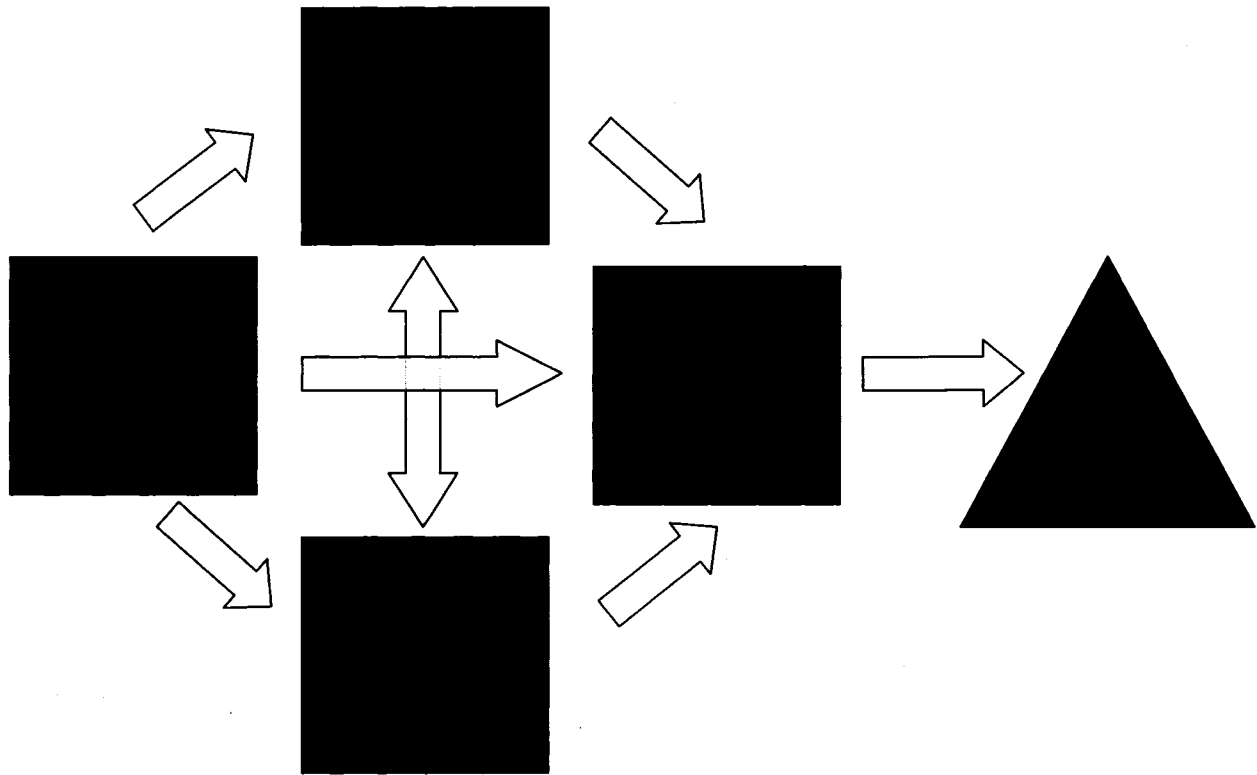
Data Analysis

This study explored the extent to which alumni satisfaction, as measured by the alumni survey, was predicted by the individual and/or joint effects of financial investment in college costs, involvement while a student, or post-college outcomes. First, descriptive statistics were run on each variable. Then, each independent variable was correlated with the dependent variable and with each other. Finally, step-wise multiple regression was used to analyze the extent to which the independent variables independently and jointly predicted alumni satisfaction. According to Kiess (2002), step-wise multiple regression is intended to predict which variables contribute more to the variance in a dependent variable (in this case, alumni satisfaction). In the step-wise analysis, I included the variables related to the three independent contributors to the model: financial investment, involvement, and post-college outcomes.

Measurements of the Variables

Each of the variables included as part of the analysis were calculated by combining items of the survey instrument. Figure 2 illustrates how each of the variables were analyzed as a part of the original conceptual framework.

Figure 2 Conceptual Framework with Measures



Financial investment. The first independent variable of financial investment was calculated in two ways. First, alumni were asked to estimate their net cost per year to attend Jackson College. I took the midpoint of this range and multiplied that amount by four to determine a four-year total investment estimate. Then, that amount was multiplied by the percentage of the cost to attend Jackson College that was paid by the student individually. This was determined through an item on the survey that asked alumni to indicate what percentage of the costs were paid for by themselves, their family, through scholarships, or by other means. The upper limits of these ranges were used in the calculation (0%, 25%, 50%, 75%, or 100%). The result of this calculation equaled a measurement of investment by the participants in the study: $[(\text{Midpoint of net cost per year} \times 4) \times \% \text{ paid by student} = \text{Investment}]$.

result of this calculation equaled a measurement of investment by the participants in the study:

[(Midpoint of net cost per year x 4) x % paid by student = Investment].

It is important to note that I was interested in collecting information from the respondents about their perceptions. Therefore, it is understood that asking alumni to estimate their costs associated with college was not an exact measure and I made no attempt to verify the estimates. This impacts the validity and reliability of the survey, but perception was more important for this exploratory study. Similarly, for the purposes of this research, any contribution made by parents or scholarships to the cost of college was not taken into consideration. This is because this research was intended to focus on the consumers – the alumni – not their family members or other sources of funding. To ensure that this research incorporated only the costs for which alumni were personally responsible, they were asked to estimate what percentage of the cost of college was paid for by parents, by grants and scholarships, and by themselves. I planned this so that their personal contributions would be clearly distinguished and could be used in the analysis. Again, this study is not based on an econometric, rational choice model. It is based solely on perception and therefore it is acceptable if alumni were not completely accurate about their contributions.

Alumni were also asked if their experience at Jackson College was worth the investment. This measure was used separately and correlated with alumni satisfaction. The “worth the investment” results were analyzed by comparing means with both investment and post-college outcomes. It was not used in the regression analysis because of the high number of respondents who felt that the investment was worthwhile (nearly 95%). With the low response rate for the survey, it is possible that the alumni who didn’t complete the survey were among the less

satisfied. This could be a reason for the skewed results showing highly positive levels of satisfaction.

Involvement. Involvement was measured on the survey using a checklist of options for different activities during college. Alumni were asked which activities they were involved in and during which years (freshman, sophomore, junior, or senior) they participated. They also indicated with a check mark any leadership positions they held in the activities. For example, participation in student government was one option and participating in research with a faculty member was another option. To reach a single measure of involvement, the sum of the check marks indicated by each respondent were calculated. Leadership was weighted in order to distinguish it from other involvement.

Post-college outcomes. There were two measures of post-college outcomes. One was the sum of the levels of satisfaction with career and current salary. Respondents evaluated their level of satisfaction for both using a 4-option Likert scale. (This satisfaction is distinct from the dependent variable of alumni satisfaction with college.) Again, a value of 4 was assigned for each response of “very satisfied” while a value of 1 was calculated for each response of “very dissatisfied” with regards to their current salary and career.

The other measure of post-college outcomes initially was an estimate by the respondent of their current salary range, however this measure was dropped due to non-responses. This will be discussed further in Chapter IV.

Alumni satisfaction with college. The dependent variable of alumni satisfaction was measured using a total score of a 4-part Likert scale item asking for satisfaction with overall educational experiences, satisfaction with extracurricular experiences, satisfaction with social experiences, and satisfaction with the decision to attend Jackson College. A point value was

assigned to each Likert scale option with “very satisfied” receiving 4 points and “very dissatisfied” receiving 1 point. A sum of the points from each individual satisfaction scale resulted in an aggregated measure of overall satisfaction. Cronbach’s alpha was calculated for this item and the measure was found to be reliable at .76.

Hypotheses

The null hypothesis of no relationship was tested for each variable. The literature reviewed in Chapter II led me to believe there would be a negative relationship between investment (two measures of financial investment) and the dependent variable of alumni satisfaction and a positive relationship between the other two independent variables (one measure of involvement, and one measure of post-college outcomes) and alumni satisfaction. In addition, I expected that more recent experiences like post-college outcomes would statistically overcome (displace) the possible effect of buyer’s remorse on the development of alumni satisfaction. Research reviewed in Chapter II showed that positive post-college outcomes led to greater alumni satisfaction (Pate, 1993; Pike, 1994; Solomon, 2004). Therefore I believed involvement would displace the effects of financial investment on alumni satisfaction and that post-college outcomes would displace the effects of both investment and involvement.

The model that was introduced in chapter I and earlier in Chapter III illustrates the basis for a displacement hypothesis. This research tested the hypothesis by statistically determining if the displacement framework held true. When students make a large “purchase” by deciding to attend a particular school, they may experience buyer’s remorse or have unmet expectations as a result of that decision. However, this model sought to test whether that potential dissatisfaction might be displaced as the college experience proved worthwhile. Both involvement, which has been correlated with student satisfaction (Astin, 1993, 1994, 1996; Pascarella & Terenzini,

2005), and/or the ultimate outcomes of college, may prove sufficiently worthwhile to displace any buyer's remorse. Stepwise multiple regression was used to determine how each variable contributed to the model both individually and jointly and to determine whether "displacement" is an accurate predictor of alumni satisfaction.

Limitations

Studies on satisfaction and college experience are difficult to generalize because the experiences at a particular institution are unique. Also, it is often difficult to pinpoint exactly which college experiences most influence satisfaction because many different factors can be involved. Simple cause and effect was not determined in this relational study.

In addition, responses to the survey could be affected by the fact that alumni reflected back on their undergraduate experiences after a number of years (especially the group that graduated in 1994). When evaluating concepts like satisfaction, it is important for respondents to be evaluating a relatively recent experience (Oliver, 1997).

Finally, the range of satisfaction scores in the results (to be discussed further in Chapter IV) was small. The analyzed correlations may therefore be lower than they would have been otherwise.

Delimitations

The results of this study are not generalizable to other four-year institutions because the research was conducted at one highly selective university. The results are also not representative of a diverse population because minority students are underrepresented in the student population at Jackson College. Also, the survey used to collect data for this research was sent only to students who graduated in the years 1994, 1999, and 2002. This convenience sampling method has limitations, including the fact that students from the same class often have similar

experiences because they were at the college contemporaneously. The total sample allowed easy contact with a large number of participants, but returns may not have been fully representative.

The instrument used in this study also did not allow for a high level of precision. For example, I chose to combine several items on the survey to create measurements of satisfaction and post-college outcomes. Alumni were asked to estimate responses on items like tuition costs which yielded information about perception, rather than exact payment levels. The survey items about involvement also only provide basic descriptive data about the number of “involvements.” The survey did not measure the intensity with which alumni were involved in those activities in college.

Ethical Standards

In keeping with the standards of ethical research, participation in the research project was voluntary. Babbie (1998) cautions that while voluntary participation is ethically important, it can limit the generalizability of the analysis (those who volunteer for participation in studies may tend to respond in a biased manner). The participation of alumni in this survey was completely voluntary because they chose to open the email link and submit their responses. Respondents could also discontinue the survey at any point and could request that their data not be used in the results. In this study, no harm was done to participants, and the anonymity of each individual participant was promised (Babbie). Participants received proof that the research was approved by the Institutional Review Board at the university prior to completing the survey. The following sentence was added to the introduction of the survey prior to the respondents completing it. *This project was found to comply with appropriate ethical standards and was exempted from the need for formal review by the college’s Protection of Human Subjects*

Committee. Contact information for the Human Subjects committee was also provided to participants.

Summary

The goal of the study was to learn the extent to which financial investment, involvement, and post-college outcomes predicted the satisfaction of recent graduates of Jackson College, and to discover whether displacement occurred. It tested not only the individual and joint effects of each variable on alumni satisfaction, but also whether any of the variables displaced the impact of another on the development of alumni satisfaction. Responses were used from the Alumni Survey distributed in October of 2004 to alumni who graduated from Jackson College in 1994, 1999, and 2002. Step-wise multiple regression analysis was performed on the data and the strongest predictor of alumni satisfaction was revealed. This analysis tested the displacement model and hypotheses.

