AN EXPLORATORY STUDY OF UNDERGRADUATE CLASSROOM EXPERIENCES AND OCCUPATIONAL ATTAINMENT IN ALUMNI SATISFACTION WITH UNIVERSITY EXPERIENCES

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dissertation entitled

AN EXPLORATORY STUDY OF UNDERGRADUATE CLASSROOM
EXPERIENCES AND OCCUPATIONAL ATTAINMENT IN ALUMNI
SATISFACTION WITH UNIVERSITY EXPERIENCES

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And hereby certify that, in their opinion, it is worthy of acceptance.

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AN EXPLORATORY STUDY OF UNDERGRADUATE CLASSROOM EXPERIENCES AND OCCUPATIONAL ATTAINMENT IN ALUMNI SATISFACTION WITH UNIVERSITY EXPERIENCES

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ABSTRACT

Using the concept of viewing higher education as a consumer good, this dissertation reports the findings of a study of alumni who graduated from a research-extensive university in the Midwest. The study examined the extent to which satisfaction with classroom experiences and with occupational attainment explained alumni satisfaction with university experiences. Alumni who received baccalaureate degrees from the university in 1994, 1998 or 2002 comprised the study’s population. Data from 272 respondents were used in the analyses. Data analyses included ANOVA, correlations, and multiple regressions. The researcher found that satisfaction with classroom experiences, satisfaction with perceived fit-1 (social experiences) and satisfaction with perceived fit-2 (present relationship with alma mater) were significant in explaining alumni satisfaction. Based on the findings, the researcher recommended that, similar to marketing models which encourage building relationships with clients, universities should continue to nurture and build relationships with alumni.
Alumni/ae who are satisfied with their experiences are a great asset to their alma mater. Alumni/ae demonstrate their satisfaction through donating to their former institutions (McAlexander & Koenig, 2001; Monks, 2003), recommending their alma mater to potential students (Thomas & Galambos, 2004) and hiring fellow graduates of their educational institution (Hartman & Schmidt, 1995). Another attribute of alums is that, as former consumers of a product (e.g., university education), they provide valuable input regarding institutional improvement to institutional development offices (Gallo & Hubschman, 2003). In addition to supporting development offices, alums support current students via mentoring (Mael & Ashforth, 1992), proving internship opportunities to students at alum’s companies, and agreeing to be guest speakers at college classrooms. The impact of alums is not limited to the university but extends to the community in which alumni currently reside. Alums speak well or ill about their university experiences when the occasion arises in their local communities. In order to encourage alums to be positive ambassadors of their alma mater, it is important that issues concerning alumni/ae satisfaction be explored.

Most alums are satisfied with their undergraduate university experiences (Kern, 1976; Bowen, 1997; Delaney, 2004; Kuh, 2005). In a classic 1952 study of over 9,000 alums from 1,000 different colleges and universities, researchers found that over 84 percent would attend the same college if they could begin again (Bowen, 1997). In
another national study of college alums who graduated in the 1960s, researchers found that 86 percent of those 1960s graduates were highly satisfied with their college experiences (Bowen, 1997). From a perusal of past alumni surveys, Pace (1984) found that alums were generally satisfied with their university experiences and more specifically, “no more than 3 or 4% say that they dislike college. Most of the others not only like it (80 to 90%) but would go to the same college if they could start over again (70 to 85%)” (p. 18). In more recent alumni studies, Kuh (2005) found that “about 80 to 85 percent of all college graduates say they are ‘very’ or at least ‘somewhat’ satisfied with the quality of their experience” (p. 154).

While most university alums have expressed satisfaction with their university experiences, they have not cited the same reasons for their university satisfaction. Some alums cited personal development as the reason for their satisfaction while other alums listed higher potential income or civic awareness as the source of their university satisfaction (Bowen, 1997). In order to capture all sources of alumni satisfaction, educational researchers have used several indicators to measure alumni satisfaction. While some researchers focused on self-reports of alumni satisfaction, other researchers studied behavioral indicators of alumni satisfaction. These behavioral indicators of alumni satisfaction have included alums returning to their alma mater for other degrees (Martin, Milne-Home, Barrett, Spalding & Jones, 2000), alums attending sports events at their alma mater (Pettit & Litten, 1999), and alums providing financial support to the university (Hartley & Berkowitz, 1983; McAlexander & Koenig, 2001; Monks, 2003). Other behavioral indicators of alumni satisfaction are alums providing institutional support such as recommending the university to a prospective student.
(Thomas & Galambos, 2004), being a mentor to a current student (Hartley & Berkowitz, 1983), and joining the alumni association (Hartley & Berkowitz, 1983).

In addition to examining post-graduation behaviors to shed light on alumni/ae satisfaction, researchers have also inquired about antecedents of college graduation. These antecedents have included satisfaction with undergraduate classroom experiences (Ness, 2003; Volkwein & Cabrerra, 1998) and satisfaction with perceived fit within the university community (Smart, 1986; Graham & Gisi, 2000). Perceived fit could be between student and peers, student and faculty, or student and college major. After baccalaureate graduation, an event that was found to be correlated with alumni/ae satisfaction was satisfaction with occupational attainment (Pike, 1994).

To examine satisfaction with occupational attainment appropriately, a researcher had to wait until former students were working. Another consideration for waiting until several years after graduation before embarking on alumni/ae satisfaction studies is that the satisfaction that students derive from higher education might not be evident immediately upon graduation; rather it might take many years after graduation before graduates were cognizant of it (Bowen, 1997; Menges & Kulieke, 1984; Delaney, 2004). Beers (1988) noted that, “for many, perhaps, the importance of the ideas they have encountered in college will not be evident until much later in their lives” (p. 93). Pace (1979) even encouraged future researchers to wait at least ten years after baccalaureate graduation to survey alums as “this extended period is surely needed if we are to learn more about the enduring influence of higher education in people’s lives and about the role of college graduates in our society” (p. 113). Pike (1994) discussed methodological
considerations of alumni/ae studies, stating that “A basic tenet of alumni research is that alumni perceptions of college are tempered by experiences after graduation” (p. 121).

Researchers also delay satisfaction studies until several years after respondents’ baccalaureate graduation has occurred to provide alums an opportunity to reflect on their professional career. Delaney (2000) noted that “a unique feature of alumni surveys is the capability of documenting students’ assessment of the quality of their educational experiences tempered by their experiences since graduation” (p. 139). Also noting that alums bring a unique perspective to satisfaction studies, Pettit and Litten (1999) stated that “unlike faculty and current students, alumni bring the advantage of having tested the outcomes of an educational program in the marketplace” (p. 1).

In some states, for example, Maryland, results from alumni/ae satisfaction studies have influenced the amount of funding that state universities received from the state (Porter, 2004). Similar to state governments requiring that universities include input from alumni/ae studies in requests for government funds, some accrediting agencies require that universities include feedback from alums in the assessment portfolio that universities submit to the accrediting agencies (Kuh, 2005). University administrators also rely on alumni/ae input, for example, “the University of Wisconsin surveys its graduates and uses some of this information in its performance indicator system” (Kuh, 2005, p. 155).

The documentation of alumni/ae satisfaction submitted by universities to government agencies and accreditation agencies may include reasons for alumni/ae satisfaction. Analyses of several alumni/ae satisfaction studies revealed that reasons for alumni/ae satisfaction could be classified as cognitive or affective (Pascarella & Terenzini, 2005). Satisfaction with undergraduate classroom experiences, with
occupational attainment, and with perceived fit within the university community (e.g., with peers and faculty) might be considered “affective satisfaction” if the focus is on affective characteristics. Gable and Wolf (1993) discussed literature that had described affective characteristics as “qualities which presents people’s typical ways of feelings or expressing their emotions” (p. 4).

In this study, the researcher placed particular emphasis on affective sources of satisfaction because affective sources of alumni/ae satisfaction may influence alum’s present relationship with their alma mater. The three affective areas that were examined for the role they play in alumni/ae satisfaction are: satisfaction with classroom experiences, satisfaction with occupational attainment, and satisfaction with perceived fit within the university community. These three areas are directly connected with alumni/ae satisfaction (Hartman & Schmidt, 1995).

Satisfaction with Classroom Experiences

Alumni/ae satisfaction with university experiences is typically a result of what transpired in the college classroom (Ness, 2003). Volkwein and Cabrera (1998) deduced from the research on alumni/ae satisfaction that classroom experiences were the most important factors explaining satisfaction with college experiences. Tinto (1997) found that college classrooms were a focal point where social and academic experiences intersect. These social and academic experiences influenced alumni/ae satisfaction. An analysis of data collected by the Cooperative Institutional Research Program (CIRP) encompassing over 300 postsecondary institutions in the United States revealed that classroom activities such as classroom interactions influence alumni/ae satisfaction. (Astin, 1977).
Satisfaction with classroom experiences is sometimes studied immediately after each classroom experience or years after the classroom experience occurred. Alums recollections of classroom experiences could provide a holistic view of classroom experiences, tempered by occupational experiences, which studies of current students might miss.

Previous studies have conceptualized satisfaction with classroom experiences as a factorially derived variable. The items that have been used to describe satisfaction with classroom experiences include satisfaction with quality of class discussion, knowledgeable faculty, friendly faculty, and class size (Chadwick & Ward, 1987), satisfaction with variety of instructional approaches, concern for respondent as an individual, class size and overall quality of instruction (Graham & Gisi, 2000), and a weighted factor score on satisfactions with quality of instruction, courses and curriculum, intellectual growth, and meeting people (Knox, Lindsay & Kolb, 1992). Since classroom experiences prepare students for their careers, a study of satisfaction with occupational attainment is also pertinent.

Satisfaction with Occupational Attainment

Making a connection between classroom experiences and occupational attainment, Menges and Kulieke (1984) stated that classroom experiences were integral to attaining future financial and career goals after graduation. In a study of alums of one university in Australia, Martin et al. (2000) found that there was a statistically significant correlation between satisfaction with classroom experiences and satisfaction with national and international employment preparation.
Providing a reason for universities to place more emphasis on occupational preparation, Menges and Kulieke (1984) noted that, when asked their reasons for attending college, there was an annual trend that showed more students were selecting “being well off financially” and fewer students were selecting “developing a meaningful philosophy of life.” Also emphasizing the current importance of universities preparing their alums for employment, Belcheir (2002) noted that a perusal of a ten-year collection of exit surveys at one institution showed that more recent alums valued employment aspects of their degree more highly than earlier graduates. Hartman and Schmidt (1995) stated that “research in higher education has shown that students give obtaining a satisfactory job as a major reason for obtaining a college degree” (p. 213). In a more current assessment of employment preparation of college graduates, Vance (2007) discussed The Association of American Colleges and Universities’ concern that college graduates were inadequately prepared by their colleges to thrive in a global economy.

A connection between satisfaction with occupational attainment and alumni/ae satisfaction with university experiences is seen in a study by Pike (1994), who found that “alumni who were satisfied with their jobs were more likely to be satisfied with their college experiences, while alumni who were not satisfied with their jobs tended to be dissatisfied with college” (p. 107). Smart (1986) also found a connection between satisfaction with occupational attainment and alum satisfaction with university experiences.

Previous studies have conceptualized satisfaction with occupational attainment as either a factorially derived variable or a single item. Chadwick and Ward (1987) used factor analysis to derive occupational factors. Items such as “my education prepared me
for work” and “my program has a good reputation” loaded onto an occupational factor. Pike (1994) used three separate items to analyze occupational variables. These items were satisfaction with pay, satisfaction with type of work alumni were performing, and present search for employment. Prior to experiencing satisfaction in post-graduation occupational fields, alums encounter issues regarding satisfaction with perceived fit within the university community; these perceptions begin from the time alums were students and may persist until the present time.

_Satisfaction with Perceived Fit Within the University Community_

Satisfaction with classroom experiences might be measured via cognitive development, for example, course grades. However, course grades, in and of themselves, might not reflect how satisfied alums were with the course in which they received that grade. Cognitive effects of college are also transient. Bowen (1997) stated that, “most studies show that 50 to 80 percent of what is learned in courses is lost within one year” (p. 88). Affective attributes, on the other hand, appeared to have lasting impacts.

Affective factors, such as friendships formed in classrooms, have been shown to contribute to classroom satisfaction. Smart (1986) found affective values, like social integration, were a significant, indirect factor explaining satisfaction with undergraduate education for alumni in non-professional occupations. Graham and Gisi (2000) noted that affective development was impacted by “interactions with peers whose values match those of the institution and how “connected” the students feel to the campus” (p. 280).

McAlexander and Koenig (2001) conceptualized alum’s past and present relationship with their alma mater as a measure of perceived fit. Alums were asked if they enjoyed interacting with faculty (during the time of alum’s undergraduate enrollment)
and if they could recall fun undergraduate experiences to enable researchers categorize alum’s Past Relationship. Current perceptions which alums had of the university e.g., do alumni agree with the statement that the university cares about their opinions constituted Present Relationship. Participation in alumni events and donations to alma mater were also included in McAlexander and Koenig’s conceptual model to measure behavioral indicators of alumni/ae satisfaction. Pearson (1999) suggested that perceived fit was partly explained by the extent to which alums were engaged with the university and involved in the university’s activities.

While satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community might explain alumni/ae satisfaction with university experiences, within each of the three areas, demographic and profile characteristics of alumni might shed greater light on overall satisfaction. More specifically, relationships between alumni/ae satisfaction with university experiences and demographic and profile characteristics pertaining to race/ethnicity, membership in college organizations, and length of time since graduation will be examined.

Demographic and Profile Characteristics

Affective factors are especially significant in explaining how satisfied alums from minority racial groups were with their undergraduate university experiences. While the first wave of African Americans to desegregate public universities garnered lots of media attention (for example, Charlayne Hunter-Gault at University of Georgia and James Meredith at University of Mississippi), more recent enrollments of African Americans at Predominantly White institutions do not raise eyebrows, yet these alumni from minority racial groups might not have felt totally welcome at their undergraduate
institutions. Some alumni studies that have examined how satisfaction varied by racial
group identification include studies by Flowers and Pascarella (2003) and Umbach and
Porter (2002). While racial identity is a characteristic that alumni/ae cannot change,
membership or non-membership in college organizations can be altered.

Membership in college organizations includes membership in Greek and other
student organizations as well as membership in alumni organizations. Membership in
college organizations, if voluntary, may indicate perceived fit within the university
community (e.g., Hartman & Schmidt, 1995). Therefore, this study examined the
relationship between membership in college organizations and alumni/ae satisfaction
with university experiences.

The third profile aspect of respondents that was examined with regard to its
relation to alumni satisfaction with university experiences is length of time since
graduation. To examine whether responses differ by length of time since graduation,
researchers sometime use cohort studies. Comparing responses from alums who
graduated in different years is one way to measure if the university is making progress in
addressing student concerns. A problem mentioned by alums who graduated several years
ago but not mentioned by recent alums might indicate the university had addressed the
problem since the older alums graduated. It could also mean other events had eclipsed
that earlier problem. Data from graduation-year cohorts could be collected in consecutive
years; for example, Copeland, Hewson and Weiker (1998) collected data from alums of
one medical residency program in three consecutive years. Each group surveyed
graduated three years prior to the collection of the data. It would take three years to
collect data for such a study. An alternative to shorten the data collection period is to
collect data at the same time from different graduation-year cohorts (e.g., Belchier, 2002; Delaney, 2005; Johnson, 2004).

One aspect of this study is to see if there are differences by graduation year. To maximize the differences that might exist, the researcher wanted as many years as possible between dates of graduation. A four-year span was chosen because most baccalaureate degree programs can be completed within four years. While overlaps might occur in terms of student enrollment in university courses (1998 graduates might be taking classes in the same years as 2002 graduates), university experiences of those about to complete their degrees are likely to be different from experiences of those just starting their degrees.

Conceptual Framework for the Study

The conceptual framework for this study is that alums view higher education as a consumption good (e.g., Hartman & Schmidt, 1995; Chadwick & Ward, 1987; Copeland, Hewson & Weiker, 1998). An assumption of this concept is that alumni/ae, as consumers of the product (higher education), provide first-hand and reliable information about their university experiences.

Post-purchase evaluation of consumption comes from marketing models (Hartman & Schmidt, 1995). However, the parallels between satisfaction with tangible products and satisfaction with intangible products like baccalaureate education are not exact. For most tangible products where items are consumed during a short duration of time and consumers have some expectation about the nature of the product, satisfaction with product can be evaluated using disconfirmation models. Disconfirmation models explore differences between expectations and performance (Conant, Brown & Mokwa,
However, baccalaureate education is a product that is “consumed” over a long period, e.g., four undergraduate years and for which few alumni/ae have fully-formed expectations of the university experience prior to university attendance.