Chapter IV: Data Analysis

Introduction

This exploratory study investigates the extent to which three variables (financial investment in college, involvement in college activities, and post-college outcomes) predict perceived alumni satisfaction. In Chapter III, I proposed a conceptual framework and model based on Astin's I-E-O model that illustrated how these variables could affect alumni satisfaction. The model hypothesizes that the separate and joint effects of the amount one pays for college (investment/input), involvement in campus activities while attending college (involvement/ process), and the outcomes of the college experience (satisfaction with career and salary/output) will predict the extent to which alumni report being satisfied with their experience at Jackson College. The model also supports the hypothesis that involvement in college will displace any negative affects of investment and that post-college outcomes will displace the impact of involvement on alumni satisfaction. Stepwise multiple regression analysis was used to test the model in this study.

Hypotheses

This study sought to test the separate and joint effects of the factors that may affect how alumni assess their college experience, including price, but also including the powerful intervening variables of involvement and post-college outcomes. Alumni who may have had buyer's remorse initially could have had a transforming experience as undergraduates or may associate post-college success with the benefits of their education. Specifically, I asked: (a) To what extent does perceived cost affect perceived alumni satisfaction with the college experience? (b) To what extent does involvement in college activities affect perceived alumni satisfaction with college experiences? (c) To what extent do post-college outcomes affect perceived

satisfaction with college experiences? (d) Finally, to what extent and in what order do the combined effects of these factors (financial investment, involvement, and post-college outcomes) predict perceived alumni satisfaction?

In Chapter III, I outlined several hypotheses. I expected that the variable of Input/Investment would have a negative relationship with alumni satisfaction, while the other two independent variables (Experience/Involvement, and Output/Post College Outcomes) would have positive relationships with Alumni Satisfaction. I also expected that the more proximate (recent) experiences would statistically overcome any remorse or dissatisfaction alumni may have felt at the earlier stages of their college experience. I used the term displacement to explain how recent experiences like post-college outcomes might displace prior experiences (like college involvement) in the evaluation of satisfaction. According to this hypothesis, the initial investment may be less influential on the development of satisfaction after the other mediating factors are included in the analysis. In other words, the purchase ultimately proves to be worth the investment because of the impact of the other variables of involvement and post-college outcomes.

Analytic Approach

Jackson College conducts the Alumni Survey regularly to gather descriptive data about the experiences and attitudes of alumni. Alumni who graduated in 1993-94, 1998-99, and 2001-02 received the questionnaire in October of 2004 and the Assessment Office at Jackson College granted me permission to include questions about investment and post-college outcomes for the purpose of this study (involvement and alumni satisfaction were already included in the college's survey). Jackson College sent the e-mail survey to 3671 alumni and followed up with a postcard reminder to non-respondents. Respondents totaled 1191 yielding a response rate of 32%. The

final data set for this study included only complete surveys, resulting in a total of 1163 respondents. The predictive analytics software used, Statistics Package for the Social Sciences (SPSS), eliminated some records because of missing values, resulting in a smaller sample size in some cases (noted in each analysis).

It is important to note that the data for the Alumni Survey are self-reports. They represent the perceptions of respondents rather than objective facts. For example, the questionnaire asked respondents to estimate their costs for attending Jackson College. I made no attempt to verify these estimates. Data describing perceptions are important because perceptions are likely to influence attitudes, and the dependent variable is a measure of attitude: alumni satisfaction. Therefore, the survey captured respondents' memories of their college involvement and of the costs of college.

The findings are summarized using a conceptual framework based loosely on Astin's I-E-O model. As mentioned previously, the displacement model proposes investment, involvement, and post-college outcomes as independent variables and alumni satisfaction as the dependent variable. First, descriptive statistics were run to determine the characteristics of the sample. Next, I used correlations to further explore relationships between the independent variables and the dependent variable. Then, I used a stepwise regression analysis to test the displacement hypothesis. A separate analysis will be presented to compare respondents with the lowest level of satisfaction with those who were more satisfied. This chapter will present these findings beginning with descriptive statistics and correlations, and then moving on to the multivariate analyses. Finally, a summary concludes the chapter.

Demographic Data

The demographic data discussed here include gender, ethnicity, and graduating class year. Frequencies, and descriptive data are explored for these demographics along with a comparison to the population at Jackson College. Table 3 includes the frequencies of the demographic characteristics of respondents.

Table 3
Demographics of Sample

	N	%
Sex		
Female	822	70.9
Male	337	29.1
Race/Ethnicity^a		
African American/ Black	24	2.1
White/Caucasian	1,015	87.3
Asian American	40	3.4
Hispanic	20	1.7
Other	28	2.4
Unreported	36	3.1
Year Graduated		
1993-1994	449	39.4
1998-1999	353	31.0
2001-2002	337	29.6

^aGiven that the results yielded such small numbers of non-Caucasian respondents, meaningful statistical analyses using Race/Ethnicity were not possible. Therefore, it was eliminated as a demographic variable in this study.

More than two-thirds of the respondents were female (70.9%, n = 822) and fewer than one-third were male (29.1%, n = 337). In 2005, the total enrollment at Jackson College was 54 percent

female and 45 percent male. This indicates that the sample is biased and it is difficult to draw conclusions from the data for men.

Members of underrepresented populations did not respond to the questionnaire in proportionate numbers. While only 2.1 percent of respondents were African American ($n = 24$), the student population at Jackson College is currently 6.7 percent African American. Asian American respondents totaled 3.4 percent ($n = 40$) while they make up 5.8 percent of the student body at Jackson. And Hispanic respondents totaled 1.7 percent ($n = 20$) in this study while those populations make up 3.7 percent of the student body. The population at Jackson College is 68.5 percent White and the sample in this study is 87.3 percent White ($n = 1,015$). As a result of the small number of non-Caucasian respondents, race/ethnicity was eliminated as a demographic variable from the analysis.

With regard to graduation year, older alumni responded at a higher rate than younger alumni. The class of 1993-94 responded at a rate of 39.4% ($n = 449$), the class of 1998-99 responded at a rate of 31% ($n = 353$), and the class of 2001-02 responded at a rate of 29.6% ($n = 337$). The older alumni are farther removed from the college experience and possibly more connected to their current careers. Therefore, because alumni who graduated in 1994 are better represented, their responses could impact the weight of post-college outcomes in the analysis.

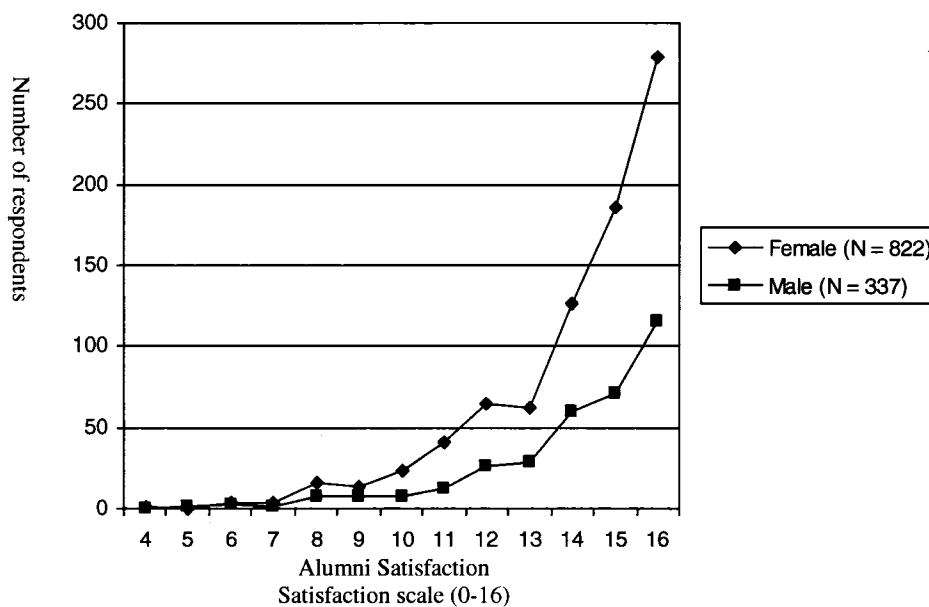
Gender

Because men were underrepresented in the sample, any conclusions should be conservatively interpreted. Men invested a mean of \$13,893.74 over the course of four years and women invested a mean of \$12,802.50. Men and women were both similarly involved in college (men had a mean involvement score of 18.52, $SD = 7.39$, and women had a mean score of 17.94, $SD = 7.62$). This measure is an indication of the number of activities they were involved with

during college, the number of years for that involvement, and a weighted measure for leadership positions. Men had a mean post-college outcomes score of 5.52 on a scale of 0 to 8 (a measure that included two 4-point Likert scales of salary and job satisfaction) and women had a mean score of 5.27, but both scores qualify as “somewhat satisfied” on the scale. None of the differences between the genders were significant.

Figure 3 depicts the distribution of the dependent variable of alumni satisfaction between both men and women. The mean for both genders was 14.2 on a scale of 0 -16.

Figure 3: Frequency of Alumni Satisfaction by Gender



Graduating Class Year

Table 4 shows the means and standard deviations of the variables with regard to class year. While it appears that alumni who graduated in 2002 invested quite a bit less than alumni who graduated in both 1999 and 1994, some of the discrepancy is due to the fact that the measure for investment was adjusted for inflation to constant dollars at the level of 2002 using an on-line inflation calculator (Friedman, 2005). Also, as mentioned in Chapter III, the tuition in

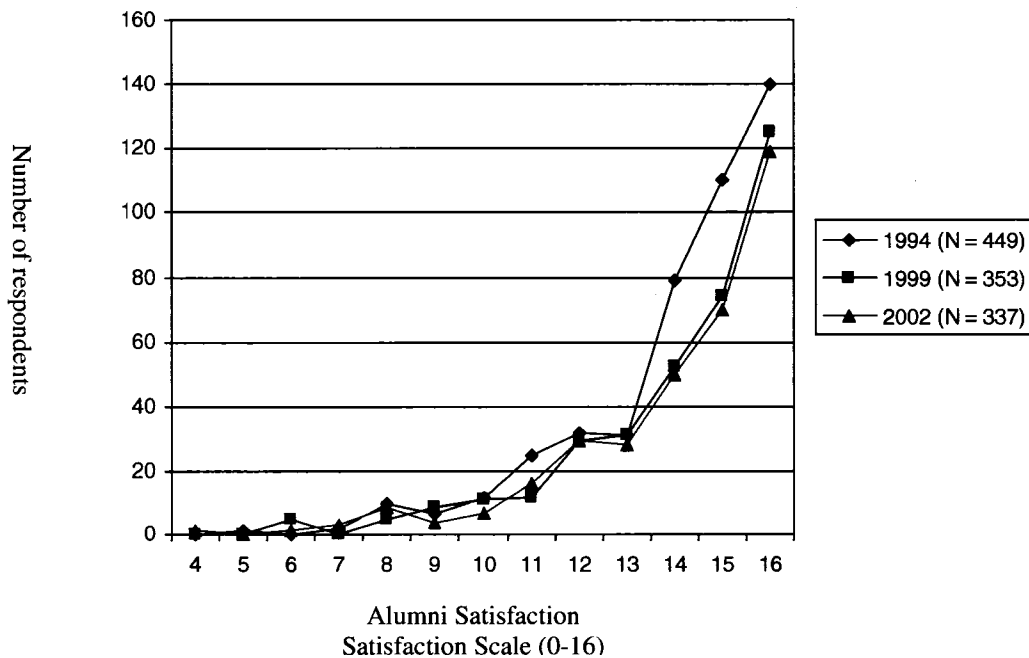
1993-94 was a bit higher than later years due to a reduction in tuition imposed by the Governor in 2001.

Table 4
Means and Standard Deviations of Investment, Involvement, Post-College Outcomes, and Alumni Satisfaction for Graduating Class Year

Graduating Class Yr	Investment (constant dollars)		Involvement		Post-College Outcomes		Alumni Satisfaction	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
1993 – 1994	\$16,268.78	\$18,111.07	18.15	7.6	5.29	2.37	14.12	2.09
1998 – 1999	\$12,314.60	\$13,935.53	18.22	7.8	5.46	2.27	14.11	2.21
2001 – 2002	\$9,749.13	\$13,376.98	17.83	7.27	5.29	2.4	14.1	2.24

The mean involvement scores for the three classes were 18.15 (1994), 18.22 (1999), and 17.83 (2002). The three classes had post-college outcome scores of 5.29 (1994), 5.46 (1999), and 5.29 (2002) on a scale of 0 – 8 with 8 being “very satisfied.”

Figure 4: Frequency of Alumni Satisfaction by Class Year



Members of each graduating class were satisfied with their college experience as noted in their mean alumni satisfaction scores of 14.12 (1994), 14.11 (1999), and 14.1 (2002) on a scale of 0 - 16. Figure 4 illustrates the distribution for the dependent variable of alumni satisfaction for graduates in 1994, 1999, and 2002.

Explanation of Variable Measures and Descriptive Results

Investment

Investment was measured in two ways. First, the financial investment variable was calculated by summing the self-reported estimate by the respondents of the cost for each year of their education at Jackson College. That sum was multiplied by the percentage of contribution respondents made to their education. For example, if a respondent indicated a cost of \$5,000 for the first year and \$10,000 for the additional three years of school, then the total cost would be \$35,000. If the respondent indicated that he/she paid 50% of that cost him/herself, then the investment value would be \$17,500. Any students who attended the university for more or less than 4 years were omitted from the analysis to allow for consistency in this measure. I acknowledge that parents pay a significant portion of tuition for many students. This was not incorporated in this study because the intention of the research was to study the effects of the student's own investment on his or her attitudes toward the experience.

Because there were three graduating classes represented in the sample spanning a period of ten years, it was important to consider inflation in the calculation of investment. Therefore, the results of the investment equation for the graduating classes of 1994 and 1999 were adjusted for inflation to the year 2002. The responses from 1994 were multiplied by 1.196 increasing the mean for that class from \$13,602.66 to \$16,267.13, and the responses from 1999 were multiplied by 1.068 increasing the mean from \$11,530.53 to \$12,320.08 (see Table 5). And

while tuition costs increased slightly from 1993 to 1999, and declined slightly in 2002, the respondents reported paying less overall in the more proximate years to the time of the survey. Also, as noted in Chapter III, the tuition levels at Jackson College decreased over this 10 year time frame due to a tuition freeze that began in 1996 and a 20% reduction in tuition instituted by the Governor at the time (Nardo, 2000). The decrease only occurred for in-state students. This runs contrary to what was happening in the rest of the country at the time with regard to tuition increases.

Table 5
*Means of Student Estimated Cost by Class Year
 As Compared to Inflation Adjusted Cost and Actual Cost (N = 978)*

Class Year	Mean Student Estimate	Mean Adjusted to 2002 Cost	In-State Cost for 4 Years	Out-of-State Cost for 4 Years
1993-1994	\$13,602.66	\$16,267.13	\$26,488.00	\$59,248.00
1998-1999	\$11,530.53	\$12,320.08	\$31,400.00	\$75,240.00
2001-2002	\$9,749.13	\$9,749.13	\$31,328.00	\$83,440.00

Note: Actual Costs include tuition and room

Source of Inflation Data: The Inflation Calculator On-line (Friedman, 2005)

Source of Actual Costs: Jackson College Undergraduate Course Catalog (1993, 1998, 2001)

Involvement

Alumni indicated with a check mark all of the activities they participated in by category and in which college years they were involved. They marked an additional check mark in the box labeled “leadership” if they held a leadership position associated with that activity. (See the question in Appendix A.) Respondents could write in an activity if it did not fit into a category.

The measure of involvement did not account for the intensity and time commitment that an activity required. This is a limitation of the measure, especially given Astin’s (1993) assertion that the amount of time and energy a student commits is related to the outcomes they experience. Student leaders arguably spend more quality time (intensity) on their involvement than non-leaders, and this has been shown to advance their development further (Cooper, Healy,

and Simpson, 1994). Therefore, I weighted the measure for leadership by counting the leadership check marks with a value of 2. Table 6 illustrates the means and standard deviations of involvement before and after weighting the measure for leadership.

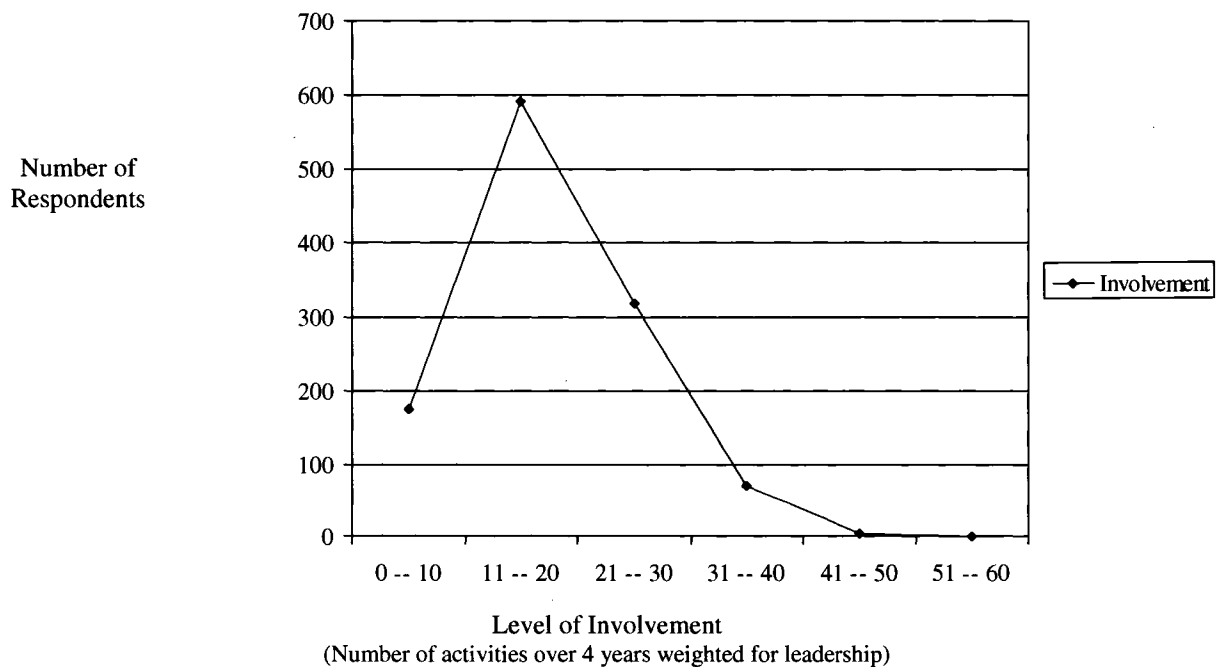
Table 6
Involvement Before and After Weighting Leadership Measure

Measure	<u>M</u>	<u>SD</u>
Leadership Weighted 1	13.43	6.48
Leadership Weighted 2	18.1	7.55

Note: N= 1163.

The (weighted) mean number of activities that alumni were involved in during college is 18.1. An involvement score of 18.1 might indicate that a student was involved in two activities for 4 years as a general member (8 check marks), another activity for three years with two years as a leader (7 check marks) and another activity for 1 year as a leader (3 check marks). The frequency distribution of involvement for the entire sample is illustrated in Figure 5.

Figure 5 (N = 1163): Frequency of Involvement

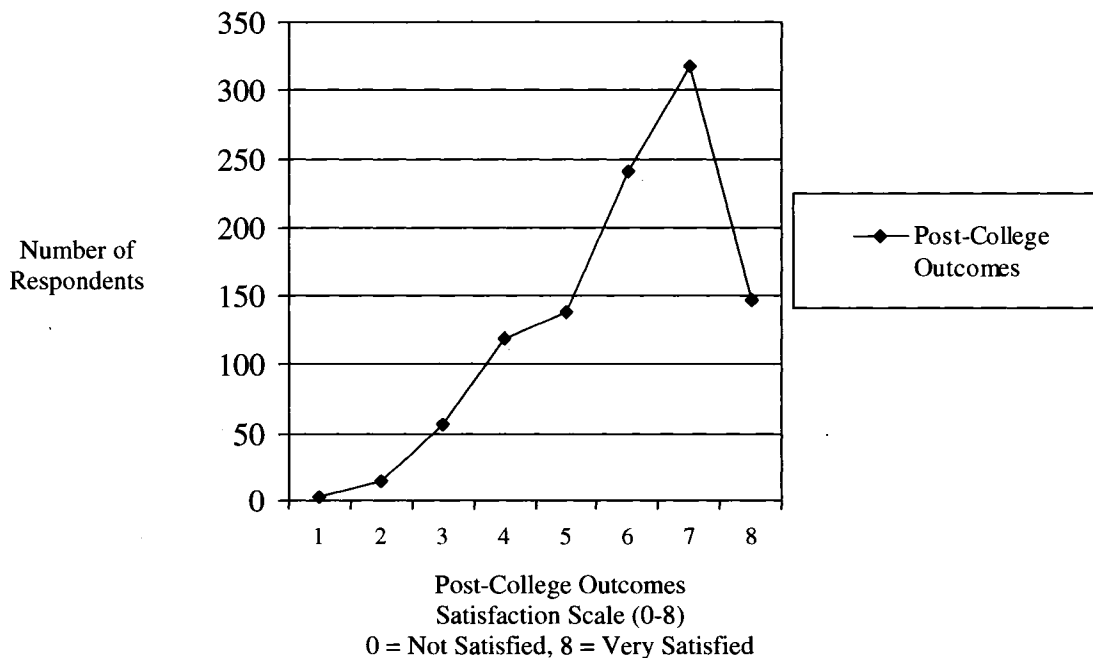


Student work was not included in the analysis of involvement, although it could be explored further in another study. Sixty-three percent of the alumni who responded to the survey worked at some point while a student at Jackson College either on or off campus.

Post-College Outcomes

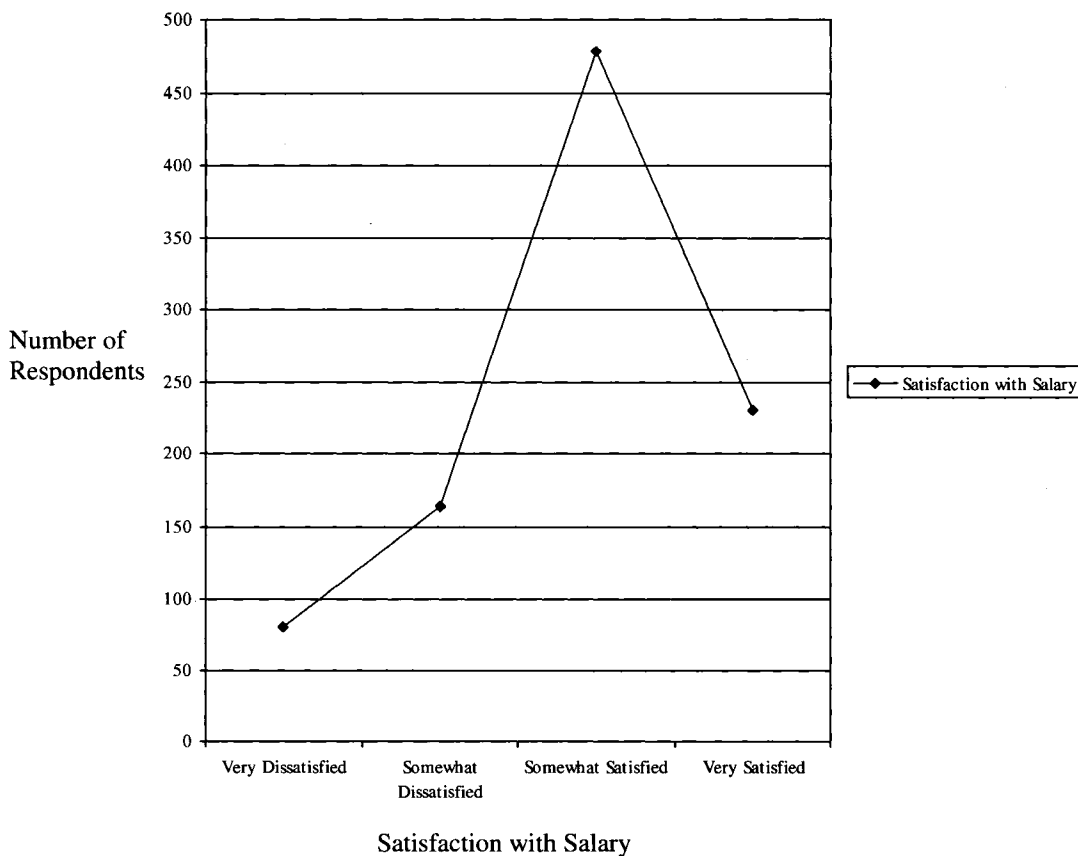
Three questions on the survey were used to measure post-college outcomes. Alumni were asked to indicate their level of satisfaction with their current career and their current salary on a 4-point Likert scale with 1 being “Not Satisfied” and 4 being “Very Satisfied.” These two responses (satisfaction with career and satisfaction with salary) were summed to create the first measure of “post-college outcomes.” The mean of post-college outcomes is 5.99 on a scale of 0 – 8. The standard deviation is 1.50. These values indicate a moderate to high amount of satisfaction among respondents with regard to career and salary (see Figure 6).