To evaluate satisfaction with university experiences, a consumer-satisfaction model could be amended to focus on the roles of perceived performance and perceived outcomes in explaining overall alumni satisfaction with university experiences (Hartman & Schmidt, 1995). Hartman and Schmidt discussed their rationale for not using disconfirmation models to examine alumni satisfaction by explaining that:

the commonly accepted disconfirmation paradigm may be ineffective when studying student/alumni satisfaction in a higher education setting. What is needed, instead, is a satisfaction model that is based on explanatory variables that do not depend on the formation of preconsumption comparison standards. Two variables that meet this criterion and have a demonstrable relationship with satisfaction in earlier research are perceived performance and perceived outcomes (p. 200).

“Perceived performance” pertains to relationships e.g., between alums and peers during student years, alums and faculty, and alums and undergraduate institution; “perceived outcomes” pertains to post-graduation outcomes such as occupational attainment (Hartman & Schmidt, 1995).

The conceptual model for this study allows the researcher to examine alumni satisfaction of a consumption good (baccalaureate education) in a frame where satisfaction is influenced by classroom experiences, occupational attainment, and perceived fit within the university community. Satisfaction with classroom experiences
has been conceptualized as a performance variable (Hartman & Schmidt, 1995) and a basis for past relationship with the university (McAlexander & Koenig, 2001).

Satisfaction with occupational attainment has been conceptualized as an outcomes variable (McAlexander & Koenig, 2001; Hartman & Schmidt, 1995; Chadwick & Ward, 1987) and satisfaction with perceived fit within the university community has been conceptualized as a performance variable (Hartman & Schmidt, 1995) and a basis for past and present relationship with the university (McAlexander & Koenig, 2001; Mael & Ashforth, 1992).

Need for the Study

In many alumni/ae satisfaction studies, a majority of respondents often expressed satisfaction with their undergraduate university experiences. This finding should be expected since these individuals were sufficiently satisfied to persist until graduation and in the process incurring costs for college tuition and foregoing income that could have been earned during those college years. Since alums might end up spending as much as one-third of their lives in the formal education system, Bowen (1997) argued that “personal satisfaction and enjoyment is by no means a frivolous goal” (p. 44). What is important, is not so much, “Are alums satisfied with their undergraduate university experiences education?”, but “Which factors contribute to alumni satisfaction with their undergraduate university experiences?”

Factors that contribute to satisfaction with undergraduate university experiences would be of interest to alumni relations departments as well as recruitment offices. If alumni relations officers are able to tap into particular factors that generate positive feelings from alumni/a, relationships between alums and their alma mater might be
strengthened. Such partnerships not only help in raising funds for institutions, but also increase the likelihood that alums would agree to mentor a current student, encourage a prospective student to attend their alma mater, and promote the university in their community.

Results from this study might also be of help to recruitment officers. If findings indicate that the primary motivation for enrollment is expectation of high income, recruitment officers could focus on informing potential students of the average earnings of alumni. If findings indicate that education is viewed as an end in itself, recruitment officers could focus on the non-pecuniary benefits of obtaining an education at that university.

Studies of alumni satisfaction that include examination of satisfaction with undergraduate classroom experiences are important in an age where classroom demographics are changing. It is also important to document demographic and profile characteristics of respondents to obtain a descriptive profile of the study’s participants. One area of demographic inquiry is comparing responses from alums who are racial/ethnic minorities with those from the alums who are racial/ethnic majority (Caucasian students). Examining responses by racial groups may bring to light specific concerns of the minority group that might be lost if comments by all alums were combined.

A study of satisfaction with classroom experiences is also important in an age where more classes are offered online. Perhaps there are particular factors that contribute to satisfaction with undergraduate university experiences that come mainly from physical
interactions in the classroom. In this study where several issues explaining satisfaction with classroom experiences are examined, such potential concerns were investigated.

Several studies have explored variables influencing satisfaction with university experiences; however, few have compared the relative effects that satisfaction with classroom experiences, satisfaction with occupational attainment, and satisfaction with perceived fit within the university community have on alumni/ae satisfaction with their undergraduate experiences. The links among satisfaction with classroom experiences, satisfaction with occupational attainments and satisfaction with perceived fit within the university community using a cross-sectional data stratified by college graduation year have rarely been documented.

Graham and Gisi (2000) conducted a study similar to the one undertaken in this study, but their interest was the effects of instructional climate and student affairs services on alumni satisfaction. While Graham and Gisi’s study might have implications for institutional organization – collaboration between academic and student life – this study will be more likely be of value to recruitment, retention and alumni relations efforts. For example, if colleges find out the primary motivation for enrollment is expectation of higher income, recruitment officers could focus on informing potential applicants of the average earnings of their alumni. This recruitment technique is different from the technique that would be used when college education is viewed as an end in itself. The population in Graham and Gisi’s study included alumni from different institutions – public, private, technical and two-year colleges; this study included alums from only one research-extensive public institution. While larger studies have merit, the
researcher believes that limiting the study’s population to one university will help to control variations that may arise from differences in university characteristics.

There are few existing instruments for this study. The Classroom Environment Scale (CES) developed by Moos and Trickett was designed for secondary school classrooms (Moos, 1979) and the College and University Classroom Environment Inventory (CUCEI) developed by Fraser and Treagust (1986), while tailored for college classrooms, is designed to assess a specific small seminal-type class and not a large lecture class nor a recollection of several classes. Winston et al. (1994) also noted the paucity in college classroom research. They stated that while “considerable work has been done in developing techniques for assessing classroom environments in primary and secondary schools, very little, however, has been done in higher education” (p. 11). The National Survey of Student Engagement is an agency which evaluates student engagement in college classrooms (http://nsse.iub.edu/). However, its survey is directed to current undergraduate students, and not alumni. In cases where alums were studied, most of these studies used national databases from organizations such as ACT or the Higher Education Research Institute, UCLA. These national datasets are appropriate for general studies; however, because they include data from different institutional types, their results might not typify experiences at the individual level in a particular institution. Therefore, a researcher-developed instrument was used to obtain data for this study.

Studies of Alums of the University of Missouri-Columbia

In this study, the focus was on a single institution – University of Missouri, Columbia (MU). University of Missouri-Columbia is the flagship university for the University of Missouri four-campus system and was also the first public university
established west of the Mississippi river (www.missouri.edu). The Mission Statement of the university states, “Our distinct mission, as Missouri’s only state-supported member of the Association of American Universities, is to provide all Missourians the benefits of a world-class research university” (www.missouri.edu). The MU Alumni Association conducted an exit survey of students who graduated from University of Missouri-Columbia in 2005. The survey revealed that 90 percent of the respondents rated their educational experiences as positive or very positive and 73 percent of those same respondents rated their class/academic experiences as excellent or good. Some studies of MU alums examined segments of the alumni population. For example, Roper (1999) researched patterns of alumni/ae giving by African-American alums of University of Missouri-Columbia. To date, little or no work has explored what factors contributed most to Mizzou graduates’ satisfaction with their university experiences, or how these factors differ by college graduation year. In addition, little or no work compared how factors explaining satisfaction with Mizzou undergraduate education differed among racial minority groups.

Purpose of the Study

The purpose of this study was to examine the extent to which satisfaction with undergraduate classroom experiences, with occupational attainment, and with perceived fit within the university community influence alumni satisfaction with their undergraduate experiences at University of Missouri-Columbia (MU). Moreover, this study compared alumni responses from three cohort graduation years. In order to understand issues pertaining to alumni satisfaction, a survey of MU alumni who received baccalaureate degrees in 1994, 1998 or 2002 was conducted. A four-year span between
cohort graduation years was chosen to maximize the range of college experiences that might have occurred in the intervening years. The following research questions guided this study:

Research Questions

1. Is there a significant difference between members of the predominant racial group and members of minority racial groups regarding their satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community?

2. To what extent are the three outcome variables (i.e., alumni satisfaction with undergraduate experiences, decision to attend MU again, likelihood of recommending MU to potential students) related to satisfaction with occupational attainment, with classroom experiences, and with perceived fit within the university community?

3. What combination of demographic and profile characteristics (i.e., race, membership in college organizations, time since graduation), satisfaction with classroom experiences, satisfaction with occupational attainment, and satisfaction with perceived fit within the university community explains overall alumni/ae satisfaction with undergraduate experiences?

4. What combination of demographic and profile characteristics, satisfaction with classroom experiences, satisfaction with occupational attainment, and satisfaction with perceived fit within the university community explains the extent to which alums would choose to attend MU again?
5. What combination of demographic and profile characteristics, satisfaction with classroom experiences, satisfaction with occupational attainment, and satisfaction with perceived fit within the university community explains the extent to which alums would recommend MU to potential students?

Hypotheses

The hypothesized relationships among variables are:

1. There will be a significant difference between minority racial groups and the predominant racial group in terms of their perceptions of satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community.

2. Satisfaction with university experiences will be positively associated with satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community.

3. A combination of membership in the predominant racial group, membership in college organizations, length of time since receiving a baccalaureate degree, satisfaction with classroom experiences, satisfaction with perceived fit within the university community and satisfaction with occupational attainment will be statistically significant in explaining high levels of satisfaction with undergraduate experiences.

4. A combination of membership in the predominant racial group, membership in college organizations, length of time since receiving a baccalaureate degree, satisfaction with classroom experiences, satisfaction with perceived fit within the university community and satisfaction with occupational attainment will be
statistically significant in explaining the extent to which alums would choose to attend MU again.

5. A combination of membership in the predominant racial group, membership in college organizations, length of time since receiving a baccalaureate degree, satisfaction with classroom experiences, satisfaction with perceived fit within the university community and satisfaction with occupational attainment will be statistically significant in explaining the extent to which alums would chose to recommend MU to potential students.

Research Design

Data for this study were obtained from alumni of a single research extensive university. Alums who graduated with baccalaureate degrees in 1994, 1998, or 2002 comprised the study’s population. The sampling frame was a list obtained from the Mizzou Alumni Association (MUAA) and containing names and addresses of alumni. The data were collected via a survey mailed to a computer-generated random selection of alumni. The data were analyzed using quantitative methods and analysis included analysis of variance (ANOVA), correlations, factor analysis and multiple regressions.

Definition of Key Terms

In this study, the following definitions were applied:

1. *Satisfaction with Undergraduate University Experiences*: The extent to which alums are satisfied with their academic, social and overall experiences at University of Missouri-Columbia. Hartman and Schmidt (1995) explained the definitions of alumni/ae satisfaction as:
Satisfaction has been operationalized as a positive response to the question of whether the student would attend the college again (Abrahamowicz, 1988; Schmidt, Debevec, and Comm, 1987), the student’s willingness to recommend the school to others (Chadwick and Ward, 1987; Schmidt, 1991), and a general overall measure of satisfaction (Garland and Westbrook, 1989; Hearn, 1985) (p. 203).

Three separate outcome models were used to explain alumni/ae satisfaction. The outcome variables for each of the three regression models are:

1. Satisfaction with overall undergraduate experience
2. Would you choose to attend MU if you had to make the decision again? and
3. Would you recommend MU to potential students?

2. Satisfaction with Undergraduate Classroom Experiences: The extent to which alums are satisfied with various aspects of their undergraduate classroom experiences. These experiences will include satisfaction with relationships formed in the classrooms, class size, exposure to new ideas and quality of instruction. This variable will be constructed using factor analysis on survey items that comprise the area of satisfaction with classroom experiences. After factor analysis, some of the items might emerge as single items for the model while others might load onto a factor.

3. Satisfaction with Occupational Attainment: Satisfaction with occupational attainment is the extent to which alums are satisfied with their present occupation, salary, the length of time it took to obtain present position, potential for occupational advancement, and overall progress made since graduation. This variable will be constructed using factor
analysis on six survey items that comprise the area of satisfaction with occupational attainment.

4. *Satisfaction with Perceived Fit within the University Community*: Satisfaction with perceived fit within the university community is the extent to which alums are satisfied with their past relationships with others in the university community e.g. with peers and faculty members and the desire to continue a relationship with people connected with the university. Items will be factor analyzed to form independent variables for the regression model. Some of the items might emerge as single items for the model while others might load onto a factor.

5. *Alumni/ae*: Graduates of University of Missouri-Columbia (MU) who received baccalaureate degrees in 1994, 1998, or 2002. Some of these alums may have attended other institutions prior to transferring to MU to complete their baccalaureate programs while others may have attended only MU for their baccalaureate degree.

**Limitations**

The data that was used in this study included responses from alums who graduated from different colleges within the same university. These colleges are not homogeneous in their academic reputation and there might be a “halo effect” of a college’s reputation upon responses from those who graduated from highly-ranked programs. In multi-university studies, “halo effects” have sometimes distorted the meaningfulness of the collected data (Brooks, 2005). In this study, residual satisfaction is of investigative interest and the researcher hopes that the high expectations students might have had of highly-ranked programs would counterbalance halo effects in reporting of satisfaction with educational experiences from that program.
Self-reported data have a limitation in that there might be a discrepancy between words and deeds. For example, in a study by Karp and Yoels (1994), male and female students said the sex of the teacher did not influence the amount of their classroom participation. However, when the authors used observation of classroom behavior in addition to the student self-reported data, they found that in male taught classes, male students accounted for a disproportionately larger percentage of the students participating in discussions. Mael and Ashforth (1992) listed reliance on self-reports as a limitation of obtaining alumni/ae data; however, they tempered that limitation by noting that while alumni might not have perfect recollections of past events, “it is perceptions that are of interest” (p. 118).

Another limitation of this study is that data were collected from only one institution. Thus, findings might not generalize to other institutions.

Summary

In this chapter, a rationale for examining the extent to which satisfaction with undergraduate classroom experiences, with occupational attainment, and with perceived fit within the university community influence alumni/ae satisfaction with their undergraduate experiences at MU was presented. First, the topic of “alumni/ae satisfaction with their university experiences” was introduced. Second, the conceptual framework of alumni view education as a consumption good was explained. Third, need for the study and purpose of the study were presented. Research questions, hypotheses guiding the study, and proposed research design were presented next. Key terms were defined and limitations of the study were noted. In Chapter Two, the literature and conceptual framework that pertains to alumni satisfaction studies will be presented.
CHAPTER TWO
Review of the Literature and Conceptual Framework

Introduction

The purpose of this study was to examine the extent to which satisfaction with undergraduate classroom experiences, with occupational attainment, and with perceived fit within the university community influenced alumni/ae satisfaction with their undergraduate experiences at University of Missouri-Columbia (MU). In this chapter, a review of literature pertaining to alumni/ae surveys is presented first. Then, literature on the three substantive areas of satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community is reviewed. After the review of literature on the three substantive areas, literature on research methods is presented.

Studies on Alumni/ae Satisfaction

Studies on alumni/ae satisfaction started in the 1930s, first with a focus on cognitive college outcomes, and later with an investigation of affective outcomes of college (Graham & Cockriel, 1989). Before the 1930s, most college graduates graduated from private colleges and universities, which as private institutions did not have the pressure of public accountability (Pace, 1979). Beginning in the 1930s, a few public universities began to conduct alumni surveys of their graduates. One of the first public universities to survey its graduates regarding alumni/ae satisfaction was the University of
Minnesota (Pace, 1979). In the initial 1937 survey of baccalaureate alums of its university, University of Minnesota included survey questions regarding alum’s satisfaction with occupational attainment. Some of the survey questions pertained to satisfaction with occupational level, opportunities for advancement at present job, satisfaction with income, and how closely related the graduate’s job was to the graduate’s college major.

The initial alumni/ae studies were not always conducted by educational institutions. The U.S. Office of Education conducted a national study of university alums who graduated between 1928 and 1935 and Time magazine conducted a national study of university alums in 1947 (Pace, 1979). Time magazine contacted 17,000 baccalaureate alums who graduated from one of the 1,000 participating colleges and universities for their study. All of those contacted for the Time study had last names beginning with “Fa”. Items on the Time survey included questions about satisfaction with classroom experiences, with occupational attainment, and with other college experiences (Pace, 1979).

Alumni/ae satisfaction questionnaires have included questions regarding cognitive and affective satisfaction. In one of the early alumni/ae surveys, a question regarding sense of attachment to their alma mater was included in the questionnaire (1950 survey of alumni of the University of California, Los Angeles, in Pace, 1979). Alumni/ae studies are useful to institutional research offices, alumni associations, and university departments in charge of preparing institutional performance reports (Kuh, 2005). Different sections of alumni reports will be pertinent to different campus constituents. While admissions office may find the section on satisfaction with occupational
attainment useful in recruiting, academic departments may find the section on satisfaction with classroom experiences useful in pedagogy (Moden & Williford, 1988).