Figure 6 (N = 1037): Frequency of Post-College Outcomes for Sample



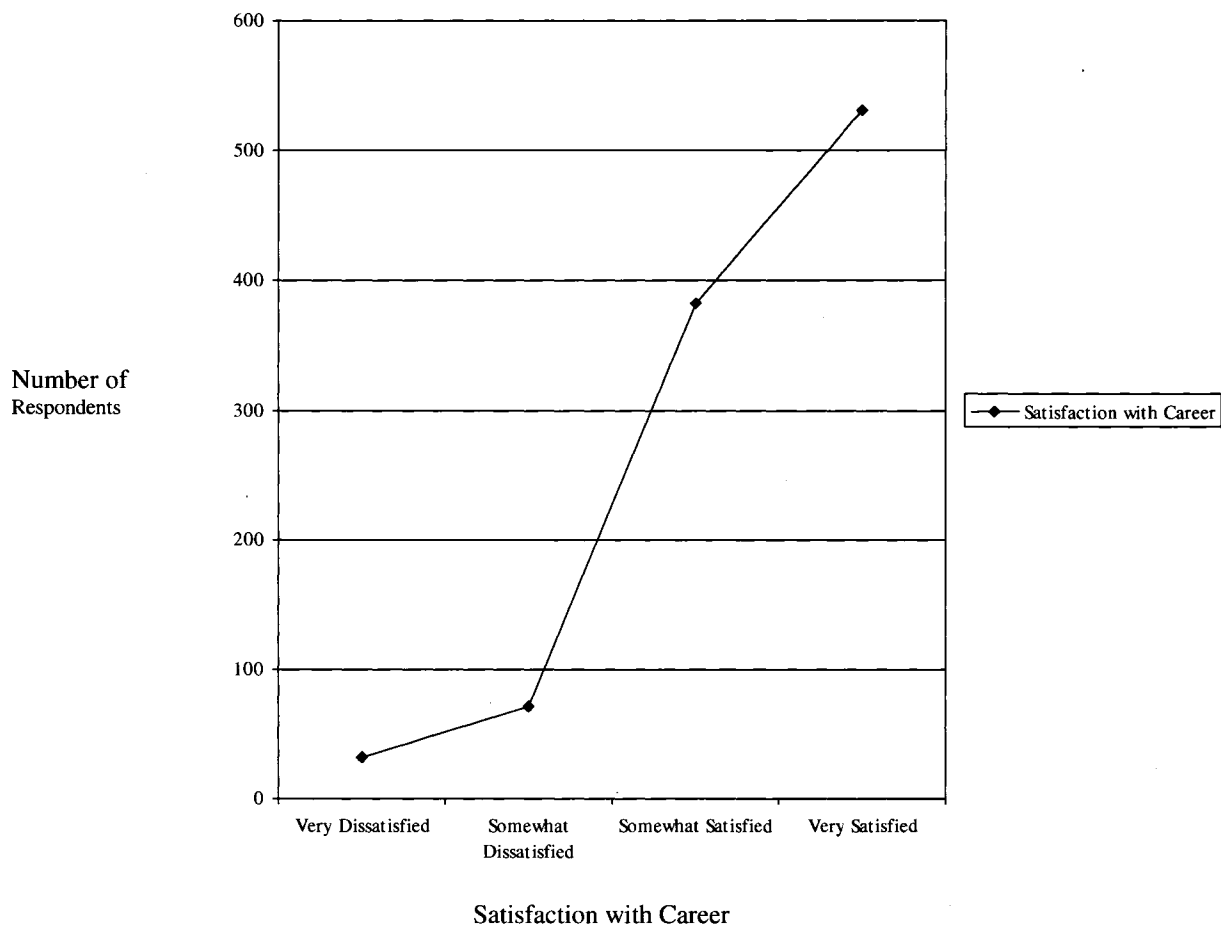
The separate measures that make up post-college outcomes are satisfaction with salary and satisfaction with career. Figures 7 and 8 depict the distribution of scores for each of these measures on a four-point Likert scale. Alumni are more satisfied overall with their career success than with their salary in which the majority of respondents indicated that they were “somewhat satisfied” with their current salary. This likely indicates that while the majority of alumni are working in a job that they enjoy, they would still like to make more money in that chosen profession. The discrepancy could also be caused by the gender bias in the study. More women responded to the survey than men and the salaries for women in the United States are typically less than the salaries of men. Therefore, women may be less satisfied with their salary.

Figure 7 (N = 1018): Frequency of Salary Satisfaction for Sample



As illustrated by Figure 8, the majority of alumni are either “somewhat satisfied” or “very satisfied” with their chosen career. Alumni who are satisfied in their careers might attribute that satisfaction or their success in their careers to their undergraduate institution (it could be based on their academic pursuits or their experiences with leadership and involvement). So, their success may directly impact their alumni satisfaction.

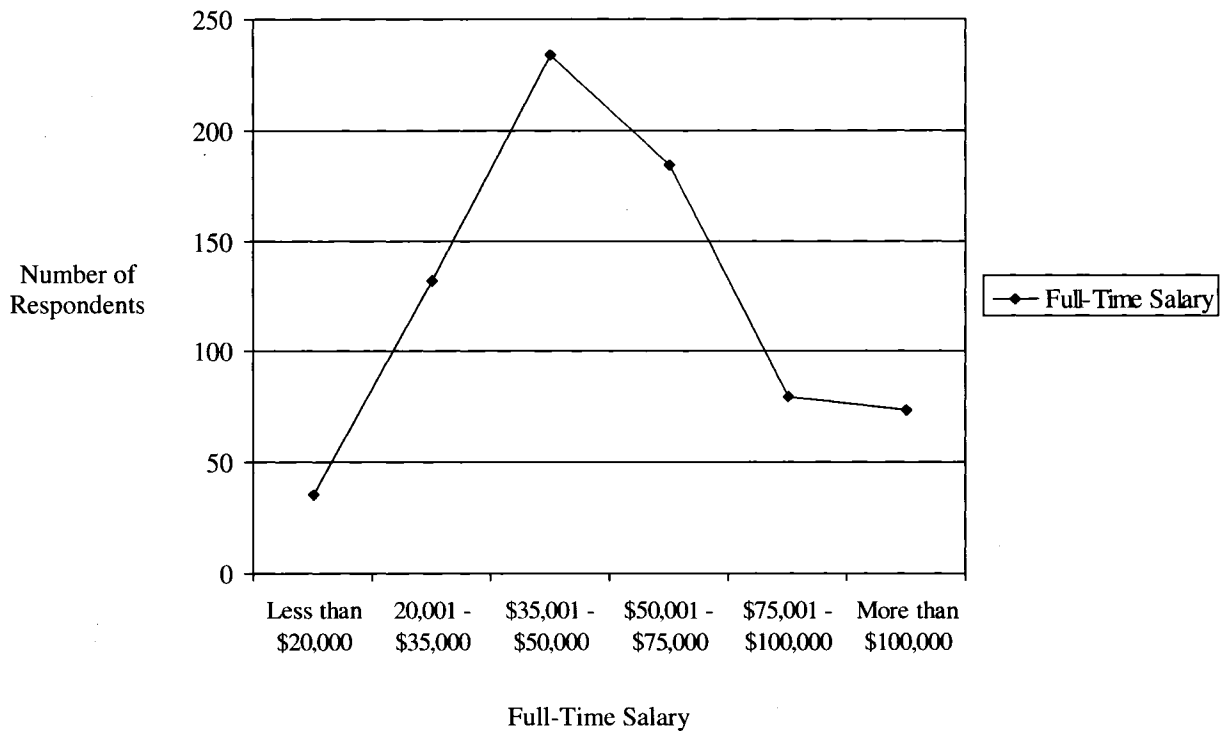
Figure 8 (N = 1103): Frequency of Career Satisfaction for Sample



Current salary was another measure of post-college outcomes. Respondents were asked to indicate their current salary based on a range (respondents working part-time or not working were omitted from the analysis). The salary ranges were: less than \$20,000; \$20,000 -- \$35,000; \$35,001 -- \$50,000; \$50,001 -- \$75,000; \$75,000 -- \$100,000; and over \$100,000. They were

coded for data analysis with scores of 1-6 respectively. The mean salary was 3.46 meaning that the mean salary falls somewhere between the ranges of \$35,001 - \$50,000 and \$50,001 -- \$75,000. See Figure 9 for the full-time salary distribution of the sample.

Figure 9 (N = 741): Frequency of Reported Salary Range for Sample

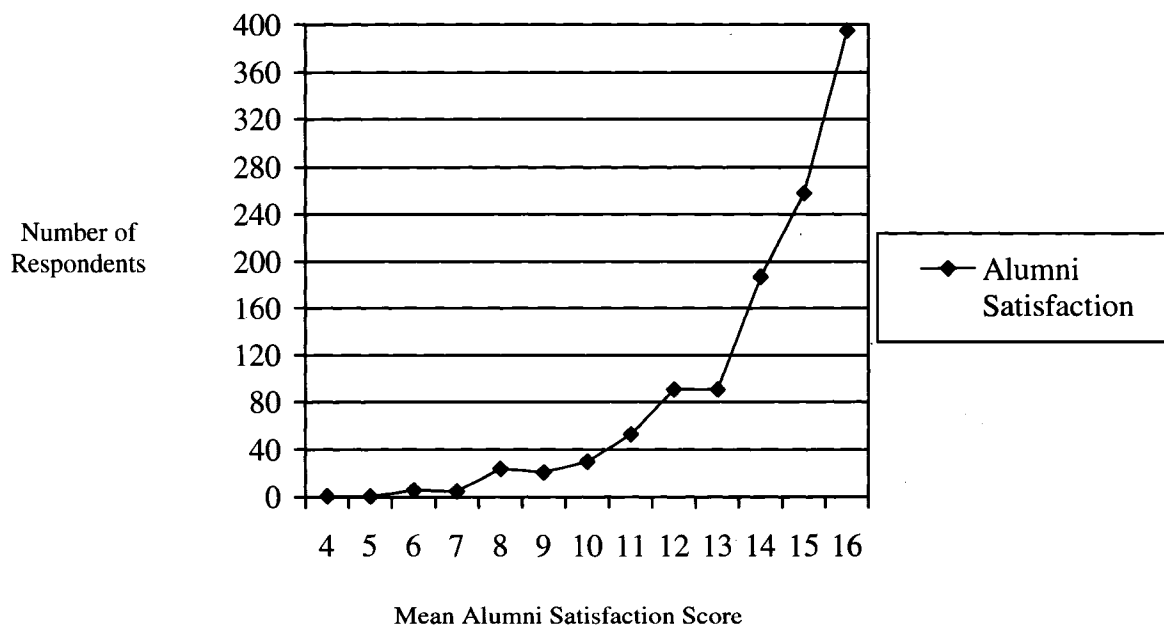


Because so many respondents chose not to answer the question that asked them to indicate their salary or were not working or working part time (N = 741/1163), I chose to omit salary from further analysis. Including this measure in the multivariate analyses would omit a large number of cases. While more correlations will be discussed later in this chapter, it is important to note here that salary was only significantly correlated with the other part of the same measure of post-college outcomes (satisfaction with career and salary), but not with any other independent variables. It was also not significantly correlated with alumni satisfaction.

Alumni Satisfaction

Alumni satisfaction was measured using four separate scales (satisfaction with educational experiences, satisfaction with extracurricular experiences, satisfaction with social experiences, and satisfaction with the decision to attend Jackson College). A Likert scale ranging from a score of 1-4 with 4 being “very satisfied” measured each variable. The sum of the four scales equaled a maximum score of 16 (meaning “very satisfied” on all 4 scales). The measure was found to be reliable ($\alpha = .76$). The mean of alumni satisfaction for the sample is 14.12 with a standard deviation of 2.16. The mean is near the upper limit of the range which indicates that the dependent variable is skewed. Figure 10 shows the overall distribution of alumni satisfaction scores.

Figure 10: Frequency of Alumni Satisfaction Scores for Sample



The Jackson College alumni who responded to this survey are highly satisfied as a whole. Two-thirds of the sample had a satisfaction score greater than 12. In the summed measure, a score of 12 indicates that the respondents were at least “somewhat satisfied.”

Univariate Analysis

Gender

A t-test was conducted for the variables of involvement, investment, and post-college outcomes and yielded no significant differences in means for men and women. The t-score for investment is .979, for involvement is 1.21, and for post-college outcomes is 1.64 (see Table 7). This data could be affected by the lack of men in the sample.

Table 7
*Group Differences for Investment, Involvement, and Post-College Outcomes
Between Men and Women*

Variable	Male		Female		t
	M	SD	M	SD	
Investment	\$13,893.74	\$16,845.14	\$12,802.50	\$15,352.00	0.979
Involvement	18.53	7.39	17.94	7.62	1.21
Post-College Outcomes	5.52	2.28	5.27	2.37	1.64
Alumni Satisfaction	14.2	2.18	14.2	2.16	.013

*p<.05 **p<.01

Graduating Class Year

Responses for each independent variable and graduating class year were compared using an ANOVA (summarized in Table 8) that showed a significant mean score difference between and among class years on the investment variable, $F(2, 975) = 15.07, p < .001$. The amount invested declined (in constant dollars) between 1993 and 2002. The adjusted investment mean in 1993-94 was \$16,267.13, in 1998-99 was \$12,320.08, and in 2001-02 was \$9,749.13. Since the earlier classes were actually more satisfied (as noted previously in the chapter), then the class that invested the most also had the highest level of satisfaction. The other variables of

involvement, post-college outcomes, and alumni satisfaction showed no significant differences. Tukey post-hoc analyses indicated that the mean score difference for investment was significantly higher for the 1993-94 graduating class than for the 2001-02 graduating class ($p < .000$). The post-hoc analyses also revealed that the mean scores of the 1993-94 class were significantly higher than for the class of 1998-99 ($p < .003$). No other significant differences were revealed in the post-hoc analyses. More information on the investment variable will be presented in the next section.

Table 8
One-Way Analysis of Variance for Effects of Graduating Class Year on Investment, Involvement, and Post-College Outcomes

Variable and Source	Df	SS	MS	F
Investment				
Between Groups	2	7,307,475,022.23	3,653,737,511.00	15.07***
Within Groups	975	236,468,069,789.08	242,531,353.60	
Involvement				
Between Groups	2	29.79	14.9	0.26
Within Groups	1136	65102.57	57.31	
Post-College Outcomes				
Between Groups	2	7.07	3.54	0.64
Within Groups	1136	6258.02	5.51	

* $p < .05$ ** $p < .01$ *** $p < .001$; Means listed earlier in Table 5

A Worthwhile Investment?

The other measure of investment originally proposed in Chapter III was whether the student's investment was viewed as worthwhile. The respondents could indicate "yes" or "no" as a response. These results need to be understood in light of the fact that the responses were extremely skewed. Of the 1133 responses to this question, only 30 respondents responded "no" (94.8% felt that the investment was worthwhile). However, I used t-tests to explore the relationship between responses and each set of t-tests resulted in several significant relationships

as noted in Table 9. With regard to their initial investment, alumni who felt the investment was not worthwhile invested a mean of \$28,043.84 and those who did feel that their investment was worthwhile invested a mean of \$12,813.74 ($p < .001$). Also, alumni who felt that their investment was worthwhile had higher post-college outcome scores ($M = 6.03$) than those who did not feel the investment was worthwhile ($M = 4.92$) ($p < .001$). Finally, alumni who felt their investment was worthwhile had a mean alumni satisfaction score of 14.26. Alumni who did not feel their investment was worthwhile had a mean alumni satisfaction score of 10.63. ($p < .001$). This result could indicate that post-college outcomes are important to the evaluation of satisfaction and alumni's cost-benefit analysis. However, it is difficult to draw any conclusions with such skewed results. Involvement had no relationship with respondents' assessment of their investment's worth.

Table 9
Group Differences for Investment, Involvement, Post-College Outcomes, and Alumni Satisfaction Between Alumni Who Felt the Investment was Worthwhile and Those Who Didn't

Variable	Investment Worthwhile		Investment Not Worthwhile		t
	M	SD	M	SD	
Investment (N = 953)	\$12,813.74	\$15,358.09	\$28,043.84	\$23,932.92	5.07***
Involvement (N = 1133)	18.07	7.53	18.9	8.7	0.594
Post-College Outcomes (N = 1133)	6.03	1.48	4.92	1.73	-3.68***
Alumni Satisfaction (N = 1133)	14.26	2.01	10.63	3.2	-9.54***

* $p < .05$ ** $p < .01$ *** $p < .001$

Bivariate and Multivariate Analyses

Correlations

I examined correlations between each of the three independent variables of investment, involvement, and post-college outcomes and the dependent variable of alumni satisfaction (see Table 10). Two significant relationships emerged, but only one with the dependent variable of alumni satisfaction.

Table 10

Means, Standard Deviations, and Intercorrelations for Alumni Satisfaction and The Predictor Variables of Investment, Involvement, and Post College Outcomes

Variable	<u>M</u>	<u>SD</u>	1	2	3
Alumni Satisfaction	14.07	2.19	-0.043	-0.021	0.197***
Predictor Variable					
1. Investment	\$13,400.53	\$15,999.01	--	-0.079**	-0.117***
2. Involvement	18.21	7.65		--	0.060*
3. Post-College Outcomes	5.96	1.50			--

* $p < .05$. ** $p < .01$. *** $p < .001$

N = 873

There is a significant relationship ($p < .01$) between investment and involvement. These variables are negatively correlated ($r = -.079$) indicating that students who pay more are involved less, and students who pay less are involved more during their years on campus. It is certainly possible that those students who must pay more for their education have less time to get involved because they need employment to pay for school. However, it is difficult to draw conclusions when the correlation is so small. Research regarding investment, work while a student, and alumni satisfaction should be explored in future studies.

The post-college outcomes measure is negatively correlated with investment ($r = -.117$, $p < .001$). This indicates that alumni who invested more are less satisfied with their post-college outcomes and alumni who invested less are more satisfied with their post-college outcomes. The post-college outcomes measure is also significantly correlated with involvement ($r = .060$, $p < .05$). This indicates that individuals who are more involved are also more satisfied with their post-college outcomes.

No significant relationship existed between alumni satisfaction and involvement, contrary to what I expected ($r = -.021$). Extensive research supports a positive link between satisfaction

with college and involvement. Perhaps the displacement model can at least partially account for this result. Post-college outcomes may have displaced the impact of college involvement on the development of satisfaction for alumni. In addition, high levels of both involvement and satisfaction may make Jackson College unrepresentative of the general population.

As noted in Table 10, alumni satisfaction and post-college outcomes are related at a significant level ($p < .001$) with a correlation of $r = .197$. This measure of post-college outcomes is the sum of the Likert scales of satisfaction with career and salary. This correlation could support the displacement hypothesis that post-college outcomes have displaced the effect of other variables on alumni satisfaction.

With post-college outcomes as the only independent variable with a significant correlation with alumni satisfaction, it is possible that alumni satisfaction is based mostly on post-college experiences. This may indicate that satisfaction with career success is more important to alumni satisfaction than in-college experiences or how much was invested in the cost of college.

Regression Analysis

I used stepwise multiple regression to analyze the displacement hypotheses. This statistical method establishes which independent variables best predict the dependent variable and the order of their independent predictive value. Stepwise regression is used in the exploratory phase of research for the purpose of prediction (Keith, 2006).

Table 11 summarizes the individual regression coefficient for the one step included in the best model of the regression analysis for predicting alumni satisfaction ($n = 873$).

Table 11
Stepwise Regression Analysis Summary for Independent Variables Predicting Alumni Satisfaction (N = 873)

Variable	<u>B</u>	<u>SEB</u>	<u>B*</u>	<u>T</u>	<u>Sig.</u>
Step 1					
Post-College Outcomes	0.285	0.048	0.197	5.915	0.000

*Note. Excluded variables were Investment and Involvement
 * Beta value is standardized.*

Post-college outcomes was the only predictor in the stepwise regression, $R^2 = .039$, $F = 34.991$, $p < .001$ (see Table 12). The other two independent variables were excluded from the analysis. The R^2 for the model was .039 indicating that post-college outcomes only accounts for 3.9% of the variance in alumni satisfaction. There was a small effect size for post-college outcomes ($\beta = .285$).

Table 12
Model Summary for Stepwise Multiple Regression for Variables Predicting Alumni Satisfaction (N = 873)

Model	<u>R</u>	<u>R²</u>	<u>Adj R²</u>	<u>R² Δ</u>	<u>F</u>	<u>Sig.</u>
Model 1	0.197	0.039	.038	.039	34.991	.000

a. Predictors (constant), Post-College Outcomes

I then tried to conduct further analysis by using the individual measures of alumni satisfaction in the regression analysis by breaking down the summed variable into each individual measure: 1) satisfaction with educational experiences, 2) satisfaction with social experiences, 3) satisfaction with extracurricular experiences, and 4) satisfaction with the decision to attend Jackson College. No significant relationships emerged in this instance either. In the regression analysis results using these individual components of alumni satisfaction, the variance explained by investment, involvement, and post-college outcomes was as follows: satisfaction

with educational experiences (R^2 value of .012); satisfaction with social experiences (R^2 value of .009); satisfaction with extracurricular experiences (R^2 value of .005); and satisfaction with the decision to attend Jackson College (R^2 value of .007). Therefore, no further analysis was conducted using these component measures of alumni satisfaction

Less Satisfied Alumni

I then conducted a separate analysis among outliers using only the lowest satisfaction scores (a sum total of 11 or less on the satisfaction scale of 4-16). I chose to include only these cases because a total score of 12 would indicate that the alumni are still “somewhat satisfied.” The inclusion of the cases that scored lower than 11 left 127 cases. A score of 11 or less indicates that the respondent was at least “somewhat dissatisfied” on one of the four satisfaction measures.

In order to compare the responses from alumni with the lowest satisfaction scores to those with higher satisfaction scores, t-tests were run to compare the means of each group on the independent variables (see Table 13). The post-college outcomes measure was the only comparison that resulted in a significant t-test. The difference between the outcomes of college for alumni who are more satisfied ($M = 6.09$) and those who are less satisfied ($M = 5.28$) is significant at the $p > .001$ level. There are no significant differences between the means for the measures of investment and involvement. This confirms the results of the regression analysis and supports the finding that post-college outcomes are the most significant predictor of alumni satisfaction.