From a review of the literature, Dunn (1988) noted that these areas needed to be covered in the alumni survey in order to elicit robust and useful findings: sense of belonging to the institution, occupational satisfaction, loyalty to the institution, level of involvement in institutional activities, interest in getting university updates and alumni donations. Dunn also mentioned that cohort studies were important in documenting changes over time by the university.

Alumni/ae studies that originate from a specific institution are useful in determining the institutional factors that influence satisfaction. Kuh (2005) was in favor of local surveys as analyses of these local studies would detect institutional characteristics promoting alumni satisfaction that global studies would miss.

Demographic and profile characteristics of respondents were sometimes used to investigate differences in patterns of alumni/ae satisfaction. For example, the profile characteristic “membership in college organizations” was considered a measure of social integration in a model postulated by Smart (1986). Smart’s study was restricted to 4,626 alumni who were employed full time in 1980. In Smart’s model, social integration was a three-item variable consisting of whether an alumnus knew a professor or administrator personally, was president of one or more student organizations, and served on a university or department committee.

Another study that discussed differences in profile characteristics of respondents with regards to their relationship to alumni/ae satisfaction was conducted by Chadwick and Ward (1987). From a review of literature, Chadwick and Ward found that alums who
were members of alumni associations reported greater satisfaction with their university experiences than nonmembers of alumni associations.

In yet another study of alumni/ae demographic profiles, Roper (2001) studied Black alums of University of Missouri-Columbia in regard to how their perceptions of the university influenced their decision to donate to the institution. From analysis of responses of 141 Black alums randomly selected for the study, Roper concluded that donors did not significantly differ from non-donors in terms of their perceptions of the quality of the institution and their relationship with other alums.

Several studies have explored variables which influence satisfaction with university experiences; however, few have compared the relative effects that satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community have on alumni/ae satisfaction with their undergraduate experiences. The links among satisfaction with classroom experiences, with occupational attainments and with perceived fit within the university community using a cross-sectional data stratified by college graduation year has rarely been documented.

In this chapter, literature pertaining to the influences of satisfaction with undergraduate classroom experiences, with occupational attainment, and with perceived fit within the university community on alumni/ae satisfaction with university experiences will be reviewed. Afterwards, literature on the conceptual framework for the study and literature on using cohort studies to compare alumni/ae satisfaction for different graduation years will be presented.
Satisfaction with Undergraduate Classroom Experiences

The college classroom is the focal point of students’ academic experience. Blake (1979) noted that “in a college or university, the formal curriculum is the reason the students are there” (p. 281). While experiences in areas outside of the classroom might be instrumental in explaining students’ satisfaction with their college experience, the center of that satisfaction base is the classroom. The college classroom is a microcosm of the academic institution and often students’ experiences in the classroom closely relate to their experiences in society. For example, a student who is often the first to volunteer to spearhead a class project often turns out later to be a group leader in the office setting. In the college classroom, most aspects of the educational experience are nurtured. In addition to the academic experience, social and character-development occur in the classroom. The classroom, because it is considerably smaller than society, is more malleable than the outside world. Thus, it is important to understand how the experiences that occurred in the college classroom influence alumni satisfaction with their university experiences.

Volkwein and Cabrera (1998) investigated factors that influenced student satisfaction with classroom experiences. They surveyed 740 representative undergraduates who started studies at one large public university as freshmen (i.e., no transfer students were in the sample). The authors found relationships with faculty -- perception of faculty concern and faculty engagement with students and variables measuring student effort were the strongest indicators of satisfaction with classroom experiences. Slightly contradicting Volkwein and Cabrera’s study were several studies (e.g., Cornelius, Gray & Constantinople, 1990; Miglietti & Strange, 1998; Fassinger,
that found that, while faculty played a role, faculty behavior was not as significant as self-concept and relationship with peers in explaining satisfaction with college classroom experiences.

One aspect of satisfaction with classroom experiences is the nature of participation in the classroom. Auster and MacRone (1994) noted that faculty pedagogical patterns, e.g., calling students by name, providing positive reinforcement to students who were speaking, allowing students time to respond to a question, and calling on students even when they did not volunteer to speak led to high levels of class participation by students. Academic involvement during undergraduate student years was positively correlated with alumni satisfaction with undergraduate classroom experiences (Astin, 1977).

Demographic characteristics of classroom participants, e.g. students’ racial groups, are also factors affecting satisfaction with university experiences. Studies by Allen (1992) have shown that classroom experiences of African Americans attending Predominantly White institutions are often less satisfying than those of their White peers.

Interaction with faculty has been shown to be the second strongest factor influencing alumni to recommend their alma mater to potential students (Chadwick & Ward, 1987). In a recent study that compared responses from different cohort graduation years, Delaney (2005) collected data from graduating seniors who attended one private college and graduated in 1997, 1998, 1999, or 2001. A total of 970 responses were collected from these four graduation years and a trend analysis of the data showed that the strongest predictor of overall satisfaction with the college experience was perception of academic development.
Graham and Gisi (2000) placed particular emphasis on the extent to which satisfaction with classroom experiences influenced alumni satisfaction with overall undergraduate experiences. Graham and Gisi’s research utilized data from the ACT Alumni Outcomes Survey. The dataset they used contained responses from 20,777 alumni who graduated between 1992 and 1996 and who had indicated that the highest degree they received from the sampled universities was a baccalaureate degree. Response rate for the study was 30 percent; a rate the researchers considered consistent with alumni response rates. Graham and Gisi’s research model consisted of two independent variables: one was a composite score of satisfaction with variables connected with the classroom, they called this variable “satisfaction with instruction;” the other was “satisfaction with student services.” The two independent variables were comprised of items that emerged from Factor Analysis – Principal Components, varimax (orthogonal) rotation. The dependent variable was a composite of three satisfaction scores pertaining to: Would alumnus attend alma mater if alumnus could begin again, alumnus’ rating of the university, and likelihood of alumnus recommending alma mater to friends. The combined score on these three items was termed “overall college rating.” One of the findings of the study was that while satisfaction with instruction and satisfaction with student services were both statistically significant in explaining overall alumni satisfaction, satisfaction with instruction exerted a greater influence on alumni satisfaction than satisfaction with student services.

Similar to findings by Graham and Gisi (2000), Gallo and Hubschman (2003) found a relationship between satisfaction with classroom experiences and alumni satisfaction with university experiences. Gallo and Hubschman hypothesized that
satisfaction with past university experiences, e.g., classroom experiences, served as motivation for future university experiences e.g., participation in alumni activities and alumni donation to alma mater. Analysis of data by Gallo and Hubschman (2003) revealed that satisfaction with classroom experiences was a variable that was statistically significant in explaining alumni satisfaction with university experiences. While literature on satisfaction with classroom experiences sheds some light on antecedents of alumni satisfaction with overall university experiences, literature on satisfaction with occupational attainment sheds light on subsequent satisfaction after receiving a baccalaureate degree.

Satisfaction with Occupational Attainment

The seminal study about occupational attainment was done by Blau and Duncan in 1967 (Smart, 1986). In Blau and Duncan’s model, occupational status attainment was a function of the individual’s background and subsequent experience in various environments. In 1961, Duncan had developed a classification system to rank occupational status. Duncan’s model, with some refinements to include new occupations that have developed since the 1960s, is still being used to measure occupational status achievement.

Studies of alumni/ae satisfaction with occupational attainment intensified in the 1970s due to the high unemployment levels that existed at that time (Pace, 1979). Some studies were of graduates of private colleges while others were of graduates of public institutions.

Findings from a study of 1999 and 2001 alums of one private college located in the Northeast United States revealed that the most significant predictor of alumni/ae
satisfaction with their undergraduate university experience was the university’s preparation of students for future careers (Delaney, 2004). Astin (1993) found an increase in the number of students attending college for career-related reasons. More specifically, Astin stated that in 1976, 71 percent of entering first year college students indicated that getting a better job was a very important reason for attending college; by 1991, the percentage citing “very important” had risen to 79 percent.

Another occupational-related variable that emerged as statistically significant in explaining alumni/ae satisfaction was value of the degree in the job market. From a review of literature, Hartman and Schmidt (1995) found “value of degree in the job market” the most significant variable explaining why alums recommended their alma mater to potential students.

The university satisfaction-satisfaction with occupational attainment link was also explored by McGuire and Casey (1999). McGuire and Casey explained that one prompting for their study was anecdotal discussions that college graduates were “flipping burgers.” The researchers conducted a statewide study of alums who graduated in 1990 (five years prior to the study) from one of 46 independent colleges in Pennsylvania. All alums who graduated in 1990 from institutions with 360 or fewer graduates were contacted and a random selection of 360 was contacted from institutions with more than 360 graduates in 1990. The total number of responses for the study was 11,108. Analysis was descriptive in nature and findings include: 62 percent of respondents had given at least one alumni donation since they graduated, 96 percent were satisfied or very satisfied with their undergraduate experiences and 79 percent had recommended their alma mater to potential students in the prior five years. With regard to satisfaction with occupational
attainment, McGuire and Casey inferred that “most alumni did not step into their dream job right after graduation” (p. 29).

Pike (1994) conceptualized satisfaction with occupational attainment as consisting of three items: satisfaction with type of work, satisfaction with pay, and a search for another job at the time the survey was completed. Pike (1994) conducted a longitudinal study of 828 University of Tennessee alums. These alums were first surveyed in 1988 when they were seniors and were later surveyed two years after graduation in 1990. The findings of the survey revealed that a three-way interaction effect between gender (female), satisfaction with pay and satisfaction with college experience was a significant factor explaining alumni/ae satisfaction. Pike also cited findings from an earlier study he conducted that showed “Alumni who were satisfied with their jobs were likely to be satisfied with their college experiences, while alumni who were not satisfied with their jobs tended to be dissatisfied with college” (p. 107). The personality attributes of alums who were ranking various areas of satisfaction was also highlighted by Volkwein and Zhou (2003) who surmised that there was a “direct connection between job satisfaction and personal characteristics” (pp. 152-153).

Another study of alumni/ae satisfaction with occupational attainment was of alums who graduated ten years or more prior to the time they participated in the study (study by Volkwein and Bian, 1999). Volkwein and Bian mailed a survey packet to 4,000 alumni of State University of New York at Albany. Volkwein and Bian received 1,7000 completed responses for a response rate of 42 percent. Analysis of the data revealed that satisfaction with occupational attainment was the most important variable explaining alumni/ae decision to attend the same institution if they could make the
decision again. Precollege characteristics were not significant in Volkwein and Bian’s study which prompted the statement that “what happens to students on campus is far more consequential than the baggage they bring with them” (p. 126). Volkwein and Bian also refined their study to differentiate between satisfaction with intrinsic areas of jobs (e.g., interest in work and feelings of accomplishment) and satisfaction with extrinsic areas of jobs (e.g., salary and job security). Research findings were that alums were more satisfied with intrinsic aspects of their jobs than they were with extrinsic areas of their jobs. In another study differentiating between intrinsic job satisfaction and extrinsic job satisfaction, Volkwein and Zhou (2003) suggested that overall satisfaction with occupational attainment was comprised of satisfaction with working environment (e.g., perceptions of job stress, teamwork and job security) and satisfaction with job (extrinsic aspects, intrinsic aspects and interpersonal relations).

Some studies of occupational satisfaction have focused on differences in occupational experiences of men and women. Delaney (2000) conducted a survey of MBA graduates of Babson College who graduated in 1997. A t-test of responses of 224 alumni of the MBA program revealed that women had annual salaries that were on average $6,913 lower than those of their male peers. Women MBA graduates reported more workplace challenges with managing subordinates and working with supervisors than did male MBA graduates. In another study of business students, Chadwick and Ward (1987) received responses from 290 alumni who received business degrees in 1984 from one large university located in the Midwest United States. One of the findings of their study was the variable that was most significant in explaining why alumni would
recommend their university to others was the perceived value of the degree in the job market.

Another cohort study was conducted by Keyes and Hogberg (1990). The researchers wanted to know to what extent alums with undergraduate psychology majors were using the academic content of their baccalaureate degrees. These researchers received completed responses from 309 alums who graduated between 1967 and 1986. The responses were divided into two categories based on graduation year: 1967-1976 and 1977-1986. Analyses of the completed surveys revealed that alums in the 1967-1976 cohort were more likely to work in non-psychology related occupations than in psychology-related occupations. Another finding of the study was that women were more likely to work in psychology-related occupations than in non-psychology related occupations and women were also more likely than male majors to pursue and obtain graduate degrees in psychology.

To measure satisfaction with occupational attainment, researchers have included ‘relationship of job to major’ as a variable in the model (Mishler, 1983). In a study conducted in 1981 of baccalaureate alums of the University of Wisconsin system, Mishler found a positive relationship between satisfaction with university experiences and satisfaction with occupational attainment. Another aspect of overall satisfaction with university experiences, which focuses more intensively on affective satisfaction than do satisfaction with classroom experiences and satisfaction with occupational attainment, is satisfaction with perceived fit within the university community.
Satisfaction with Perceived Fit Within the University Community

Satisfaction with university experiences includes much more than satisfaction with academic experiences. Affective experiences are also an important component of alumni satisfaction. Noting the importance of affective satisfaction, Placier, Moss and Blockus (1992) stated that “the college experience means more than absorbing academic content and skills, and consequently acquiring a high-paying job” (p. 463). Perceived fit includes fit between alumni and college majors (Nafziger, Holland & Gottfredson, 1975), alumni and professors (Morstain, 1977) and alumni and peers (Hartman & Schmidt, 1995). Fit was sometimes viewed as integral to satisfaction with the academic environment. In a definition of teaching, Walker (1971) stated that teaching was “the interaction of the personality of the instructor with the personality of the group being taught and with the personalities of the individual members of that group in accomplishing the teaching-learning goals decided upon” (p. 37). In addition to fit between professors and students, fit between student and peers was integral to alumni satisfaction. From a review of literature, Hartman and Schmidt (1995) found “student’s interaction with peers had the strongest effect on satisfaction” (p. 204). In another comment about the effect of peer groups, Astin (1993) stated: “one generalization seems clear: student’s values, beliefs, and aspirations tend to change in the direction of the dominant peer group” (p. 398).

The theoretical concept for studying perceived fit comes from organizational identification and social identity theories (Mael & Ashforth, 1992). Mael and Ashforth defined social identity as “the perception of belongingness to a group classification” (p. 104) and they viewed organizational identification as a form of social identification. In a
continuum model of alumni identification with their alma mater, Mael and Ashforth proposed that there were antecedents of organizational identification (e.g., recency of attendance and good mentor relationship with a faculty member) and consequences of identification (e.g., alums donations to alma mater, alums becoming mentors to current students and alums participation in university functions). It should be noted here that Mael and Ashforth’s terminology of “consequences of identification” and their use of the term is consistent with other researchers’ use of behavioral indicators of alumni satisfaction with university experiences. In Mael and Ashforth’s model, consequences of identification were dependent variables and satisfaction with university’s contribution to the alumni’s goals was the independent variable. The sampling frame for Mael and Ashforth’s study was a list of alumni who graduated from one college located in the northeast United States. Out of the 700 alumni who were randomly selected for the study, 297 returned usable responses. One of the findings of the study was that perception of fit was statistically significant in explaining why alumni would advise others to attend their alma mater while number of years since graduation and mentor relationship were not statistically significant in explaining satisfaction.

Ness (2003), from a study of alums from five universities and seven community colleges in the state of Tennessee, found that involvement in school-sponsored social activities was positively associated with alumni/ae satisfaction with university experiences. Hartman and Schmidt (1995) also found literature that suggested alums who were members of college organizations had alumni/ae satisfaction ratings that were significantly higher than satisfaction ratings of alums who were not members of college organizations.
Involvement in college-affiliated activities, as a variable explaining alumni/ae satisfaction with university experiences, was not limited to involvement during one’s undergraduate years. Involvement might have started during the time alums were undergraduate students but involvement could also continue as a graduate of the university. Hartley and Berkowitz (1983) examined how membership in alumni associations was related to satisfaction with university experiences. Hartley and Berkowitz mailed a survey to 1,941 graduates of one Midwestern university who lived within close proximity of their alma mater. Hartley and Berkowitz explained that the geographical restriction was made to reduce bias that might occur from non-participation in university events that might have occurred from living physically far away from the university campus. All of the selected participants graduated between 1974 and 1979. The sampling frame was stratified by membership in the university’s alumni association. All 850 alumni association members (who graduated between 1974 and 1979 and lived within the prescribed geographical area) were contacted and a computer-generated random selection of non members of the alumni associated was selected for participation. The overall response rate for the study was 44 percent. Some of the findings of the study were: alumni association members had a significantly higher rate of satisfaction with university experiences (expressed as “My experiences as a student at the university was enjoyable”) than nonmembers, and alumni association members were more likely than non members to have participated in college organizations during their student years.