Table 13

*Group Differences for Investment, Involvement, and Post-College Outcomes,
Between Alumni Who Were More Satisfied and Alumni Who Were Less Satisfied*

Variable	Satisfaction 12 or Higher		Satisfaction 11 or Lower		t
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
Investment	\$12,891.37	\$15,427.27	\$14,630.00	\$18,069.74	1.157
Involvement	18.02	7.47	18.74	8.12	1.06
Post-College Outcomes	6.09	1.46	5.28	1.64	-5.767***

*p<.05 **p<.01 ***p<.001

Summary

This chapter presented the results of statistical analyses conducted to explore the relationships between alumni satisfaction and investment, involvement, and post-college outcomes. Based on the displacement model presented in Chapter III, the three independent variables were expected to predict alumni satisfaction. Investment was expected to be negatively correlated with alumni satisfaction, involvement and post-college outcomes were expected to be positively correlated with alumni satisfaction, and I expected to find that the more proximate variables like post-college outcomes would displace the earlier variables of investment and involvement.

The sample was highly satisfied (M = 14.2 on a 16-point scale). No significant differences were found using gender as a moderating variable. When comparing means of each variable using class year as a moderating variable, one significant relationship emerged with investment $F(2, 975) = 15.07, p < .001$ indicating that the investment levels of the graduating classes were significantly different from each other. Post-hoc analyses revealed that the means were significantly higher for the class of 1993-94 than for both classes of 1998-99 and 2001-02. The class that invested the most (1993-94) was also the most satisfied. This did not support the hypothesis regarding buyer's remorse (but that could be impacted by a number of factors

included a highly satisfied sample). However, it is still possible that later experiences like post-college outcomes displaced any negative impact that investment had on satisfaction for the respondents of that class (based upon the other more compelling results regarding post-college outcomes).

Correlations indicated that the post-college outcomes measure was positively correlated with alumni satisfaction ($r = .197$) and was significant. Another significant correlation existed between involvement and investment ($r = -.079$) which likely indicates that the more students invest, the less they are involved, perhaps due to the need to work. Post-college outcomes also were correlated with investment ($r = -.117$) meaning the more alumni invested, the less happy they were with their post-college outcomes. In addition, post college outcomes correlated with involvement ($r = .060$) and showed that higher levels of student involvement also may lead to higher levels of satisfaction with post-college outcomes. While these correlations are statistically significant, they are weak correlations and not necessarily practically significant.

Stepwise regression analysis showed that investment and involvement were not significant independent predictors of alumni satisfaction. Results showed that the one independent predictor of alumni satisfaction was post-college outcomes, but it only predicted a small amount of the variance in alumni satisfaction (3.9%). This relationship between post-college outcomes and alumni satisfaction is likely due to the fact that outcomes were the most proximate influence on the development of satisfaction for the respondents as predicted by the displacement hypothesis. Involvement may also have an indirect effect on alumni satisfaction that should be explored further since it positively correlates with post-college outcomes and post-college outcomes are a predictor of alumni satisfaction. Also, the fact that post-college outcomes correlated with each of the other independent variables and was the only significant predictor in

the regression analysis indicates that the relationship between post-college outcomes and alumni satisfaction should be explored to a greater extent in future research. Researchers who are interested in conducting alumni surveys may want to take this into account.

Chapter V: Conclusions and Interpretations

Overview

Satisfied alumni are essential to the success of a college or university. And researching the attitudes and perceptions of alumni helps to inform an expanding body of literature on the outcomes of college. While there are many factors that could contribute to the development of that satisfaction, outcomes (defined as satisfaction with salary and career) have the most impact, according to this research. Other factors that were explored, including the costs associated with tuition and college expenses and involvement in activities (both co-curricular and extracurricular), did not show strong relationships with alumni satisfaction. This was somewhat surprising since in recent years, there has been additional emphasis on the rising costs of college and since involvement has been linked to the development of satisfaction in previous research.

This study principally examined the relationship of investment, involvement, and post-college outcomes with alumni satisfaction. Descriptive statistics, correlations, and stepwise multiple regression were all used to explore the separate and joint relationships among the variables. By exploring investment, I hoped to learn more about the impact of tuition costs on each of the other measures, especially alumni satisfaction. By exploring involvement, I hoped to test the links between involvement and satisfaction and explore the possibility that any such relationship might displace the impact of investment on the development of satisfaction. By exploring post-college outcomes as an independent variable, I hoped to learn if the outcomes of college had a significant impact on the development of alumni satisfaction. In addition, I wanted to understand whether post-college outcomes would displace the impact of the previous two variables in determining alumni satisfaction.

The Conceptual Framework

The study addressed these issues through a measure of alumni satisfaction and through the testing of the displacement model. The model was developed with Astin's (1993) research on involvement as a guide. Using this conceptual framework, I explored the extent to which factors of investment, involvement, and post-college outcomes may affect alumni satisfaction. Alexander Astin's (1993) research on involvement in college is widely known among practitioners and scholars in the field of higher education and is in many ways central to the philosophy of faculty and administrators who work closely with students. The theory basically states that students' assimilation into campus life, their level of involvement in their academic pursuits, and their involvement in other aspects of campus life have a significant effect on the outcomes of their college experience, and on their satisfaction with it.

Astin illustrates this through his I-E-O (input – process/environment – output) model. He hypothesized that the amount of input (time and energy) students contribute to their collegiate environment directly affects the outcomes they achieve. Many other studies have supported the findings from Astin and the application of the I-E-O model to other research questions have confirmed that it has predictive power (Abrahamowicz, 1988; Chickering and Reisser, 1993; Cooper, Healy, and Simpson, 1994; Hatcher, Kryter, Prus, & Fitzgerald, 1992; Knox, Lindsay, & Kolb, 1992; Kuh, et al., 1991; Kuh, 1995; Schuh, 1991; Williams and Winston, 1985). The model has even been adapted and used as a conceptual framework for assessment in higher education (House, 1998; Stein, 2007; Swing, 2007; Thurmond et. al, 2002). The model emphasizes the importance of including the inputs that students bring to the university, their experiences on campus, and the outcomes of that experience when assessing a program or initiative. For example, Stein (2007) used the I-E-O model in his assessment of male college

students' willingness to prevent rape. He studied the issue using personal attitudes as the input variable and interaction with a sexual assault peer educator as the environment variable.

Willingness to prevent rape was the outcome he studied. He found both the input and environment variables significantly influenced the students' willingness to prevent rape.

The model was operationalized for this study with investment as the input variable, the experience of college/involvement as the process/environment variable, and post-college outcomes (satisfaction with career and salary) as the output variable. This model set up a hypothesis that predicts alumni satisfaction is developed beginning with the initial investment made in tuition, and then is modified by experience, particularly the degree of involvement. Finally, one might expect further modification of alumni attitudes by post-college outcomes.

Review of the Hypotheses

The study was completed during a time when the higher education marketplace placed a great deal of emphasis on tuition costs, perceived quality, and high expectations for the benefits of a college diploma. As I reviewed literature on consumer behavior, it was obvious that investment from a business perspective was linked to the notion of consumer satisfaction through theories like the expectancy-disconfirmation model. In this model, a consumer's satisfaction or dissatisfaction about a product is based on expectations created at the time of purchase. These expectations are often based on the cost of the product and how the consumer believes that he/she would benefit from the purchase (Oliver, 1997).

As a result, I hypothesized that investment would have a negative relationship with alumni satisfaction because of the possibility for the development of buyer's remorse. Then, based upon Astin's research (1993) and the support of other research that followed (Gaier, 2005; Knox, Lindsay, & Kolb, 1992; Tsao & Coll, 2005), I hypothesized that involvement would have

a strong relationship with alumni satisfaction and would ultimately displace any impact of investment on the development of satisfaction. Involvement had been found to contribute in positive ways to the development of student satisfaction in numerous studies and while that had never been linked directly to alumni satisfaction, it seemed that memories or lessons learned through that involvement would continue to have a positive effect on satisfaction for alumni. I also hypothesized that post-college outcomes would have a positive relationship with alumni satisfaction and that it could displace the effects of investment and involvement as a source of satisfaction because of the proximity of post-college experiences to the time of the survey. My overall hypothesis was that investment would have a negative relationship with alumni satisfaction and that involvement and post-college outcomes would have positive relationships with alumni satisfaction. In this final chapter, I will review the data collection and analysis, summarize and interpret the findings, qualify those findings by reporting limitations of the study, discuss the implications of this study for practice, and suggest possible directions for future research.

Review of Data Collection and Analysis

The alumni survey used in this research was distributed in October of 2004 to the graduating classes of 1994, 1999, and 2002 from Jackson College. I included questions on the survey that pertained directly to my research with permission from the Assessment Office. These items generated data regarding the costs associated with college, undergraduate involvement while a student, and post-graduation outcomes.

In the study, the dependent variable of alumni satisfaction was measured as the sum of four satisfaction scales (satisfaction with educational experiences, social experiences, extracurricular experience, and the overall decision to attend Jackson College). The three

independent variables (investment, involvement, and post-college outcomes) were measured in a variety of ways.

Investment was a self-estimated report by the respondents about the cost of their education each year they attended Jackson College. The sum of the estimated cost over four years was multiplied by the percentage of contribution that the alumni respondents reported to have been responsible for personally. This personal investment measure was then adjusted to account for inflation over the period that the respondents graduated from Jackson College (investments made by classes that graduated in 1994 and 1999 were adjusted to an equivalent investment in 2002). The survey also asked respondents whether the financial investment in their education and experience at Jackson College were worthwhile.

Involvement was measured using the sum of activities and leadership positions held by the alumni respondents while they were students. Categories representing various types of involvements were outlined on the survey and respondents indicated with a check mark how many years they participated in each activity and whether they held a leadership position within that activity. The list of potential activities included co-curricular involvements (such as study abroad and academic clubs) and extracurricular involvements (such as intramural sports and Greek life). Any leadership involvement was weighted with a value of “2” and yearly participation was given a value of “1”. The sum of the values provided an overall score for involvement.

The variable of post-college outcomes was measured using two post-graduation satisfaction scales (satisfaction with current career and satisfaction with current salary). These two satisfaction scales were summed for an overall outcomes score. Originally, I planned to use

reported salary in the analysis, but because so many (approximately 30%) of the respondents chose not to indicate their salary or were not working at the time of the survey, it was omitted.

Summary and Interpretation of Findings

The results of this research indicated that the measure of post-college outcomes was the strongest predictor of alumni satisfaction and that those outcomes displaced any influence the factors of investment and involvement may have had on the development of alumni satisfaction. The findings summarized in this section will further elaborate on the relationships among these variables. However, it is important to note that early in the analysis I discovered the satisfaction levels of alumni in the sample did not vary appreciably. The mean score of alumni satisfaction on a 16 point scale was 14.2 and the standard deviation was 2.16. Alumni also overwhelmingly considered their education at Jackson College to be “worth the investment” (94.8%) which made it more challenging to fully explore the hypothesized relationships. The restricted range likely caused weaker correlations (Lane, 2007). Despite the lack of variability in the sample, several conclusions did emerge.

Investment

The results showed that the correlation of investment with alumni satisfaction was not significant and it was not a predictor of alumni satisfaction in the regression analysis. However, the question of whether investment would be an influential factor in a study with more variance in alumni satisfaction still remains. Because Jackson College had such low tuition in comparison to other institutions at the time of this research, and because the overall satisfaction of the alumni in the sample was so high, it was unlikely that any buyer’s remorse would occur. Ultimately, the alumni from Jackson College received a high quality education for comparatively little investment.

Involvement

In this study, there was no significant correlation between involvement and alumni satisfaction, which was surprising given the extensive prior research on the link between involvement and student satisfaction. In addition, involvement was not a predictor of alumni satisfaction in the regression analysis, although it was likely displaced by post-college outcomes. Once again, the lack of variability in alumni satisfaction may have attenuated this relationship.

There were no significant differences in involvement between men and women or among the graduating class years. Involvement had a weak positive correlation with post-college outcomes ($p < .05$) and a weak negative correlation with investment ($p < .01$). This indicates that those who invested more were involved less. This could be because some students who invest more in their education have to work while in college, thus leaving less time for involvement.