While Hartley and Berkowitz (1983) examined alumni behavior in terms of membership in the alumni association, Gwinner and Beltramini (1995) examined behavior in terms of the likelihood of alumni participating in university activities. Alums
from one large university were contacted for Gwinner and Beltramini’s study, and 491 of
the alums returned completed questionnaires. The relationship between likelihood of
participation in university events and satisfaction with university experiences was
examined. Using the procedure of correlational analysis, the researchers found a positive
correlation between how likely alums were to participate in university activities and
alumni/ae satisfaction with university experiences.

Alums who felt a sense of fit within the university community were likely to be
satisfied with their university experiences (Delaney, 2004; Thomas & Galambos, 2004).
Using a large dataset of 1,698 students attending one public university, Thomas and
Galambos found that ‘sense of belonging’ was the most important variable explaining
students’ overall satisfaction with their educational experiences.

McAlexander and Koenig (2001) studied a continuum of perceived fit with the
university community - from past relationships with the university during the time an
alumnus/alumna was an undergraduate student to present relationships with the university
now that the alumnus/alumna was as a graduate of the university. To model the
relationship with the university, McAlexander and Koenig included variables such as
alumni/ae donations, recommending university to potential students, participating in
alumni events and responses to affective statements like “The university cares about my
opinions questions” in their conceptual framework. “Past Relationship” with the
university was derived from responses to statements regarding past relationships e.g.,
interactions with faculty. “Present Relationship” with the university was derived from
five items regarding alumni’s current perceptions of affective satisfaction with the
university. Statements such as “The college understands my needs” and “The college
cares about my opinions” were used to conceptualize Present Relationship. Recall of fun
times during baccalaureate student years, recall of academically challenging classes and
cohort graduation year were included as independent variables in McAlexander and
Koenig’s research model.

In order to conduct the study regarding alumni/ae relationship with the university,
McAlexander and Koenig (2001) contacted 481 alums who graduated from one western
university three to eight years prior to the time of survey. The 481 respondents
represented 43 percent of those who were contacted for the study. In the first model,
Present Relationship was considered a dependent variable while Past Relationship, Fun
experiences, challenging classes and cohort graduation year were considered independent
variables for the regression model. Present Relationship and Past Relationship were both
derived from Factor Analysis. In the second model, alumni/ae behavior, e.g., donating
money to alma mater and recommending university to others were treated as dependent
variables while Present Relationship, Past Relationship, fun university experiences,
challenging classes and cohort graduation year were treated as independent variables.
One of the findings from the second model was that with regard to alumni/ae donations,
the most significant variable explaining alums’ decision to donate was a recall of fun
university experiences; the second most significant variable was Present Relationship and
third in the degree of significance was graduation year. The longer it had been since the
respondent graduated, they more likely it was that alums would donate to their alma
mater. Past Relationship and challenging classes were not statistically significant in
explaining donations by alums to their alma mater. In another study in which cohort
graduation year was included as a variable in the research model, Delaney (2004) found
that alums who graduated with baccalaureate degrees in 1999 reported significantly higher rates of satisfaction with affective areas of satisfaction than alums who graduated in 2001.

Monks (2003), in a finding similar to McAlexander and Koenig’s (2001) findings, noted a relationship between alumni donations and alumni satisfaction with university experiences. Monks was more dollar-specific than McAlexander and Koenig (2001) in defining alumni donations. While McAlexander and Koenig did not specify the amount donated, Monks used the dollar value of donation as the dependent variable in the regression model. Another difference between Monk’s and McAlexander and Koenig’s study was that while McAlexander and Koenig limited their data to alums from one university, Monks included 10,511 alums from 28 universities in the study. The sampled alums in Monks’s study graduated in 1989, ten years prior to the time the study was undertaken, and they represented 41 percent of those contacted for the study. In Monks’s regression model, alumnus’s income, household income, race, satisfaction with undergraduate experiences, and participation in college organizations were independent variables. One of the findings of the study was that “respondents who reported that they are “very satisfied” with their undergraduate experience gave over 2.6 times as much to their alma mater as graduates who were “ambivalent”, “generally dissatisfied”, or “very dissatisfied” (p. 126). More emphatically, Monks stated that “the single biggest determinant of the generosity of alumni donations is satisfaction with one’s undergraduate experience” (p. 129).

Pearson (1999) also found evidence to support a relationship between alumni/ae satisfaction with university experiences and alumni/ae donations. However, Pearson
stated satisfaction was not a sufficient reason to explain alumni/ae donation as evidence showed “satisfaction is a necessary but not sufficient condition for giving” (p. 8). Pearson explained that a variable that was as important as satisfaction with university experiences in explaining alumni donations was alumni satisfaction with perceived fit with the university. Perceived fit could be measured partly by alumni’s desire to be engaged in the activities of the university (Pearson, 1999).

In another study linking alumni/ae donations to alumni/ae satisfaction with university experiences, alums’ satisfaction with university experiences was found to play a less significant role than family income in predicting status of alumnus/a as a donor to their alma mater. Taylor and Martin (1995) started with a study population of 37,000 alums who graduated between 1975 and 1985 from one research-extensive university. Out of the study population, a random sample of 250 donors to the university and a random sample of 250 non donors to the university was drawn. One of the research purposes of Taylor and Martin’s study was to extract characteristics that distinguish donors from non donors. From the sample of 500, 371 surveys were usable. The statistical procedure of Discriminant Function Analysis was used to predict donor status. Independent variables in the model included satisfaction with university experiences, satisfaction with preparation for first job after graduation, membership in college organizations, involvement in alumni activities, reading alumni publications and income. The Discriminant Function Analysis procedure correctly predicted 65 percent of the cases. One of the findings of the study was that while involvement with the university after graduation, membership in Greek organizations, and reading alumni publications
were significant in predicting group (donor/non donor) membership, income was the most statistically significant predictor of donor status.

Satisfaction with University Experiences

Three outcome variables will be used to guide this study:

1. Satisfaction with overall undergraduate experience (items 1, 15, 16 & 17 in Appendix A)

2. Would you choose to attend MU if you had to make the decision again? (item 12 in Appendix A)

3. Would you recommend MU to potential students? (item 13 in Appendix A)

These three variables are widely used in alumni studies, sometimes as single variables and sometimes as a combined variable measuring one single construct. Hartman and Schmidt (1995) explained the definition of alumni satisfaction as:

Satisfaction has been operationalized as a positive response to the question of whether the student would attend the college again (Abrahamowicz, 1988; Schmidt, Debevec, and Comm, 1987), the student’s willingness to recommend the school to others (Chadwick and Ward, 1987; Schmidt, 1991), and a general overall measure of satisfaction (Garland and Westbrook, 1989; Hearn, 1985) (p. 203).

Graham and Gisi (2000) used a composite score of responses to three questions (If you could begin again, would you attend this school? Overall, how would you rate this school? And, would you recommend this school to a friend or acquaintance?) to measure alumni satisfaction. Graham and Gisi found that the two factors that were of interest to them, satisfaction with instruction and satisfaction with student services, were both
statistically significant in explaining alumni satisfaction; however, satisfaction with instruction was more significant than satisfaction with student affairs services.

Similar to Graham and Gisi’s approach of combining scores from different items to form one outcome variable, Pike (1994) conceptualized satisfaction with overall undergraduate experience as a combined score on ratings of satisfaction with academic, social, and overall undergraduate experiences. Using a cross-tabs between overall satisfaction rating, demographic information and various aspects of satisfaction with occupational attainment, Pike found a three-way statistical significance among variables of interest; “specifically, the effect of satisfaction with pay on alumni ratings of college experiences was greater for women than men” (p. 119).

McAlexander and Koenig (2001) conceptualized alumni/ae satisfaction as the response to the question of would you recommend this institution to others? In their findings, McAlexander and Koenig discussed that recall of fun experiences was the most important predictor of desire to recommend alma mater to others. Mael and Ashforth, in a methodology similar to McAlexander and Koenig’s, conceptualized alumni/ae satisfaction as the response to the question of would you advise others to attend your alma mater? Findings from Mael and Ashforth’s study revealed that the most significant predictors of willingness to recommend alma mater were organization identification (how closely alumnus/a identified with institution) and organizational prestige (how others perceived institution). Also using the outcome variable of willingness to recommend alma mater to others, Chadwick and Ward (1987) found variables that were most significant in explaining recommending university to others were value of degree in the job market and instructional interaction with faculty.
Also using a single construct for the outcome variable, but this time, using responses to the question of willingness to do it all again, Volkwein and Bian (1999) found that “precollege and postcollege experiences had a relatively minor influence” (p. 125) on the outcome variable, and it was satisfaction with academic experiences and perceived personal growth that were the most important predictors of willingness of alumni to attend the same institutions again.

In the preceding sections, literature on alumni studies was presented. First there was an explanation of how alumni/ae studies had developed and next, literature on satisfaction with classroom experiences, satisfaction with occupational attainment and satisfaction with perceived fit within the university community was presented. Outcome variables for the study were also explained. The conceptual models that have been used to frame alumni studies will be presented next.

Conceptual Framework for the Study

Alumni researchers at times use literature from survey research, marketing or fund raising (Melchiori, 1988; Hartley & Berkowitz, 1983). One widely used conceptual model in alumni research is outcomes model (e.g., model by Volkwein & Bian, 1999). Satisfaction with undergraduate classroom experiences, satisfaction with occupational attainment and satisfaction with perceived fit within the university community are considered outcomes. Further refinement of outcomes includes a differentiation between cognitive and affective outcomes (Pascarella & Terenzini, 2005). This study will focus on the affective outcomes of a baccalaureate program.

The theoretical concept used to frame this study is the viewing of higher education as a consumption good (e.g., Hartman & Schmidt, 1995; Chadwick & Ward,
If higher education is viewed as a consumption good, feedback from one group of consumers (alums) would be vital to maintaining and improving the product (higher education). Alumni surveys would be one avenue through which alumni could provide information about what they valued about their education and which services they wanted to be maintained. This is important in an era of budget cutting where student services might be reduced. An overwhelming response in favor of a service the university provides may persuade decision-makers to keep the service. If alumni are provided opportunities to inform their alma mater about what services to keep or change, consumer (alumni) satisfaction might increase. Comments from satisfied alumni are also useful as a marketing device. Gwinner and Beltramini (1995) explained that during the 1980s, when declining enrollments led to more competition for students, institutions resorted to greater use of alumni satisfaction surveys to obtain more input from satisfied consumers (alums) that could be used to recruit new students. Consumer satisfaction, in terms of higher education, can be assessed from perceived performance and perceived outcomes (Hartman & Schmidt, 1995). “Performance” is a result of interaction between students and agents associated with the university; in various researches, performance has included quality of effort, classroom experiences, and social integration (Hartman & Schmidt). “Outcome” is an end result that could include better jobs (Hartman & Schmidt). Information about perceived performance and perceived outcomes can be obtained from alumni. Hartman and Schmidt (1995) noted there were few studies that used the performance→satisfaction concept compared with studies that used performance→outcome concepts.
After some years in the workforce, alums are also in a position to provide information about how the university could improve the product. From their work experiences, alums could understand what the university could do to better serve students. Alumni surveys provide an avenue for alums to inform universities about product (university) satisfaction and the alumni surveys “provide a basis for evaluating how well the knowledge and skills developed through the educational programme relate to knowledge and skills required in the workplace” (Delaney, 2000, p. 139). Chadwick and Ward (1987) encouraged educational institutions to emulate private industries which had for a long time spent great effort soliciting consumer input to improve products.

One of the first studies to postulate a sequence of relationship among variables of interest was developed in 1969 by Chickering (Smart, 1986). In Chickering’s model, college impact is a function of “initial or preenrollment characteristics of students, structural and organizational attributes of institutions of higher learning, and interaction between students and the primary agents of socialization on campus (i.e., faculty and students)” (Smart, p. 75). Chickering’s model helps a researcher to postulate a conceptual map which links students’ background characteristics, institutional factors including their effect on students’ experiences, and college outcomes. One hypothesis about the relationship between variables was a causal sequence. Smart (1986) hypothesized precollege student characteristics → (influenced) undergraduate institution characteristics → collegiate performance and experiences (academic integration, college satisfaction, social integration) → educational attainment → occupational status of first job → occupational status of current job. Hartman and Schmidt’s (1995) conceptual model of alumni satisfaction was: performance, e.g., intellectual environment and career...
preparation \(\rightarrow\) (influenced) outcomes, e.g., personal skills and career skills \(\rightarrow\) (influenced) alumni satisfaction. An additional aspect of Hartman and Schmidt’s model was a direct link between performance and satisfaction. A comparison of the two models shows they are both performance-outcome-satisfaction models with an additional performance-satisfaction link in Hartman and Schmidt’s model.

A third outcomes model that was also based on a causal sequence was by Astin (1991). Astin postulated an input-environment-outputs model. “Environment” was described by Astin to include “the student’s actual experiences during the educational program” (p. 18). Astin also pointed out that while a taxonomy classifying outcomes as cognitive or affective, and as psychological or behavioral was useful in understanding college outcomes, overlaps occur in outcomes.

In a further refinement of an outcomes model, Volkwein and Bian (1999) conceptualized demographic and profile characteristics (age, ethnicity, gender, family encouragement, high school academic achievements, and career goals) \(\rightarrow\) (influenced) college experiences (classroom experiences, social integration, institutional integration) \(\rightarrow\) educational outcomes (academic and personal) \(\rightarrow\) alumni outcomes (satisfaction with occupational attainment, alumni giving).

To analyze the effect of time on alumni/ae satisfaction, some researchers included cohort graduation year as a variable in alumni satisfaction models (McAlexander & Koenig, 2001; Keyes & Hogberg, 1990; Belcheir, 2002; Delaney, 2004). Delaney (2004) conducted a study of 522 baccalaureate alumni of one college in the United States. The surveyed alums graduated in 1999 or 2001. Using a research method involving t-tests
and analyses of variances, Delaney found that the earlier graduates were more satisfied with their baccalaureate university experiences than the more recent graduates.

Research Methods Used to Examine Alumni Satisfaction

Surveys used for alumni studies were either researcher-developed (e.g., Hartman & Schmidt, 1995) or national surveys e.g., the ACT Alumni Outcomes Survey. Several research methods could be used to analyze data gathered from surveys. Research methods used for studies similar to the study proposed in this study were primarily factor analysis. For data analysis, researchers would factor-analyze items to determine which items loaded onto a factor and which items were best treated as single items in a regression model. “Variables which load heavily (0.3 or more) on a factor are believed to contribute to that factor’s interpretation” (Chadwick & Ward, 1987, p. 242). Using responses collected from 290 alumni who graduated from one university located in the Midwest United States, Chadwick and Ward (1987) analyzed a 70-item questionnaire in a 1984 study. They separated the 70 items into five-item sub scales and they explained their research method thus: “To assess whether the items in the subscales of the seventy-item inventory actually measured the dimensions intended, the subscales were subjected to an item analysis to detect and eliminate inconsistent scales and items that apparently failed to capture their intended construct” (p. 240). Chadwick and Ward computed coefficient alphas for each of the subscales and recommended a minimum coefficient alpha of 0.5 for a factor. Another methodological consideration was which items to keep in the model and which items to drop. To determine which items to keep, Chadwick and Ward
evaluated the item-to-total correlation of each item and they dropped items with item-to-total correlations lower than 0.3. This left them with 48 items for the analysis. The remaining 48 items were factor analyzed using one common factor analysis. One of the findings from the Chadwick and Ward study was that the value of the degree in the job market was the most significant variable explaining willingness to recommend alma mater to others.

Factor Analysis was also used by Graham and Cockriel (1989) to analyze data collected from the ACT Alumni Survey. Graham and Cockriel restricted their analysis to responses from 53,372 alumni of 172 U.S. colleges and universities who had indicated that the highest degree they obtained was a baccalaureate degree. About 60 percent of the responding alumni graduated three years or more prior to the start of the survey; the other 40 percent graduated within three years prior to the start of the survey. Data, collected between 1980 and 1988, were subjected to a principal components factor analysis – orthogonal rotation. A scree test helped the researchers determine which factors to retain. Twenty four items were subjected to the factor analysis, and out of these items, six factors emerged to explain college outcomes. Respondents were grouped as a whole for the analysis and in the summary of their findings, Graham and Cockriel suggested that future researchers “identify traits that might be associated with gender, age, or personality characteristics” (p. 286).