Previous research suggests that there may be an indirect impact of involvement on alumni satisfaction. Studies have shown that students involved in extracurricular activities not only developed skills that benefited them in their future careers, but also increased their marketability in landing positions (Astin, 1993). Post-college outcomes (including satisfaction with career and salary) correlated significantly with each of the variables in the study. If post-college outcomes did displace the effects of involvement on alumni satisfaction, it is possible that involvement in college helped generate the positive post-college experiences (although that was not a finding of this study). I believe that more research should be conducted to explore the link between involvement, post-college outcomes, and alumni satisfaction particularly since all three were positively correlated with each other. This possible link between involvement and post-college outcomes is further discussed in the next section on post-college outcomes.

Post-College Outcomes

There were no significant differences in post-college outcomes by gender or graduating class year. However, post-college outcomes presented the strongest relationship with alumni satisfaction (a positive correlation and the only predictor of alumni satisfaction in the stepwise regression analysis) leading me to believe that the respondents' current life situations had the greatest influence on their satisfaction. This also supports the notion that outcomes are a key factor in alumni satisfaction, and may in fact displace the other variables in the development of satisfaction. This conclusion could lead universities to focus more on the outcomes of college.

Also, this result supports the fact that since the early 1990s, critics of higher education spending have been calling for greater accountability and more emphasis on outcomes as a measure of success (Burke and Minassians, 2002). These outcomes appear to be a key factor in determining alumni satisfaction. Since there is a relationship between post-college outcomes and alumni satisfaction, perhaps institutions should evaluate how they prepare students for life after college. The question remains, however, as to how an institution should design the undergraduate experience in order to create the desired outcomes. As discussed earlier, involvement did not have a direct link to alumni satisfaction in this study, but given prior research on the links between involvement and post-college success, it is possible that an indirect connection exists. Therefore, higher education institutions need to think about creating opportunities that encourage students to develop along positive lines that could lead to greater post-college success. Or perhaps students just need to spend more time reflecting on how they acquired job-related skills so that they can later attribute them back to the institution.

There has been some research that links involvement to the development of important skills like leadership. Kezar and Moriarty (2000) found that being active in a student

organization, holding office in student government, and membership in a fraternity or sorority had a positive effect on seniors' self-ratings of their leadership ability and their ability to influence others. Their findings support much of Astin's research (1993) on the positive effects of student involvement. This not only shows that students are learning how to be leaders, but they are also gaining self-confidence in their leadership abilities.

Much of the research within higher education on the transfer of acquired skills from college to the workforce is focused on adult learners, vocational schools, and community colleges (Glover and Hull-Toye, 1995; Leventhal, 1998). This body of research emphasizes the importance of work experience through internships, vocational courses, and diversity training. Educators from these more vocational environments spend time talking with students about the skills that are necessary to have a successful career. Within more liberal arts institutions, those discussions tend to occur most frequently in career services offices. In one study of career decision-making self efficacy at a more traditional 4-year college, leadership confidence was the most important influence and cultural sensitivity was a factor as well (Paulsen and Betz, 2004). Other research has found that skills in oral communication, written communication, public speaking, motivating and managing others, and effective group leadership are most essential for career success (Zekeri, 2004). These are the same skills that, according to Astin (1993), are acquired through student involvement and leadership. According to research by Humphreys and Davenport (2005), the academic and business communities value global understanding, civic engagement, a sense of values and ethics, and intercultural skills and knowledge in graduates from liberal arts backgrounds. These skills could also be acquired both inside and outside of the classroom.

Perhaps all higher education institutions should broaden their focus beyond career services staff and begin discussing strategies that would reinforce the development of skills and values for students across the institution. Institutions should also find ways to help students understand how their experiences and skills are transferable to the work world. If faculty and administrators emphasize the importance of gaining leadership and vocational skills through areas like student involvement, undergraduate research, internships, volunteer activities, mentoring, in-class activities, and student employment, then perhaps students will attribute their post-college success back to the institution. With post-college outcomes as a significant predictor of alumni satisfaction, it is important for universities to be more active in the development of these outcomes.

Limitations and Suggestions for Future Research

There were several limitations in this research. These include the research setting, the omission of the academic experience as a variable, a low response rate, and imperfect measures.

The Research Setting

The institution used in this study, a highly selective state university, is atypical. Its student body is highly selective, principally residential, ethnically homogeneous, and particularly active in campus life. A survey of the kind may not yield the same results at dissimilar institutions. For example, alumni from other institutions may not have the same patterns of involvement as those from Jackson College due to differences in institution size, culture, and opportunities. Additionally, tuition at Jackson College was unusually low during the time that this survey was administered due a freeze on tuition increases in the state (Nardo, 2000). Therefore, the setting was not ideal for researching concepts like buyer's remorse since the students were getting an education for a low cost.

Alumni from Jackson College may achieve very different post-college outcomes from graduates of other institutions as affected by factors such as pre-college success, prestige, job placement practices, academic preparation, and location. Two additional concerns that came about from using Jackson College for this study were the lack of diversity in the sample and the high level of overall satisfaction among alumni. Greater representation in the sample could be addressed by including additional institutions in future research.

The Academic Experience

Admittedly, this study may not have explored the most important aspect of college. Investment, involvement, and post-college outcomes focus on differing aspects of alumni satisfaction with the college experience, but one of the most important experiences in college is what happens inside the classroom. Studies have shown that learning academic skills is enhanced by an environment that emphasizes scholarship and that the effort put forth by students to excel academically has an impact on their self-ratings of growth in career-related skills (Kuh, Schuh, et al., 1991; Pascarella and Terenzini, 2005). While the survey did ask students about a few “academic experiences” in measuring involvement (like interaction with faculty outside of class), the specific content of students’ academic experience was omitted from this study and would be an important addition to future research about alumni satisfaction.

A higher response rate

Non-respondents are a concern for all researchers who employ survey methodology. While surveys are a good way to gain feedback from a large number of respondents, it can be difficult to achieve a high response rate. The drawback of a low response rate is that there are many non-responders whose responses may vary from those received in important ways. Thirty-two percent of the alumni who received the survey responded. It cannot be determined how the

other 68 percent might have responded, although it is possible that the alumni who were not satisfied did not respond. An adequate response rate for survey research would be 50 percent or greater (Babbie, 1990). The implications of the issue of non-responders are significant, but unavoidable in survey research. A higher response rate would have allowed greater confidence in the results. More specifically, conclusions could not be drawn for minorities because they were underrepresented in the sample. Men were also underrepresented, so conclusions about the impact of gender are conservatively drawn.

Imperfect Measures

The measures used in this study were not perfect. Because it was important to capture the respondents' perceptions of their college experience, and because I was surveying about attitudes, the survey design included subjective responses that may have been both unreliable and invalid in objective terms. Investment was a personal estimate by respondents. An attempt to acquire current salary information did not result in as many responses as I would have hoped, likely due to the fact that respondents were not comfortable sharing that information. Involvement was also difficult to assess because accounting for time and energy that alumni devoted to the activities was nearly impossible in a paper survey. Qualitative follow-up research would have enhanced this measure. Periodically surveying students during college about their involvements and experiences, and then archiving it for later use would allow accurate data to be used when surveying alumni. Ideally, data could be collected at the time of college choice, throughout college, and then post-graduation (perhaps 5 and 10 years later). In order to get the best information from students and alumni, it is necessary to be intentional about assessing their experiences at the time they occur. This point is supported by the possibility that post-college

outcomes was the most influential factor on alumni satisfaction because it was the most proximate.

The Inclusion of Investment

I chose investment as a variable in the study because the idea of students as “consumers” of higher education has begun to impact the decisions and approach of higher education professionals. However, measuring the psychological impact of higher costs in higher education was challenging and might be better addressed through a mixed design of quantitative and qualitative research. In this study, the measure of investment captured the perceived costs and whether alumni felt it was worth the investment. The measure did not capture the investment by parents and in general, it was difficult to measure because it was based on alumni perception. Perhaps expanding the measure to include more information about how the financial investment factored into college choice would provide greater insight into the issue. As noted before, a longitudinal study that followed students through their 4 years of college and beyond would be an optimal design for future studies on the role financial investment plays in college choice, involvement, and outcomes. This would allow for a more complete accounting for an individual’s investment by year. It might also allow for using actual investment data (like tuition bills) as the students are paying for college.

Future research may also compare the attitudes of students at institutions with differing tuition levels since in this study, Jackson College was relatively inexpensive. A study that explores the college choice process as it relates to investment could improve understanding of the impact of rising tuition costs on student attitudes as consumers. Such a study could help answer the question, is there a cost threshold where student expectations for returns in the form of involvement and outcomes are too high to lead to satisfaction?

Additional Research Designs

As mentioned previously, a qualitative study would allow further testing of the displacement hypothesis. This could be achieved through interviews or focus groups with alumni about their undergraduate experience and what they feel are the most important contributors to their post-college satisfaction. A qualitative study would be helpful in sorting out the interrelations among investment, involvement, post-college outcomes, and alumni satisfaction because of the ability of the researcher to ask additional questions for clarification or to help generate more thoughtful responses. In order to explore why these variables are or are not related, additional research could delve deeper into the experiences and associations of alumni through the use of qualitative design, mixed design, longitudinal design, and more accurate measures (actual data as opposed to perceived responses). These additional research tools would allow a more complete picture of the complex relationships among the variables to emerge.

Implications for Practice

Two of the most obvious implications that stem from this research are the importance of post-college outcomes as the prime correlate of alumni satisfaction and the fact that post-college outcomes displaced investment and involvement in the development of alumni satisfaction. Post-college outcomes stood out as the strongest predictor of alumni satisfaction. When we ask alumni to reflect back on college experiences, their memory is potentially affected by current events and their dissatisfaction or satisfaction with life after college. Or perhaps the outcomes of college are more important to the development of their satisfaction post-graduation.

Astin's (1993) involvement theory has been widely used in the field of higher education to explain the importance of helping students learn, grow, and develop. Student success,

retention, and satisfaction have been attributed to involvement and strong connections to the university. This study did not show a significant relationship between involvement and alumni satisfaction, either because the connection between the variables simply wasn't there or because the effects of involvement were displaced by post-college outcomes. Prior research has indicated, however, that involvement in college activities and leadership led to positive post-college outcomes (Kuh, 1993). So, high involvement levels could have led to positive post-college outcomes, thereby indirectly affecting alumni satisfaction for some of the survey respondents. To the extent that student involvement may result in outcomes that will affect alumni satisfaction, we need to understand the long-term effects of the extent and intensity of that involvement. We need to know more about how to design for success after graduation. This research shows a connection between post-college outcomes and alumni satisfaction (and previous research has shown a link between involvement and post-college outcomes). The question is, how do we shape involvements and/or the academic experience to ensure that alumni are satisfied and that they consider their post-college outcomes to be a success?

Conclusion

In this study, post-college outcomes had a significant relationship with alumni satisfaction, thus reinforcing the idea that outcomes are an important predictor of alumni satisfaction. This result could support the displacement hypothesis because in this study outcomes may have displaced the negative impact of investment and weak positive impact of involvement on alumni satisfaction. However, this exploratory research leaves enough unanswered questions to warrant further study on the topic of alumni satisfaction.

I began this research with the understanding that involvement was a strong predictor of satisfaction in previous studies, but with the hypothesis that investment and post-college

outcomes also would contribute significantly to the development of alumni satisfaction. As mentioned previously, the most unresolved aspect of this study is whether involvement has an impact on the success of alumni in their post college lives. We now understand that post-college outcomes are important to the evaluation of alumni satisfaction, but are only left with a possible indirect connection between involvement and alumni satisfaction. It is possible that the positive correlation between involvement and post-college outcomes may indicate that certain skills and knowledge gained through involvement lead to successful post-college outcomes.

This does not assume that prior research was wrong regarding a strong link between involvement and satisfaction. On the other hand, it is more likely that as alumni achieve success in their post-college lives, that success is potentially grounded in their college experiences (including involvement). This success then displaces other factors which might have initially affected satisfaction. Therefore, it is still important to encourage students to be involved and engaged because it is likely to lead to success in their post-college lives. Because involvement and engagement are likely to be a foundation for outcomes, and because outcomes are correlated with alumni satisfaction, we need to know a great deal more about the impact of involvement on the kinds of outcomes that contribute to success. Future research should consider whether factors like leadership, research with faculty, mentorship, and internships that would foster a greater connection for alumni with their undergraduate institution are correlated with post-college outcomes. Knowing that the institution contributed to their post-college success in direct ways could lead to more satisfied alumni, and greater satisfaction among alumni can lead to a stronger institution.