Some alumni studies conducted after Graham and Cockriel’s (1989) study included analyses of demographic and profile characteristics of respondents. Ness (2003) collected data from alumni of five universities in the University of Tennessee system. In the data analysis, Ness postulated a model where “alumni satisfaction with university
experiences” was the dependent variable and the independent variables were factor scores on satisfaction with academic experiences, social experiences, and dummy variables for profile characteristics of gender, employment, and race. Findings from the study included satisfaction with academic experiences and satisfaction with social experiences were statistically significant in explaining alumni satisfaction, and satisfaction with academic experiences was the most significant factor explaining alumni satisfaction.

Ness (2003) explained the criteria for the use of certain research methods. If only one factor emerges from factor analysis, rotation is not necessary. If more than one factor emerges, orthogonal rotation should be used when the correlation among variables is low and oblique rotation should be used when there is high correlation between variables. In an exploratory study such as this study, Ness stated that factors should be extracted “based on eigenvalues as opposed to a pre-determined number of factors” (p. 11).

Similar to the research method employed in Graham and Cockriel’s (1989) study, and consistent with Ness’s (2003) explanation of the use of analysis criteria, Hartman and Schmidt (1995) used a principal components factor analysis to analyze data in their study. The survey questionnaire used in Hartman and Schmidt’s study was developed by the researchers based on items that emerged from alumni satisfaction literature. The questionnaire was mailed to all alumni of one undergraduate college who graduated five years prior to the year the survey was mailed. 585 usable questionnaires were completed and returned. Factor Analysis – Principal Components of the performance variables using varimax rotation yielded two factors with eigenvalues greater than one. The emergent factors were labeled “intellectual environment” and “career preparation” and they had Cronbach’s alpha reliability of 0.7 and 0.84 respectively. The outcomes variables were
also factor-analyzed and the analysis yielded three factors which the researchers labeled personal skills, career skills, and communication.

Some alumni studies consisted primarily of descriptions of respondents and correlations between key variables. Other alumni studies were more in-depth in their analyses. In quantitative methods models, variables used in the model may be analyzed using regression equations. The variables used in a regression model could be single item variables or they could be variables that were constructed from Factor Analysis. Several options exist for data analysis of alumni data and Astin (1991) discussed some considerations in selecting a procedure. Path Analysis is one procedure that could be used for modeling; path analysis allows the researcher to treat “any variable falling between the earliest and latest variable in the chain as dependent variables” (Astin, 1991, p. 302). One of the problems Astin found with Path Analysis was that it “becomes unwieldy when large numbers of independent variables are used” (p. 302). An alternative to Path Analysis is Stepwise Regression. Stepwise Regression “computes all direct paths to the dependent variable, and by blocking the independent variables and by following the step-by-step changes in betas, the investigator can, in fact, examine all indirect paths as well” (Astin, p. 302). The process in Stepwise Regression is to add the independent variables in blocks to the regression model; the addition should be based on the temporal order of the sequence of occurrences. The various research models demonstrate that, when based on sound methodological considerations, research models aid in clear interpretation of data.

Summary

In this chapter, the first section explained how alumni studies originated and why they were needed. After literature on broad categories pertaining to alumni satisfaction
was presented, literatures on the areas of satisfaction with classroom experiences, satisfaction with occupational attainment and satisfaction with perceived fit within the university community, as they pertained to alumni satisfaction with their undergraduate university experiences were reviewed. In each of the three areas of alumni satisfaction, research using cohort graduation years for comparisons was highlighted. Alumni satisfaction, with an emphasis on satisfaction with affective areas of the undergraduate experience, included many personality characteristics of respondents. In order to account for the personality characteristics, the review in this chapter included demographic and profile characteristics (e.g., alumni/ae membership in college organizations during student years, alumni donations to the university and participation in alumni events after graduation) of respondents. How outcome variables had been conceptualized and findings using the particular outcome variables were explained.

The second section of this chapter explained the conceptual framework of viewing higher education as a consumption good. Included in literature of the conceptual framework was an explanation of input-environment-outcomes concept. The third section was about research methods used to examine alumni satisfaction. In this third section, an explanation of how researchers have analyzed data and the rationale for the procedures used by researchers was presented. In Chapter Three, the research method to undertake this study will be explained.
CHAPTER THREE

Method

Introduction

Several studies have explored variables influencing satisfaction with university experiences; however, few have compared the relative effects that satisfaction with classroom experiences, satisfaction with occupational attainment, and satisfaction with perceived fit within the university community have on alumni satisfaction with their undergraduate experiences. The links among satisfaction with classroom experiences, satisfaction with occupational attainments and satisfaction with perceived fit within the university community using a cross-sectional data stratified by college graduation year have rarely been documented.

In this chapter, the method that was used to undertake a study of issues explaining alumni satisfaction with their undergraduate university experiences will be explained. The purpose of the study, research questions that guided the study, and research hypotheses are presented first. Then the research design, the research instrument and variables, and operationalization of the survey instrument are presented. Finally, there is a discussion of validity and reliability of the research instrument, protection of human subjects, and proposed data analyses.

Purpose of the Study

The purpose of this study was to examine the extent to which satisfaction with undergraduate classroom experiences, with occupational attainment, and with perceived
fit within the university community may have influenced alumni/ae satisfaction with their undergraduate experiences at University of Missouri-Columbia (MU). Moreover, this study compared alumni/ae responses from three cohort graduation years. In order to understand issues pertaining to alumni/ae satisfaction, a survey of MU alums who received baccalaureate degrees in 1994, 1998 or 2002 was conducted.

Research Questions

The following research questions guided this study:

1. Is there a significant difference between members of the predominant racial group and members of minority racial groups regarding their satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community?

2. To what extent are the three outcome variables (i.e., alumni satisfaction with undergraduate experiences, decision to attend MU again, likelihood of recommending MU to potential students) related to satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community?

3. What combination of demographic and profile characteristics (i.e., race/ethnicity, membership in college organizations, time since graduation), satisfaction with classroom experiences, satisfaction with occupational attainment, and satisfaction with perceived fit within the university community explains overall alumni/ae satisfaction with undergraduate experiences?

4. What combination of demographic and profile characteristics, satisfaction with classroom experiences, satisfaction with occupational attainment, and satisfaction
with perceived fit within the university community explains the extent to which alumni/ae would choose to attend MU again?

5. What combination of demographic and profile characteristics, satisfaction with classroom experiences, satisfaction with occupational attainment, and satisfaction with perceived fit within the university community explains the extent to which alums would recommend MU to potential students?

Hypotheses

The hypothesized relationships among variables are:

1. There will be a significant difference between minority racial groups and the predominant racial group with regard to their perceptions of satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community.

2. Satisfaction with university experiences will be positively associated with satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community.

3. A combination of membership in the predominant racial group, membership in college organizations, and length of time since receiving a baccalaureate degree will be statistically significant in explaining high levels of satisfaction with undergraduate experiences. Furthermore, all independent variables in the regression equation will explain overall satisfaction with undergraduate experiences.

4. A combination of membership in the predominant racial group, membership in college organizations, and length of time since receiving a baccalaureate degree
will be statistically significant in explaining the extent to which alums would choose to attend MU again. Furthermore, all independent variables in the regression equation will explain the extent to which alumni would choose to attend MU again.

5. A combination of membership in the predominant racial group, membership in college organizations, and length of time since receiving a baccalaureate degree will be statistically significant in explaining the extent to which alums would chose to recommend MU to potential students. Furthermore, all independent variables in the regression equation will explain the extent to which alums would choose to recommend MU to potential students.

Research Design

In order to obtain answers to the research questions, data were collected from respondents at a single point in time for a cross-sectional study. A survey instrument (Appendix A) was used to collect data from the respondents. The survey instrument was constructed by the researcher using literature pertaining to alumni/ae satisfaction with classroom experiences, with occupational experiences, and with perceived fit within the university community. The researcher also used literature pertaining to the theoretical constructs of view of college as consumption good and input-environment-outcomes model to inform the choice of items on the survey.

The survey questionnaire used for this study was mailed to a random selection of students who received a baccalaureate degree within the past twelve years from University of Missouri-Columbia. University of Missouri-Columbia is described as a large, public, primarily residential, “more selective” research university.
The sampling frame was a list obtained from the MU Alumni Association containing names of alums and their addresses. The list provided by MU Alumni Association (MUAA) included all students who graduated from University of Missouri-Columbia in one of three specified years but was not limited to alums who were MUAA members.

The population for this study was alums who graduated from University of Missouri-Columbia (MU) with baccalaureate degrees in 1994, 1998 or 2002. The population was also limited to alums with U.S. postal addresses and who received no more than a baccalaureate degree from MU. There were 9,558 MU alums who fit the criteria for selection as participants in the study. Of this population, 3,182 received baccalaureate degrees in the year 1994, 2,964 received baccalaureate degrees in 1998 and 3,412 received baccalaureate degrees in the year 2002.

Of the study’s population of 9,558, a random selection of 1,600 was drawn for the study using the computer program, SPSS 15.0 (2007). One of the considerations for selecting a sample size of 1,600 was that “to use multiple regression analysis, the ratio of observations to independent variables should not fall below five” (Bartlett, Kotrlik, & Higgins, 2001, p.48). Bartlett, Kotrlik and Higgins also stated that “If the researcher plans to use factor analysis in a study, the same ratio considerations discussed under multiple regression should be used, with one additional criteria, namely, that factor analysis should not be done with less than 100 observations” (p. 49). There were 47 items in the survey questionnaire and applying Bartlett, Kotrlik and Higgin’s recommendation of a five-to-one ratio of observations to independent variable, a minimum of 235 usable responses are needed for robust findings if each item is used as a variable in the
regression models. If the items load onto a factor, fewer than 235 observations will be sufficient.

Other considerations for the sample size included minimizing error rates and estimating survey return rate. One source of error is sample size error. If the sample size is too small, results from the data cannot be generalized to the population. On the other hand, “raising the sample size above the level indicated by the sample size formula will increase the probability of Type I error” (Bartlett, Kortlik & Higgins, p. 49). Type I error is the error that arises from finding significant differences when no such difference exists.

The project survey return rate was also a consideration for the research design. In the pilot study for this project, an alumni survey was mailed to MU alums who graduated from University of Missouri-Columbia in the year 1999. For that pilot study, the survey return rate for alums who graduated with baccalaureate degrees was 23 percent. The survey response rate for similar surveys was also considered. The Performance Enhancement Group conducts alumni surveys, the Alumni Attitude Survey, for over 70 research-extensive universities. The average return rate for the Alumni Attitude Study is 20 percent (Performance Enhancement Group, 2005) and some response rates are as low as 14 percent (The Mason Spirit, 2004). With the considerations of adequate sample size, projected survey return rate and data analysis procedure, a random selection of 1,600, stratified by graduation year was made for this study.

Data Collection

Alums who were randomly selected for the study were contacted several times as recommended by Dillman (2007) in Tailored Design Method. Parts of the recommendations by Dillman which this study used were: (1) A respondent-friendly
questionnaire was mailed. (2) A multiple-contact approach was used. The first contact was a mailing which consisted of the survey instrument (see Appendix A), a cover letter (see Appendix B), and a self-addressed stamped return envelope. Two weeks after sending the survey packet, a thank-you postcard (see Appendix C) was mailed to sampled alumni thanking those who have returned their survey and urging those who had not returned their survey to please do so now. Two weeks after the thank-you card was mailed, a replacement survey packet was mailed to non-respondents (see Appendix D). The non-respondents were encouraged to take a few minutes to complete and mail the survey as their input is important for the study. To increase the likelihood of participation in the study, a cover letter from the MUAA office (Appendix E) was also included in the survey packets.

The advantages of using mail surveys are that respondents can fill out the questionnaire at the time that is most convenient for them and respondents do not have to complete the questionnaire at one sitting – they may complete part of it at one time and complete the other parts at another time. Also, since the researcher would not be present when respondents completed the questionnaire, respondents had the incentive to be more truthful because of the anonymity of their responses.

Instrumentation and Variables

Based on literature pertaining to alumni/ae satisfaction with classroom experiences, with occupational attainment and with perceived fit within the university community, a survey instrument was constructed by the researcher (see Appendix A). The survey instrument had four sections. A preamble told the reader that the survey was being mailed to randomly selected alumni, and that the purpose of the survey was for
improvement of college undergraduate experiences. Recipients of the survey package were also informed that their responses would be kept confidential and would not be individually identifiable in the study report.

The four sections that comprised the survey are (a) satisfaction with undergraduate experiences at University of Missouri-Columbia, (b) satisfaction with classroom experiences at University of Missouri-Columbia, (c) satisfaction with occupational attainment, and (d) demographic and profile information.

*Satisfaction with Undergraduate Experiences at University of Missouri-Columbia*

The first section contained 25 items. The first twelve items asked respondents to rate their satisfaction with their: overall undergraduate experiences, perception of the university’s concern for them as an individual, friendships formed at the university, overall academic experiences, overall social experiences, their perception of how well the university prepared them for their career, participation in university events, participation in non-university events, quality of mentoring by adviser, academic growth, personal growth, and overall progress made since graduation. Likert-scale response options were provided and the options ranged from “1” indicating ‘not at all satisfied’ to “5” indicating ‘completely satisfied’. Respondents also had the option of selecting N/A (not applicable) as a response to any of the questions. Gable and Wolf (1993) stated that Likert-type instruments were a widely-used method to collect data for affective studies.

The second set of thirteen items focused on behavioral indicators of alumni/ae satisfaction, e.g. recommending alma mater to potential students, making an alumni/ae donation to alma mater, participating in alumni activities, mentoring current students of the university, desiring to stay connected with other alumni and keeping up-to-date with
current university news. The response options ranged from “1” indicating ‘definitely no’ to “5” indicating ‘definitely yes’.

Satisfaction with Classroom Experiences at University of Missouri-Columbia

The first section consisted of 12 Likert-type items. Respondents were asked to rate their satisfaction with the following aspects of their classroom experiences: overall classroom experiences, how much they learned from their classes, relationships with professors, relationships with class peers, professors’ knowledge of subject, average class size, openness of classes to diverse opinions, overall quality of instruction, amount of class time devoted to activities, academic rigor of classes, exposure to new ideas and reputation of their academic department. Likert-scale response options were provided and the options ranged from “1” indicating ‘not at all satisfied’ to “5” indicating ‘completely satisfied’. Respondents also had the option of selecting N/A (not applicable) as a response to any of the questions.

The second part of the section contained eleven items and focused on perceived fit within the classroom. Respondents were asked to rate their perception of similarity between their views and those of their professors, and their views and those of their classmates. The fit was also be extended to life experiences: respondents were asked to rate how similar they perceived their life experiences were with those of their professors, and how similar their life experiences were with those of their classmates. Respondents were also asked if they felt a sense of belonging in the classroom, if their professors were supportive, if they felt comfortable expressing their opinions, their perception of their academic preparation relative to their classmates’ preparation, if they enjoyed the class experience, and if they missed seeing class members after the class was over. The
response options ranged from “1” to “5”. A response option of “1” indicated that respondents selected ‘definitely no’ to a statement and a response of “5” indicated that respondents selected ‘definitely yes’ to a statement.

Satisfaction with Occupational Attainment

In the third section, alumni/ae satisfaction with their occupational attainment was assessed. This section consisted of ten items. Respondents were asked how satisfied they are with their current or most recent job, length of time it took to obtain their current job, opportunities to advance in their current job, and satisfaction with number of jobs they’ve had since graduating from MU. Likert-scale response options were provided and the options ranged from “1” indicating ‘not at all satisfied’ to “5” indicating ‘completely satisfied’. Respondents also had the option of selecting N/A (not applicable) as a response to any of the questions. Then, respondents were asked about how well MU prepared them for their current job and how closely related their current job is to their MU major. Finally, two demographic questions pertaining to occupation were asked: respondent’s occupational status and salary range.

Demographic and Profile Characteristics of Respondents

In this final section, demographic information about respondents was obtained. Respondents were asked for their gender, race/ethnicity, and membership status in the MU Alumni Association. Respondents were asked if they were over the age of 25 at the time they began their undergraduate studies, if they were a member of a Greek association in their college years, if they were a member of other college organizations, and if they have given financially to MU since graduation. Another demographic question was an inquiry about the primary means that alums used to finance their
undergraduate education. In the final two questions on the survey, respondents were asked to indicate the college or school from which they received their baccalaureate degree and to note how many degrees they received from MU.

Outcome Variables

Three outcome variables guided this study:

1. Satisfaction with overall undergraduate experience (items 1, 15, 16 & 17)
2. Would you choose to attend MU if you had to make the decision again? (item 12)
3. Would you recommend MU to potential students? (item 13)

These three variables are widely used in alumni studies, sometimes as single variables and sometimes as a combined variable measuring one single construct. In this study, the three outcomes will be used as single dependent variables.

Operationalization of the Survey Instrument

The survey instrument contained items that would measure respondents’ satisfaction with college outcomes. From a synthesis of literature on how college affects students, Pascarella and Terenzini (1991) deduced that college outcomes could be cognitive or affective. More specifically, Pascarella and Terenzini (1991) explained that: “Cognitive outcomes have to do with the utilization of higher-order intellectual processes such as knowledge acquisition, decision making, synthesis, and reasoning. Affective outcomes are attitudes, values, self-concepts, aspirations, and personality dispositions” (p. 5). Each of these college outcomes could be psychological or behavioral and the authors gave some examples of each category. Cognitive-psychological outcomes were reflected in knowledge of subject matter while cognitive-behavioral outcomes could be seen in occupational attainment. Affective-psychological outcomes included personality
dispositions and affective-behavioral outcomes comprised students’ choice of major or use of leisure time.

The survey instrument used in this study attempts to measure satisfaction with each of the four outcomes proposed by Pascarella and Terenzini (1991). Satisfaction with classroom experiences and satisfaction with occupational attainment, which are the major variables studied as to their impact on satisfaction with college experiences, are attributes that could be viewed in cognitive and affective gains. Although evidence of satisfaction with these four college outcomes was sought, it should be noted that student development could not always be separated into discrete categories. Pascarella and Terenzini (1991) noted that student development was often holistic; however, a theoretical framework such as these outcome categories was an effective way to operationalize the items on the research instrument.

The items on the survey were also grounded in the literature. In Chapter Two, a detailed explanation about each variable was provided. Some of the variables that were discussed in Chapter Two and were included in the survey instrument were satisfaction with overall undergraduate experiences (items 1, 12, 13, 15, 16, 17), (Graham & Gisi, 2000; Delaney, 2004; Hartman & Schmidt, 1995); satisfaction with classroom experiences (items 6, 25 – 36, 47), (Church, Elliot, & Gable, 2001; Fassinger, 1995a; Fassinger, 1995b; Billson & Tiberius, 1994; Karp & Yoels, 1994); and alumni perceived fit within the university community (items 2, 3, 5, 7, 8, 14, 18 -24, 37-46), (McAlexander & Koenig, 2001; Mael & Ashforth, 1992; Ness, 2003; Hartley & Berkowitz, 1983). Variables pertaining to satisfaction with occupational attainment can be found in items

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Demographic information was obtained from respondents. Literature that explored the connection between alumni satisfaction with university experiences and a student demographic background included race (Umbach & Porter, 2002; Flowers & Pascarella, 2003), membership in college organizations or alumni associations (Chadwick & Ward, 1987; Gwinner & Beltranimi, 1995; McAlexander & Koenig, 2001; Hartman & Schmidt, 1995) and alumni/ae donations (Monks, 2003; Pearson, 1999; Taylor & Martin, 1995) The grounding of the instrument in the research literature pertaining to satisfaction with college experiences, with classroom experiences and with occupational attainment provided validity for the study.

Validity and Reliability of the Research Instrument

Validity

Thorndike (1997) and Gable and Wolf (1993) stated that validity relates to the use or interpretation of survey results. One source of validity is content validity. Content-related validity refers to the relationship between the contents of the survey and the proposed interpretation. The researcher included a thorough review of related literature to provide justification for use of the items. The researcher also relied on input from a team of experts on the researcher’s dissertation committee. Another source of validity is construct validity. The procedure of Factor Analysis will be used to analyze the data for this study. Factor Analysis with its ability to show how interrelated are items on a factor acts as a form of construct validity (Gable & Wolf, 1993).
Further validity came from a pilot study. The pilot study was a survey of 1999 graduates of University of Missouri-Columbia. Presentations of the findings of the pilot study revealed the importance of belonging to college organizations. The pilot study did not include a question pertaining to membership in college organizations. The instrument for this study included a question about membership in college organizations. Another difference between this study and the pilot study is the order of satisfaction rankings. In the pilot study, the ranges were from “completely satisfied” to “not at all satisfied” and in the interpretation of the regression results, an increase in coefficient implied a decrease in alumni satisfaction. This interpretation was not as clear as one in which satisfaction was positively correlated with the regression coefficient. In the research instrument for this study, satisfaction levels ranged from “not at all satisfied” to “completely satisfied”.

Because of a thorough literature review and incorporation of suggestions from the pilot study, the researcher believes the content-validity of the survey instrument is high.

*Reliability*

How ‘reliable’ an instrument is pertains to the internal consistency of the study. Would the study yield similar results if conducted again is an underlying question that ‘reliability’ addresses. Huck (2004) stated that Cronbach’s alpha can be used to measure internal consistency for Likert-type questions that do not have a pre-determined correct answer. For an affective instrument, Cronbach’s internal reliability coefficient of 0.70 is acceptable (Gable, 1986). To assess the reliability of the constructs in this study, Cronbach’s alpha for the set of questions comprising each construct will be computed.
Protection of Human Subjects

Although the questions on the survey are not overtly sensitive and the researcher did not expect any respondent to feel uncomfortable answering any of the questions, the researcher still took steps to ensure the protection of respondents. Respondents were told that the information they provide will be kept confidential, and that only aggregated data will be published. The survey was mailed only after the University of Missouri-Columbia’s Institutional Review Board had approved the survey instrument and data collection methods. Approval by a university board was also expected to help re-assure respondents of the appropriateness of the survey. Respondents were informed that their participation was voluntary and that they should answer only the questions they felt comfortable answering. The survey was approved by the MU Alumni Association officers who also provided the database for the study population. This additional agency approving the survey added another layer of protection to the participants.

Data Analysis

After data for the study was collected, a basic description of demographic and profile characteristics of respondents was computed using SPSS 15.0 (2007) software. This basic description included means and standard deviations of variables and a correlation matrix to determine how closely variables are correlated with each other. The data was “cleaned up” before further analyses were conducted.

Cleaning up of the data included checking each variable for missing data, normal distribution, and correlation with other variables. To ensure that each variable used in the model is contributing to variations in the dependent variable, the tolerance statistic for each variable was be computed. “The tolerance statistic represents the proportion of a
variable’s variance not accounted for by other independent variables in the equation” (Delaney, 2005, p. 10). The higher the tolerance statistic, the more unique is the variable’s contribution to variances in the dependent variable.

For demographic information, a frequency distribution of the data was compiled. There were three dependent variables: satisfaction with overall undergraduate experiences, would you choose MU if you had to make the decision again? and would you recommend MU to potential students? Survey items were categorized under domains of interest to explain each of the independent variables. Prior to analyses, constructs were developed via Factor Analysis. Factor Analysis was used to determine which items load onto the factors: satisfaction will classroom experiences, satisfaction with occupational attainment, and satisfaction with perceived fit within the university community. Factor scores were calculated for each construct. Criterion of keeping factors with eigenvalues greater than 1.0 was used to determine which factor to retain and which variables to keep as single items.

For each domain, an alpha reliability coefficient was computed. While Bean and Bradley (1986) recommended a minimum alpha coefficient of 0.8, Gable and Wolf (1993) stated that a minimum Cronbach’s alpha coefficient of 0.70 was sufficient for an affective instrument. Johnson and Christensen (2004) also stated that “A popular rule of thumb is that the size of the coefficient alpha should generally be, at a minimum, greater than or equal to 0.70 for research purposes” (p. 138). Variables were added to the regression model in a stepwise manner. Stepwise regression was employed by Stoecker and Pascarella (1991) and is a useful procedure to analyze how the coefficient of determination ($R^2$) changes as more variables are added to the model. A Chi-squared test
for each type of alumni demographic information and for each graduation cohort class was computed to see if the average responses statistically vary within each of the groups.

The research questions guiding the study were analyzed as follows:

Question 1. *Is there a significant difference between members of the predominant racial group and members of minority racial groups regarding their satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community?*

   Analysis of Variance (ANOVA) was used to determine if there was a statistical significant difference among racial groups regarding their satisfaction with classroom experiences, with occupational attainment and with perceived fit within the university community.

Question 2. *To what extent are the three outcome variables (i.e., alumni/ae satisfaction with undergraduate experiences, decision to attend MU again, likelihood of recommending MU to potential students) related to satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community?*

   A correlation model was used. Correlation coefficients between each of the three outcome variables and satisfaction with classroom experiences, satisfaction with occupational attainment and satisfaction with perceived fit within the university community was computed.

Question 3. *What combination of demographic and profile characteristics (i.e., race, membership in college organizations, time since graduation), satisfaction with classroom experiences, satisfaction with occupational attainment, and satisfaction with perceived fit*
within the university community explains overall alumni/ae satisfaction with undergraduate experiences?

Each of the profile characteristic was entered as an independent variable in the regression. Factor scores from a Factor Analysis procedure were entered as independent variables in the model. The coefficient of determination of the regression model \( R^2 \) was computed. The beta coefficients of the independent variables were compared as to their magnitude of significance in explaining variations in the dependent variable.

Question 4. *What combination of demographic and profile characteristics, satisfaction with classroom experiences, satisfaction with occupational attainment, and satisfaction with perceived fit within the university community explains the extent to which alums would choose to attend MU again?*

Each of the profile characteristic was entered as an independent variable in the regression. Factor scores from a Factor Analysis procedure were entered as independent variables in the model. The coefficient of determination of the regression model \( R^2 \) was computed. The beta coefficients of the independent variables were compared as to their magnitude of significance in explaining variations in the dependent variable.

Question 5. *What combination of demographic and profile characteristics, satisfaction with classroom experiences, satisfaction with occupational attainment, and satisfaction with perceived fit within the university community explains the extent to which alums would recommend MU to potential students?*

Each of the profile characteristic was entered as an independent variable in the regression. Factor scores from a Factor Analysis procedure were entered as independent variables in the model. The coefficient of determination of the regression model \( R^2 \) was
computed. The beta coefficients of the independent variables were compared as to their magnitude of significance in explaining variations in the dependent variable.

Summary

In this chapter, the method that was used to analyze data was presented. First, the purpose of the study, the research questions guiding the study and the research hypothesis were presented. The researcher-constructed survey instrument was explained and procedures that were used to collect the survey data were explained. Issues regarding validity, reliability, and protection of human subjects were also explained. Finally, the data analysis of each research question was presented. In Chapter Four, findings of the study will be presented.
CHAPTER FOUR

Results

Introduction

The purpose of this study was to examine the extent to which satisfaction with undergraduate classroom experiences, with occupational attainment, and with perceived fit within the university community influenced alumni/ae satisfaction with their undergraduate experiences at University of Missouri-Columbia (MU). Moreover, this study aimed to investigate how levels of satisfaction varied with these demographic and profile characteristics: racial identification, membership in college organizations and cohort graduation year. In this chapter, results of the study are presented. The results include demographic and profile characteristics, findings to research questions and a summary of the findings.

Demographic and Profile Characteristics

The total population for the study was 9,558 alumni. Population by graduation year was 3,182 for year 1994, 2,964 for year 1998 and 3,412 for year 2002. There were 1,600 alumni that were randomly selected to participate in this study: 528 from the 1994 graduation class, 492 from the 1998 graduation year cohort and 580 from the 2002 graduation year cohort. A survey questionnaire was mailed to the randomly selected alums. Two hundred and seventy two alums (17.00%) responded. Of the responses, ten were blank forms and five were returned letters with incorrect addresses leaving 257 observations available for this study. An analysis of how closely the drawn sample for the
study has mirrored the study’s population are presented by race/ethnicity and gender.

Racial Identification

The number of alums in the population for the 1994 cohort was 2,851 Whites/Caucasian (89.60%), 125 Black/African Americans (3.93%), 57 Asians (1.79%), 40 non-resident international students (1.26%), 29 Hispanics (0.91%), 12 Native Americans/American Indians (0.38%) and 68 unknown (2.14%). The second cohort group was comprised of alums who graduated in 1998. The number of alums in the population for the 1998 cohort was 2,663 Whites/Caucasian (89.84%), 142 Black/African Americans (4.79%), 59 Asians (1.99%), 30 Hispanics (1.01%), 23 non-resident international students (0.78%), 9 Native Americans/American Indians (0.30%) and 38 unknown (1.28%). The third cohort had alums who graduated in 2002. The number of alums in the population for the 2002 cohort was 2,953 Whites/Caucasian (86.55%), 194 Black/African Americans (5.69%), 84 Asians (2.46%), 49 Hispanics (1.44%), 21 non-resident international students (0.61%), 11 Native Americans/American Indians (0.32%) and 100 unknown (2.93%).

The sampling frame for the study was stratified by graduation year and race. Whites/Caucasians were in one racial group and all other racial groups were in another racial group. Ethnic minorities were purposely overselected for the study in order to meet or exceed the proportion of minorities in the population. The random selection of participants was made using the software program, SPSS 15.0 (2007). The proportion of respondents from each racial group was very similar to the racial proportion in the alumni population. Among the respondents who graduated in 1994, 69 (87.34%) were White and 10 (12.66%) were non-Whites. In the 1998 cohort group, 68 (82.93%) of the respondents
were White (82.93%) and 14 (17.07%) were non-Whites. Among the respondents who graduated in 2002, 83 (86.46%) were White and 13 (13.54%) were non-Whites. The racial composition of respondents is shown in further detail in Table 1.

Table 1
*Racial Composition of Respondents*

<table>
<thead>
<tr>
<th>Race</th>
<th>1994 Cohort</th>
<th>1998 Cohort</th>
<th>2002 Cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td>White/Caucasian</td>
<td>69 (87.34%)</td>
<td>68 (82.93%)</td>
<td>83 (86.46%)</td>
</tr>
<tr>
<td>Black/African American</td>
<td>6 (7.59%)</td>
<td>6 (7.32%)</td>
<td>6 (6.25%)</td>
</tr>
<tr>
<td>Asian</td>
<td>1 (1.27%)</td>
<td>6 (7.32%)</td>
<td>3 (3.13%)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1 (1.27%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Native American</td>
<td>1 (1.27%)</td>
<td>1 (1.22%)</td>
<td>1 (1.04%)</td>
</tr>
<tr>
<td>Not specified</td>
<td>1 (1.27%)</td>
<td>1 (1.22%)</td>
<td>3 (3.13%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>79 (100%)</strong></td>
<td><strong>82 (100%)</strong></td>
<td><strong>96 (100%)</strong></td>
</tr>
</tbody>
</table>

*Sex*

In addition to race, survey participants were requested to indicate their sex. The sample selected for the analysis was made using the software program, SPSS 15.0 (2007). The participants were randomly selected by the software program and while the sample selected for the study was very close to the survey population in terms of proportion of females to males, proportion of females to males in the respondents was higher than the corresponding proportion in the study’s population. In the 1994 graduation year cohort, 1,647 (51.76%) of the population was female and 1,535 (48.24%) was male. Among the
respondents who graduated in 1994, 46 (58.23%) were females and 33 (41.77%) were males. In the second cohort, alums who graduated in 1998, 1,588 (53.58%) of the population was female and 1,376 (46.42%) was male. Among the respondents who graduated in 1998, 49 (59.76%) were females and 33 (40.24%) were males. The third cohort was comprised of alums who graduated in 2002. The population for the 2002 cohort was 1,913 (56.07%) females and 1,499 (43.93%) males. Among the 2002 cohort respondents, 66 (68.75%) were females and 30 (31.25%) were males. The distribution of the survey population and respondents by sex is shown in Table 2.