APPENDIX A

Greetings from the

We recently sent you a post card about an Alumni Survey. In the survey we ask you, as a graduate, to tell us about your experiences at the College and how those experiences have affected your life after graduation. In addition this survey supports research by Amy Barnes, a current Ed.D. candidate

If you have participated in the online Alumni Survey, thanks! If not, please complete the paper version and return it in the enclosed envelope. If you prefer, you may access the web version at:

(url)

Login Name = (insert LOGIN NAME)
Login Password = (insert PASSWORD)

Results of this survey will be shared with faculty and the administration as an integral part of program evaluation and planning for the future of the College. We also use survey results in reports to the leaders of the Commonwealth and to accrediting associations (e.g., Southern Association of Colleges and Schools), and in related research projects. Ms. Barnes is studying the financial investment of a college education. She will publish her findings in her dissertation scheduled for completion next spring. All responses are confidential and all results will be reported anonymously.

We appreciate your participation in this survey. If you have any questions please contact Dr. Director of Assessment Research associated with this survey has been approved by the College's Protection of Human Subjects Committee (Chair: For questions about PHSC procedures or forms, please contact

Professor & Chair of the
Assessment Steering Committee Director of Assessment

Amy Beasley Barnes
Ed.D. Candidate

THIS PROJECT WAS FOUND TO COMPLY WITH APPROPRIATE ETHICAL STANDARDS AND WAS EXEMPTED FROM THE NEED FOR FORMAL REVIEW BY THE PROTECTION OF HUMAN SUBJECTS COMMITTEE (PHONE: ON SEPTEMBER 16, 2004 AND EXPIRES ON SEPTEMBER 15, 2005.

BACKGROUND INFORMATION

1. Where do you currently reside: Other: _____
2. What is your sex? Female Male
3. Please mark your racial/ethnic background:
- | | |
|--|---|
| <input type="checkbox"/> African American/Black | <input type="checkbox"/> American Indian |
| <input type="checkbox"/> Asian American/Asian | <input type="checkbox"/> Mexican American/Chicano |
| <input type="checkbox"/> Puerto Rican/Other Latino | <input type="checkbox"/> White/Caucasian |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Choose not to answer |
4. What was your residential status when you first enrolled at
- In-state Out-of-state
5. When did you receive your undergraduate degree from
- SESSION: Spring (May) Summer (August) Fall (December)
- YEAR: _____
6. Please indicate your major(s) and minor: Primary major: _____
- If applicable: Secondary major: _____
- If applicable: Minor: _____

EXPERIENCES

7. Please indicate which of the following academic experiences you had at

- | | | |
|------------------------------|-----------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | a. Seminar course |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | b. Lecture course |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | c. Laboratory |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | d. Course in creative and performing arts |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | e. Study abroad |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | f. Internship/Externship |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | g. Mentoring relationship with faculty member |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | h. Senior departmental honors |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | i. Individual work with a faculty member for academic credit, including independent study/research |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | j. Individual work with a faculty member for no academic credit |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | k. Work on faculty-supervised research project with other students |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | l. Social interaction with faculty (e.g., visiting in office, going out for coffee, dinner at faculty member's house) |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | m. Other significant experience: _____ |

→ From your current perspective, select your 3 most significant experiences listed above.

(identify by letter): 1st _____ 2nd _____ 3rd _____

8. Mark each year (if any) you participated in the following extracurricular activities at
 → Also, indicate if you held a leadership position in the activity.

Held leadership position	Did not participate	Fresh	Soph.	Junior	Senior
<input type="checkbox"/> a. Student Government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> b. Social Fraternity/Sorority	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> c. Service Clubs/Volunteer Activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> d. Intercollegiate Sports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> e. Intramural/Club Sports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> f. Honor/Judicial Council	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> g. Student Publications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> h. Religious Organizations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> i. Clubs related to your major	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> j. Artistic Groups (performance, visual)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> k. Multicultural Organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> l. Student Staff (Resident advisor, Orientation advisor, Tour guide, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> m. Special Interest (Student Alumni Liaison Council, Univ. Center Activities Board, ROTC, Athletic Ed Foundation, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> n. Honorary Organization(s) (PBK, ODK, Mortar Board, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> o. Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

→ From your current perspective, select your 3 most significant experiences listed above
 (identify by letter): 1st _____ 2nd _____ 3rd _____

9. Did you work (for pay) while a student at _____ excluding summer jobs, if not enrolled in summer school at the College)?

No Yes → Did you work on-campus, off-campus, on- and off-campus
 → On average, how many hours per week were you employed during your undergraduate years? Indicate "00" if you did not work in a given year.

Freshmen _____hrs/wk Junior _____hrs/wk

Sophomore _____hrs/wk Senior _____hrs/wk

10. How much did your experiences contribute to your personal growth in the following areas?

	Very Little	Somewhat	Very Much	Does not Apply
Writing effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speaking effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding written information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding graphic information (charts, graphs, maps)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using the library	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recognizing your personal rights and responsibilities as a citizen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding and applying mathematics in daily activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding different philosophies and cultures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Defining and solving problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding the interaction of people and their environments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding and appreciating the arts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding and applying scientific principles and methods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Critical thinking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leadership development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Working independently	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Working collaboratively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Computing skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. To what extent were you satisfied with each of the following experiences at .

	Very satisfied	Somewhat satisfied	Somewhat dissatisfied	Very dissatisfied	Prefer not to answer	Not applicable
<i>overall educational experiences</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>extracurricular experiences</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>social experiences</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. Looking back, how satisfied are you with your decision to attend

13. Rate your satisfaction with how well . prepared you for:

	Very satisfied	Somewhat satisfied	Somewhat dissatisfied	Very dissatisfied	Prefer not to answer	Not applicable
<i>overall, life after graduation</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>the work force</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>post-graduate studies</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. How would you rate the overall quality of instruction at

excellent good fair poor

15. What experience(s) as a student at was/were most influential to you after graduation?

POST GRADUATE EXPERIENCES

16. Immediately following graduation were you: (mark all that apply)

- Employed within your intended career path
- Employed, but not within your intended career path
- Unemployed, but job searching
- Applying to graduate school/furthering education
- Admitted to graduate school/furthering education
- Other: _____

17. What is/was the level of knowledge and skills needed or required in your first position after

- Less than a bachelor's degree
- Bachelor's degree
- Other: _____
- Not applicable

18. Are you currently enrolled as a graduate student?

- No Yes, part-time Yes, full-time

19. What degrees have you earned since receiving your bachelor's degree at (mark all that apply)

- | | |
|---|---|
| <input type="checkbox"/> None beyond | <input type="checkbox"/> Doctorate |
| <input type="checkbox"/> Currently pursuing degree | <input type="checkbox"/> Law degree |
| <input type="checkbox"/> Additional bachelor's degree | <input type="checkbox"/> Medical degree |
| <input type="checkbox"/> Master's degree | <input type="checkbox"/> Other degrees: _____ |
| <input type="checkbox"/> Certificates: _____ | |

20. How many full-time employment positions have you held since graduating from

- None One 2 – 3 4 – 5 more than 5

- 21a. Are you currently employed? No, not actively seeking employment
 No, but actively seeking employment
 Yes, part-time
 Yes, full-time

21b. Which of the following categories best describes the kind of work you do?

- Not employed
 Work at home caring for member(s) of the household
 Clerical or office worker (e.g., bookkeeper, postal clerk, secretary, data entry, office manager)
 Foreman or supervisor in a shop or factory
 General laborer (e.g., farming, service & mechanical work, factory work, carpentry)
 Manager, administrator, executive of a business, govt. agency or other organization
 Owner & operator of a business such as a store, factory, or construction company
 Professional worker such as a lawyer, scientist, engineer, physician, educator, musician, artist, architect
 Sales worker, such as a sales representative or a sales clerk
 Skilled worker in a trade or craft such as carpenter, electrician, printer, computer technician
 Other: _____

→ What is your job title: _____

22. How satisfied are you with your current job? Very satisfied
 Somewhat satisfied
 Somewhat dissatisfied
 Very dissatisfied
 Prefer not to answer
 Not applicable

23. What is your current annual salary range? Not currently working
 Working part-time: approx. salary \$ _____
 Working full-time (annual salary):
 Less than \$20,000
 \$20,000 – \$35,000
 \$35,001 – \$50,000
 \$50,001 – \$75,000
 \$75,001 – \$100,000
 Over \$100,000
 Prefer not to answer

24. How satisfied are you with your current pay?

- Very satisfied
 Somewhat satisfied
 Somewhat dissatisfied
 Very dissatisfied
 Prefer not to answer
 Not applicable

25. In the last year, how often have you done each of the following?

	Haven't done	Once or twice	Three or more times
Read a magazine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Read a novel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Read a nonfiction book	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended a musical or play (not a school performance)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended a public lecture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended an athletic event	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visited an art museum or gallery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visited an historic museum or historic site	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26. To what extent have you *voluntarily* participated in the following activities or groups during the ***past 24 months***? (By "*voluntarily*", we mean that you were not required by an employer to participate. An "*active participant*" means that you attended meetings and events. As a "*leader*", we mean that you held some office or formally recognized position other than member.)

	Not a Member	Member only	Active participant	Leader
Youth organization or activities (e.g., Little League, Scouting)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Professional, trade, farm, or labor union associations or activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Partisan political clubs, organizations and activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Political issue groups or activities (e.g., Sierra Club, NAACP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Religious organizations or activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hobby or garden clubs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sports groups, teams, or activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community centers, neighborhood improvement grps, or activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Literary, art, discussion, music, study groups, or activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elementary, secondary school organizations or activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Service organizations or activities (e.g., Rotary club, Big Brothers/Big Sisters, Meals on Wheels)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

27. Mark each of the following that applies to you:

- Registered to vote
- Voted in the 2004 presidential election
- Voted in 2000 presidential election
- Voted in most recent congressional election
- Voted in most recent gubernatorial election in my state
- Voted in most recent city or county election in my state
- Have been a member of a local party committee
- None of these

FINANCIAL INVESTMENT IN COLLEGE EDUCATION

28. When you decided to come to _____, what was your impression of the financial cost?

- Very inexpensive
- Somewhat inexpensive
- In line with expectations
- Somewhat expensive
- Very expensive
- No opinion

29. How important was the cost of tuition at _____ to your decision to attend the college?

- Very Important
- Important
- Somewhat Important
- Not Important
- Prefer not to answer

30. Do you feel that your _____ education was worth the financial investment?

- Yes
- No

31. How many years did you attend _____

32. On average, how much did it cost for you to attend _____ **per year** (including tuition, room & board, and books, while subtracting any scholarship or grant money)? *Please provide your best estimate if you are not sure.*

	Freshman	Sophomore	Junior	Senior
\$0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$1 - \$4,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$5,000 - \$9,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$10,000 - \$14,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$15,000 - \$19,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$20,000 - \$24,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$25,000 - \$29,999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More than \$30,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Information:

33. What percentage of the total cost to attend _____ was financed by:
(Please provide your best estimate if you are not sure)

	0%	1-25%	26-50%	51-75%	76-100%	Prefer not to answer
you personally (directly or through loans)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
your family (directly or through loans)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
scholarships/grants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other sources of support: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

34. If you *personally* took out student loans to attend _____, how much did you borrow?
Please provide your best estimate if you are not sure.

- Less than \$5,000
- \$5,000 - \$9,999
- \$10,000 - \$19,999
- \$20,000 - \$29,999
- \$30,000 - \$39,999
- \$40,000 - \$49,000
- \$50,000 - \$59,000
- \$60,000 - \$69,000
- More than \$70,000
- Prefer not to answer

Do you have any final comments or suggestions about _____ or this survey?

Thank you for completing the

Alumni Survey.

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