Table 2

Distribution of the Survey Population and Respondents by Sex

<table>
<thead>
<tr>
<th>Cohort Graduation Year</th>
<th>1994</th>
<th>1998</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Population</td>
<td>Respondents</td>
<td>Population</td>
</tr>
<tr>
<td></td>
<td>N (%)</td>
<td>n (%)</td>
<td>N (%)</td>
</tr>
<tr>
<td>Female</td>
<td>1647 (51.76%)</td>
<td>46 (58.23%)</td>
<td>1588 (53.58%)</td>
</tr>
<tr>
<td>Male</td>
<td>1535 (48.24%)</td>
<td>33 (41.77%)</td>
<td>1376 (46.42%)</td>
</tr>
<tr>
<td>Total</td>
<td>3182 (100%)</td>
<td>79 (100%)</td>
<td>2964 (100%)</td>
</tr>
</tbody>
</table>

In addition to race and sex, another profile characteristic that was examined was membership in college organizations. One of the questions in the survey questionnaire was “What college organizations did you join while at MU?” Respondents who were members of college organizations listed several organizations ranging from academic
groups, athletic clubs, religious organizations to political associations. In each cohort graduation class, over half of the respondents were members of one or more college organizations. In the 1994 graduation year cohort, 33 (41.77%) respondents were not members of any organization during their undergraduate years, 26 (32.91%) joined one organization, 12 (15.19%) joined two organizations and 7 (8.86%) were members of three or more organizations. Among alums who graduated in 1998, 37 (45.12%) did not join any organization during their undergraduate years, 24 (29.27%) joined one organization, 11 (13.41%) joined two organizations and 9 (10.98%) were members of three or more organizations. In the 2002 graduation year cohort, 35 (36.46%) respondents did not join any organization during their baccalaureate years, 24 (25.00%) joined one organization, 18 (18.75%) joined two organizations and 19 (19.79%) joined three or more organizations. Alumni/ae membership in college organizations is presented in Table 3.

Table 3
Membership in College Organizations

<table>
<thead>
<tr>
<th>Number of Organizations joined</th>
<th>1994</th>
<th>1998</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td>0</td>
<td>33 (41.77%)</td>
<td>37 (45.12%)</td>
<td>35 (36.46%)</td>
</tr>
<tr>
<td>1</td>
<td>26 (32.91%)</td>
<td>24 (29.27%)</td>
<td>24 (25.00%)</td>
</tr>
<tr>
<td>2</td>
<td>12 (15.19%)</td>
<td>11 (13.41%)</td>
<td>18 (18.75%)</td>
</tr>
<tr>
<td>3</td>
<td>3 (3.80%)</td>
<td>6 (7.31%)</td>
<td>9 (9.38%)</td>
</tr>
<tr>
<td>4 and above</td>
<td>4 (5.06%)</td>
<td>3 (3.66%)</td>
<td>10 (10.42%)</td>
</tr>
<tr>
<td>Not Specified</td>
<td>1 (1.26%)</td>
<td>1 (1.22%)</td>
<td>0 (0.00%)</td>
</tr>
<tr>
<td>Total</td>
<td>79 (100%)</td>
<td>82 (100%)</td>
<td>96 (100%)</td>
</tr>
</tbody>
</table>
Research Questions: The Results

Five research questions guided this study. The statistical procedures of Analysis of Variance, Correlation Statistics, Factor Analysis, and Multiple Regressions were used to analyze these data. The findings and results for the five research questions are now presented:

Question 1. Is there a significant difference between members of the predominant racial group and members of minority racial groups regarding their satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community?

Analysis of Variance (ANOVA) was used to determine if there was a statistical difference among racial groups regarding the items that comprise alumni satisfaction with classroom experiences, with occupational attainment and with perceived fit within the university community. Before the ANOVA analysis was conducted, assumptions underlying ANOVA procedures were tested. Two assumptions underlying ANOVA are normal distributions and homogeneity of variances. Homogeneity of variance implies that the spread of responses in the dependent variable is relatively the same at all levels of the grouping variable (racial group). Normal distribution was determined via histograms on a normal probability plot. Homogeneity of variances was assessed using Levene’s Statistics in the software program SPSS (15.0, 2007). The homogeneity of variance assumption was violated in four of the items in the data set: Overall quality of instruction, academic rigor or challenge of classes, similar views with most classmates on issues discussed in
class and life experiences similar with those of most classmates. The four items with heterogeneity of variances were disregarded in the ANOVA analysis.

The first ANOVA analysis was to determine if there were significant differences among racial groups regarding their satisfaction with classroom experiences. The ANOVA procedure revealed that there were significant differences among racial groups regarding their satisfaction with relationships with class peers (p = .001), average class size (p = .040), openness to diverse opinions (p = .033), exposure to new ideas (p = .007) and sense of belonging in the classroom (p = .000). Further examination of the ANOVA differences was made using Bonferroni procedures. The Bonferroni posthoc test will list differences by each racial group. There was only one Hispanic in the data set and since posthoc comparisons could not be made with some cohorts having zero Hispanics, the data set was refined to exclude Hispanics. The posthoc analysis revealed that Whites/Caucasians were significantly more satisfied with their relationships with peers than Blacks/African Americans were with their relationships with peers. Similarly, Whites/Caucasians were more likely to feel a sense of belonging in the classroom than were Blacks/African Americans. Posthoc analysis also revealed that Whites/Caucasians were significantly more satisfied with their exposure to new ideas than Asian Americans were with their exposure to new ideas. Post hoc comparisons – with Hispanics excluded from the analysis – did not reveal a difference among the races in satisfaction with average class size and openness of class to diverse opinions.

In Table 4, descriptive information, sorted by racial groupings, for relationships with peers, exposure to new ideas and sense of belonging in the classroom is shown. The response options from which participants could choose ranged from “1” (not at all
satisfied) to “5” (completely satisfied). Respondents could also choose N/A or simply skip the question. Among the four racial groups, Whites had the highest satisfaction with their relationships with peers (mean = 3.76, SD = .757). The second group in terms of satisfaction with relationships with peers was Native Americans (mean = 3.67, SD = .577). The third group was Asian Americans (mean = 3.50, SD = .850) and the least satisfied with relationships with peers was African Americans (mean = 2.94, SD = .725).

Among the four racial groups, Whites had the highest satisfaction with their exposure to new ideas (mean = 3.93, SD = .809), African Americans had the next highest rating (mean = 3.61, SD = .979), Native Americans were next (mean = 3.33, SD = 1.155) and Asian Americans were the least satisfied group in terms of satisfaction with exposure to new ideas (mean = 2.80, SD = .919). The third item with statistical differences among racial groups was sense of belonging in the classroom. Whites had the highest satisfaction rating for sense of belonging in the classroom (mean = 3.80, SD = .817), Native Americans were next (mean = 3.67, SD = .577), Asian Americans were third (mean = 3.67, SD = .577) and African Americans were the least likely to feel a sense of belonging in the classroom (mean = 3.06, SD = .938). Table 4 shows differences by racial groups in terms of their satisfaction with classroom experiences.
Table 4

*Differences by Racial Groups: Satisfaction with Classroom Experiences*

<table>
<thead>
<tr>
<th>Relationship with Peers</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whites</td>
<td>3.76</td>
<td>.756</td>
</tr>
<tr>
<td>African Americans</td>
<td>2.94</td>
<td>.725</td>
</tr>
<tr>
<td>Asian Americans</td>
<td>3.50</td>
<td>.850</td>
</tr>
<tr>
<td>Native Americans</td>
<td>3.67</td>
<td>.577</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exposure to New Ideas</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whites</td>
<td>3.93</td>
<td>.809</td>
</tr>
<tr>
<td>African Americans</td>
<td>3.61</td>
<td>.979</td>
</tr>
<tr>
<td>Asian Americans</td>
<td>2.80</td>
<td>.919</td>
</tr>
<tr>
<td>Native Americans</td>
<td>3.33</td>
<td>1.155</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sense of Belonging in the Classroom</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whites</td>
<td>3.80</td>
<td>.817</td>
</tr>
<tr>
<td>African Americans</td>
<td>3.06</td>
<td>.938</td>
</tr>
<tr>
<td>Asian Americans</td>
<td>3.44</td>
<td>1.236</td>
</tr>
<tr>
<td>Native Americans</td>
<td>3.67</td>
<td>.577</td>
</tr>
</tbody>
</table>

As indicated in Table 4, of the four racial groups in the analysis, Whites had the highest satisfaction rating for relationship with peers. The difference between ratings for Whites and African Americans in ‘relationship with peers’ was .823 and according to the Bonferroni procedure, this difference was statistically significant (p=.000). The difference between ratings for Whites and each of the other racial groups was not statistically significant. Table 5 also showed that of the four racial groups, Whites had the highest satisfaction rating for ‘exposure to new ideas’. The difference between Whites
and Asian Americans in ‘exposure to new ideas’ was 1.13 and according to the Bonferroni procedure, this difference was statistically significant (p=.001). The difference between mean score of Whites and each of the other racial groups in terms of satisfaction with exposure to new ideas was not statistically significant. The third classroom variable with differences between the predominant racial group and a minority racial group was sense of belonging in the classroom. The difference between the mean score for Whites and the mean score for Blacks was .740 and this difference was statistically significant (p= .005) according to the Bonferroni procedure. The mean score of Whites for ‘sense of belonging in the classroom’ was not statistically different from the mean score of Asian Americans or Native Americans.

In addition to satisfaction with classroom experiences, ANOVA procedures were also conducted for the items comprising satisfaction with occupational attainment. There was no statistically significant difference among racial groups regarding alumni/ae satisfaction with occupational attainment.

The third area of satisfaction analyzed were the items that comprised satisfaction with perceived fit within the university community. The ANOVA procedure revealed that there were statistically differences among racial groups in three areas: participation in non-university events (p = .027), having similar views with the majority in the university (p = .000), and role MU traditions play in feelings of connectedness with the university (p = .000). Further examination of the ANOVA differences was conducted using Bonferroni post-hoc procedures. Because post-hoc comparisons could not be made with zero Hispanics in some cohorts, Hispanics were again dropped from further analysis since there was only one Hispanic in the dataset. After Hispanics were excluded from the
analysis, satisfaction with participation in non-university events no longer showed a significant difference among racial groups. Post-hoc analysis revealed that Whites were more likely to respond “Yes” to the question, “As an MU student, did you believe your views were similar to the views of the majority?” than were other racial groups. The Likert-type response options ranged from “1” (definitely no) to “5” (definitely yes). Respondents could also choose N/A or simply skip the question. The racial pattern in the response to the question about similar views was Whites (mean = 3.62, SD = .835), Native Americans (mean = 3.37, SD = 1.155), Asian Americans (mean = 3.10, SD = .994) and African Americans (mean = 2.65, SD = 1.057).

Post-hoc analysis also revealed Native Americans were more influenced by MU traditions than were Whites, African Americans and Asian Americans. The response options ranged from “1” (definitely no) to “5” (definitely yes). Respondents could also choose N/A or simply skip the question. The racial response pattern to the question, “Do MU traditions influence your feelings of connectedness with the university?” was Native Americans (mean = 4.33, SD = .577), Whites (mean = 3.92, SD = 1.024), Asian Americans (mean = 2.90, SD = 1.287) and African Americans (mean = 2.76, SD = 1.091). Table 5 shows differences by racial groups in terms of their satisfaction with perceived fit within the university community.
Table 5

Differences by Racial Groups: Satisfaction with Perceived Fit

<table>
<thead>
<tr>
<th>Similar Views with Majority</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whites</td>
<td>3.62</td>
<td>.835</td>
</tr>
<tr>
<td>African Americans</td>
<td>2.65</td>
<td>1.057</td>
</tr>
<tr>
<td>Asian Americans</td>
<td>3.10</td>
<td>.994</td>
</tr>
<tr>
<td>Native Americans</td>
<td>3.37</td>
<td>1.155</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Role of MU Traditions</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whites</td>
<td>3.92</td>
<td>1.024</td>
</tr>
<tr>
<td>African Americans</td>
<td>2.76</td>
<td>1.091</td>
</tr>
<tr>
<td>Asian Americans</td>
<td>2.90</td>
<td>1.287</td>
</tr>
<tr>
<td>Native Americans</td>
<td>4.33</td>
<td>.577</td>
</tr>
</tbody>
</table>

The difference between the mean score of Whites and African Americans in ‘Similar views with majority’ was statistically significant (p = .000) according to Bonferroni post-hoc procedures. Similarly, the difference between the mean score of Whites and African Americans in ‘Role of MU Traditions’ was statistically significant (p = .000) according to Bonferroni procedures. The difference in mean scores between Whites and Asian Americans was also statistically significant according to Bonferroni procedures (p = .026) when ‘Role of MU Traditions’ was considered.

A summary of findings to Research Question 1 is that there were significant differences between members of the predominant racial group (Whites) and members of minority racial groups regarding their satisfaction with the items comprising classroom experiences and perceived fit within the university community. There was no statistically
significant difference between Whites and each of the other racial groups regarding their satisfaction with occupational attainment.

Question 2. To what extent are the three outcome variables (i.e., alumni satisfaction with undergraduate experiences, decision to attend MU again, likelihood of recommending MU to potential students) related to satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community?

The first outcome variable – alumni satisfaction with undergraduate experiences - is a composite of four items: satisfaction with overall undergraduate experience, “Do you feel you got your ‘money’s worth’ from your MU education? “Was your MU academic experience better than what you expected?” and “Were your MU social experiences better than what you expected?” To determine if the four items were measuring the same underlying construct, Cronbach’s Alpha was computed using SPSS 15.0 (2007). The computed Cronbach’s Alpha was .752. Since the value of Cronbach’s Alpha exceeded the minimum threshold of .70, the first outcome variable was defined to be a combination of the four specified items.

To determine to what extent alumni/ae satisfaction with undergraduate experiences related to satisfaction with classroom experiences, a Pearson correlation model was computed. All of the correlations between items in ‘Satisfaction with Classroom Experiences’ and ‘Alumni Satisfaction with Undergraduate Experiences’ were statistically significant. Satisfaction with overall classroom experiences had the strongest correlation with alumni satisfaction with overall undergraduate experiences ( \( r = .619 \)).
and satisfaction with relationships with professors had the weakest correlation with satisfaction with alumni satisfaction with undergraduate experiences (r = .220).

All of the correlations between Alumni Satisfaction with Undergraduate Experiences and items in ‘Satisfaction with Occupational Attainment’ were statistically significant. Satisfaction with opportunities for advancement in current job had the strongest correlation with alumni satisfaction with undergraduate experiences (r = .157) and satisfaction with current job had the weakest correlation with alumni satisfaction with undergraduate experiences (r = .142).

All of the correlations between Alumni Satisfaction with Undergraduate Experiences and items in ‘Satisfaction with Perceived Fit within the University Community’ were statistically significant. The item from Perceived Fit which had the strongest correlation with alumni satisfaction with undergraduate experiences was satisfaction with “Your college’s concern for you as an individual student” (r = .568) and the item from Perceived Fit which had the weakest correlation with alumni satisfaction with undergraduate experiences was “Would you mentor a current MU student?” (r = .202).

The second outcome variable was “Would you choose MU if you had to make the decision again?” To determine to what extent the decision to choose MU relates to satisfaction with classroom experiences, a Pearson Correlations model was computed. All of the correlations between choosing MU again and items in satisfaction with classroom experiences were statistically significant. Satisfaction with overall classroom experiences had the strongest correlation with the decision to choose MU again (r = .530)
and satisfaction with relationships with professors had the weakest correlation with choosing to attend MU again ($r = .180$).

While all of the correlations between choosing MU again and satisfaction with classroom experiences were statistically significant, none of the correlations between choosing MU again and satisfaction with occupational attainment was statistically significant.

All of the correlations between items in Satisfaction with Perceived Fit within the University Community and choosing MU again were statistically significant. The Perceived Fit item with the strongest correlation with the decision to choose MU again was “Do you plan to stay informed about MU news?” ($r = .497$) and the Perceived Fit item with the weakest correlation with choosing MU again was “Would you mentor a current student?” ($r = .165$).

The third outcome variable was “Would you recommend MU to potential students?” To determine to what extent the decision to recommend MU relates to satisfaction with classroom experiences, a Pearson Correlation was computed. All of the correlations between recommending MU and items in Satisfaction with Classroom Experiences were statistically significant. The Classroom Satisfaction item with the strongest correlation with recommending MU to potential students was satisfaction with overall classroom experiences ($r = .563$) and the Classroom Satisfaction item with the weakest correlation with recommending MU to potential students was satisfaction with relationships with professors ($r = .188$).

While all of the correlations between recommending MU to potential students and satisfaction with classroom experiences were statistically significant, none of the
correlations between recommending MU and satisfaction with occupational attainment was statistically significant.

The final correlation computed was between recommending MU to potential students and items in Satisfaction with Perceived Fit within the University Community. All of the correlations were statistically significant. The item from Perceived Fit which had the strongest correlation with recommending MU was satisfaction with “Your college’s concern for you as an individual student” (r = .517) and the item from Perceived Fit which had the weakest correlation with recommending MU was “Would you mentor a current MU student?” (r = .195).

A summary of findings to Research Question 2 is that to a large extent the three outcome variables (i.e., alumni satisfaction with undergraduate experiences, decision to attend MU again, likelihood of recommending MU to potential students) are related to satisfaction with classroom experiences and satisfaction with perceived fit within the university community. Among the three outcome variables (i.e., alumni satisfaction with undergraduate experiences, decision to attend MU again, likelihood of recommending MU to potential students), the only outcome variable with statistically significant correlations with satisfaction with occupational attainment was alumni satisfaction with university experiences.

Question 3. *What combination of demographic and profile characteristics (i.e., race, membership in college organizations, time since graduation), satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community explains alumni/ae satisfaction with undergraduate experiences?*
To explain alumni/ae satisfaction with undergraduate experiences, a regression equation was used to analyze the data. The dependent variable in the regression model was alumni/ae satisfaction with undergraduate experiences. The independent variables in the model were items from the three areas of satisfaction with classroom experiences, with occupational attainment and with perceived fit within the university community. To make the regression model easier to interpret, the items that would be used as independent variables were analyzed and reduced as factor scores. Factor Analysis combines items with the same underlying construct into a factor. The Factor Analysis procedure leads to a model that would not have too many independent variables; the parsimonious model also helps to conserve the degrees of freedom in a regression model.

One of the first steps in creating factor scores was to compute Cronbach’s coefficient alphas for each subscale. Coefficient alphas are reliability measures that verify that items in the subscale are measuring the same underlying construct. Using SPSS 15.0 (2007), Cronbach’s alphas were computed. The items in the survey questionnaire that comprised satisfaction with classroom experiences had a computed Cronbach’s Alpha of .940. Cronbach’s alpha for items comprising satisfaction with occupational attainment was .781 and Cronbach’s alpha for the items comprising satisfaction with perceived fit within the university community was .917. All three alpha levels exceeded the minimum threshold of 0.70.

The second step in the Factor Analysis procedure was to examine item-to-total correlation in each subscale and drop items with low item-to-total correlations. None of the items had a low correlation (no item-to-total correlation was less than 0.3) so all of the items were retained for further analysis. The items were checked to verify that they
met the conditions for Factor Analysis. The verification included checks for multicollinearity of variables and linearity: A correlation matrix showed there was no problem with multicollinearity (no correlation between items exceeded 0.8) and Bartlett’s test of sphericity was used to determine there was no singularity problem (severe multicollinearity leading to an identity matrix). Items comprising the consumption of goods model are incorporated in all three section as items explaining relationships with peers, faculty, college organizations and college settings.

After all of the data cleanup checks were completed, items were subjected to Factor Analysis. An initial analysis using Principal Components Analysis determined that five factors should be retained. The five factors emerged from a scree test and the criteria of eigenvalues that are greater than one. The scree test is a plot of eigenvalues against number of items. Once it was determined to select five factors, Factor Analysis was conducted using Principal Axis Factoring, Promax rotation (method of oblique rotation for correlated factors). Table 6 shows the factor loadings.
Table 6

**Principal-Components Analysis with Oblique Rotation: Alumni Satisfaction with University Experiences**

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>How much you learned from college classes</td>
<td>.906</td>
</tr>
<tr>
<td>34</td>
<td>Academic rigor or challenge of classes</td>
<td>.856</td>
</tr>
<tr>
<td>33</td>
<td>Amount of class time devoted to each topic</td>
<td>.799</td>
</tr>
<tr>
<td>35</td>
<td>Your exposure to new ideas in the classroom</td>
<td>.774</td>
</tr>
<tr>
<td>25</td>
<td>Overall classroom experiences</td>
<td>.763</td>
</tr>
<tr>
<td>29</td>
<td>Professors’ knowledge of subject</td>
<td>.754</td>
</tr>
<tr>
<td>10</td>
<td>Academic growth during your years at MU</td>
<td>.750</td>
</tr>
<tr>
<td>4</td>
<td>Overall academic experience</td>
<td>.709</td>
</tr>
<tr>
<td>42</td>
<td>Had professors who were supportive of you</td>
<td>.661</td>
</tr>
<tr>
<td>52</td>
<td>How well MU classes prepared you for current job</td>
<td>.657</td>
</tr>
<tr>
<td>36</td>
<td>Reputation of your academic department</td>
<td>.591</td>
</tr>
<tr>
<td>6</td>
<td>How well MU classes prepared you for your career</td>
<td>.588</td>
</tr>
<tr>
<td>31</td>
<td>Openness of classes to diverse opinions</td>
<td>.567</td>
</tr>
<tr>
<td>47</td>
<td>Classroom experiences better than what you expected</td>
<td>.561</td>
</tr>
<tr>
<td>30</td>
<td>Average class size</td>
<td>.529</td>
</tr>
<tr>
<td>2</td>
<td>Your college’s concern for you as an individual student</td>
<td>.442</td>
</tr>
<tr>
<td>43</td>
<td>Felt comfortable expressing your opinions in classes</td>
<td>.409</td>
</tr>
</tbody>
</table>

Number of items = 17  
Cronbach’s Alpha = .943  
Percentage of total variance explained by factor = 30.04%

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Overall social experience</td>
<td>.811</td>
</tr>
<tr>
<td>8</td>
<td>Participation in non-university events</td>
<td>.720</td>
</tr>
<tr>
<td>3</td>
<td>Friendships formed at MU</td>
<td>.704</td>
</tr>
<tr>
<td>7</td>
<td>Participation in university-sponsored events</td>
<td>.603</td>
</tr>
<tr>
<td>23</td>
<td>Associate MU with pleasant experiences</td>
<td>.550</td>
</tr>
<tr>
<td>11</td>
<td>Personal growth during years at MU</td>
<td>.400</td>
</tr>
</tbody>
</table>

Number of items = 6  
Cronbach’s Alpha = .863  
Percentage of total variance explained by factor = 6.12%
Table 6 (contd.)

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor III</td>
<td>Plans to participate in MU alumni activities</td>
<td>.840</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>Plans to make a financial contribution to MU</td>
<td>.699</td>
</tr>
<tr>
<td>Perceived</td>
<td>Plans to stay informed about MU news</td>
<td>.537</td>
</tr>
<tr>
<td>Fit-2 (Present Relationship with MU)</td>
<td>Plans to stay in touch with other MU alumni</td>
<td>.493</td>
</tr>
<tr>
<td></td>
<td>Would you mentor a current student?</td>
<td>.487</td>
</tr>
</tbody>
</table>

Number of items = 5
Cronbach’s Alpha = .791
Percentage of total variance explained by factor = 4.57%

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor IV</td>
<td>Similar views with peers on issues discussed in class</td>
<td>.846</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>Similar views with professors on issues discussed</td>
<td>.814</td>
</tr>
<tr>
<td>Perceived</td>
<td>Life experiences similar with professors</td>
<td>.690</td>
</tr>
<tr>
<td>Fit-3 (Fit within the Classroom)</td>
<td>Similar views with majority at MU</td>
<td>.552</td>
</tr>
<tr>
<td></td>
<td>Missed seeing class members after class was over</td>
<td>.262</td>
</tr>
</tbody>
</table>

Number of items = 5
Cronbach’s Alpha = .773
Percentage of total variance explained = 3.73%

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor V</td>
<td>Opportunities for advancement in current job</td>
<td>.826</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>Satisfaction with current job</td>
<td>.672</td>
</tr>
<tr>
<td>Occupational</td>
<td>Satisfaction with salary</td>
<td>.670</td>
</tr>
<tr>
<td>Attainment</td>
<td>Time it took to obtain your current job</td>
<td>.553</td>
</tr>
<tr>
<td></td>
<td>How well MU experiences prepare you for job</td>
<td>.389</td>
</tr>
</tbody>
</table>

Number of items = 5
Cronbach’s Alpha = .776
Percentage of total variance explained = 2.32%
Factor I was called Satisfaction with Classroom Experiences because items defining the factor described satisfaction with how much was learned from classes, academic rigor of classes and other variables pertaining to satisfaction with the classroom experience. The most interesting aspect of the factor analysis was that the items comprising the area of Perceived fit were reduced to three substantive factors (noted here as Factors II, III, and IV). For ease of interpretation, Factor II was called Satisfaction with Perceived Fit-1 (PF1- Satisfaction with Social Experiences) because items defining the factor described satisfaction with friendships formed at MU, as well as satisfaction with participating in university-sponsored and non-university events. Factor III was called Satisfaction with Perceived Fit-2 (PF2- Present Relationship with MU) because items defining the factor described alumni desire to maintain a relationship with MU thorough participating in alumni activities, making a financial contribution to MU, and staying in touch with MU news and alumni. Factor IV was called Satisfaction with Perceived Fit-3 (PF3- Perceived Fit within the Classroom) because items defining the factor described similarities between the respondent and others in the classroom (classmates, professors) in terms of issues discussed in the class and life experiences. Factor V was called Satisfaction with Occupational Attainment because items defining the factor pertained to occupational satisfaction in terms of job, salary and opportunities for advancement in career.

The five emergent factors were rotated using Promax rotation. Factor rotation is a technique used to aid interpreting of factors by making items load onto as few factors as possible. Promax rotation was selected because the factors were correlated and Promax is
the rotation method applicable to correlated factors. The factor correlation matrix (Table 7) showed that the correlation between factors 1 and 2 was .481, the correlation between factors 1 and 3 was .569, the correlation between factors 1 and 4 was .488 and the correlation between factors 1 and 5 was .267. The strongest factor correlation in the matrix was between factors 2 and 3 ($r = .599$). Factor 5 was weakly correlated with other factors (correlation with factor 1 = .267, with factor 2 = .056, with factor 3 = .150, with factor 4 = .100). With several factors (except factor 5) showing correlations greater than 0.30, a consideration was made about collapsing some of the factors. However, since the reliability of each factor exceeded the minimum .70 and since the items explaining each factor were conceptually meaningful, the decision was made to retain the five factors.

Table 7

<table>
<thead>
<tr>
<th>Factor Correlation Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

Factor scores from the Factor Analysis were saved and used as independent variables in subsequent analyses. The demographic and profile characteristics were entered along with the five factors as independent variables in the regression. Table 8 shows results for the regression model with alumni satisfaction with university experiences as the dependent variable. The model explained 67.4 percent of the variation in the dependent variable. The combination of independent variables in the regression
was significant in explaining the model. Three factors (satisfaction with classroom experiences, PF1-satisfaction with social experiences and PF2-present relationship with MU) were statistically significant in explaining alumni satisfaction with their undergraduate experiences. Two factors (PF3-perceived fit within the classroom, satisfaction with occupational attainment) and demographic and profile characteristics (race, gender, membership in college organizations, cohort graduation year) were not statistically significant in explaining alumni satisfaction with undergraduate experiences.

Table 8

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SEb</th>
<th>Beta</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>-.209</td>
<td>.334</td>
<td>-.023</td>
<td>.532</td>
</tr>
<tr>
<td>Female</td>
<td>.291</td>
<td>.236</td>
<td>.046</td>
<td>.220</td>
</tr>
<tr>
<td>Cohort</td>
<td>-.127</td>
<td>.145</td>
<td>-.034</td>
<td>.384</td>
</tr>
<tr>
<td>Salary Range</td>
<td>-.056</td>
<td>.103</td>
<td>-.023</td>
<td>.586</td>
</tr>
<tr>
<td>College Organizations</td>
<td>-.116</td>
<td>.092</td>
<td>-.047</td>
<td>.209</td>
</tr>
<tr>
<td>Satisfaction with classroom experiences</td>
<td>1.368</td>
<td>.160</td>
<td>.441</td>
<td>.000**</td>
</tr>
<tr>
<td>PF1-Satisfaction with social experiences</td>
<td>.843</td>
<td>.167</td>
<td>.263</td>
<td>.000**</td>
</tr>
<tr>
<td>PF2-Present relationship with MU</td>
<td>.723</td>
<td>.182</td>
<td>.222</td>
<td>.000**</td>
</tr>
<tr>
<td>PF3-Perceived fit within the classroom</td>
<td>.213</td>
<td>.146</td>
<td>.065</td>
<td>.146</td>
</tr>
<tr>
<td>Satisfaction with occupational attainment</td>
<td>.076</td>
<td>.134</td>
<td>.023</td>
<td>.572</td>
</tr>
</tbody>
</table>

** p < .01

Adjusted R² = .674

F ratio  = 53.336

Question 4. *What combination of demographic and profile characteristics, satisfaction with classroom experiences, satisfaction with occupational attainment, and satisfaction*
A multiple linear regression model was used to explain the extent to which alums would choose to attend MU again. The dependent variable in the regression model was the item: Would you choose MU if you had to make the decision again? The independent variables in the model were demographic and profile characteristics (race, sex, membership in college organization, cohort graduation year) and five factors (satisfaction with classroom experiences, satisfaction with social experiences, present relationship with MU, perceived fit within the classroom and satisfaction with occupational attainment). Table 9 shows results for the regression model with the decision to choose MU again as the dependent variable. The model explained 46.5 percent of the variation in the dependent variable. The combination of independent variables in the regression was significant in explaining the model. Three factors (satisfaction with classroom experiences, PF1-satisfaction with social experiences and PF2-present relationship with MU) were statistically significant in explaining whether alumni would choose MU if they had to make the decision again. Two factors (PF3-perceived fit within the classroom, satisfaction with occupational attainment) and demographic and profile characteristics (race, gender, membership in college organizations, cohort graduation year) were not statistically significant in explaining alumni satisfaction with undergraduate experiences. Race was coded as a dummy variable to reflect the effect of being White; gender was coded as a dummy variable to reflect the effect of being female; membership in college organizations and cohort graduation year were treated as interval variables.
### Table 9

**Would You Choose MU If You Had to Make the Decision Again?**

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE_b</th>
<th>Beta</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>.223</td>
<td>.131</td>
<td>.081</td>
<td>.091</td>
</tr>
<tr>
<td>Female</td>
<td>.040</td>
<td>.093</td>
<td>.021</td>
<td>.665</td>
</tr>
<tr>
<td>Cohort</td>
<td>.036</td>
<td>.057</td>
<td>.032</td>
<td>.528</td>
</tr>
<tr>
<td>Salary Range</td>
<td>.048</td>
<td>.057</td>
<td>.064</td>
<td>.234</td>
</tr>
<tr>
<td>College Organizations</td>
<td>-.060</td>
<td>.036</td>
<td>-.078</td>
<td>.101</td>
</tr>
<tr>
<td>Satisfaction with classroom experiences</td>
<td>.276</td>
<td>.063</td>
<td>.290</td>
<td>.000**</td>
</tr>
<tr>
<td>PF1-Satisfaction with social experiences</td>
<td>.160</td>
<td>.066</td>
<td>.162</td>
<td>.015**</td>
</tr>
<tr>
<td>PF2-Present relationship with MU</td>
<td>.301</td>
<td>.071</td>
<td>.301</td>
<td>.000**</td>
</tr>
<tr>
<td>PF3-Perceived fit within the classroom</td>
<td>.054</td>
<td>.057</td>
<td>.054</td>
<td>.345</td>
</tr>
<tr>
<td>Satisfaction with occupational attainment</td>
<td>-.005</td>
<td>.053</td>
<td>-.005</td>
<td>.921</td>
</tr>
</tbody>
</table>

** p < .01  
Adjusted R² = .465  
F ratio = 22.999

**Question 5.** *What combination of demographic and profile characteristics, satisfaction with classroom experiences, satisfaction with occupational attainment, and satisfaction with perceived fit within the university community explains the extent to which alums would recommend MU to potential students?*

A multiple linear regression model was used to explain the extent to which alums would recommend MU to potential students. The dependent variable in the regression model was the item: Would you recommend MU to potential students? The independent variables in the model were demographic and profile characteristics (race, sex, membership in college organization, cohort graduation year) and five factors (satisfaction with classroom experiences, satisfaction with social experiences, present relationship with MU, perceived fit within the classroom and satisfaction with occupational attainment). Table 10 shows results for the regression model with the decision to
recommend MU to potential students as the dependent variable. The model explained 53.4 percent of the variation in the dependent variable. The combination of independent variables in the regression was significant in explaining the model. Four factors (satisfaction with classroom experiences, PF1-satisfaction with social experiences, PF2-present relationship with MU and satisfaction with occupational attainment) were statistically significant in explaining whether alumni would recommend MU to potential students. One factor (PF3-perceived fit within the classroom) was not statistically significant in explaining the model. None of the demographic and profile characteristics (race, gender, membership in college organizations, cohort graduation year) was statistically significant in explaining alumni/ae decision to recommend MU to potential students.

Table 10

Would You Recommend MU to Potential Students?

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE_b</th>
<th>Beta</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>.072</td>
<td>.106</td>
<td>.030</td>
<td>.500</td>
</tr>
<tr>
<td>Female</td>
<td>.049</td>
<td>.075</td>
<td>.029</td>
<td>.517</td>
</tr>
<tr>
<td>Cohort</td>
<td>-.007</td>
<td>.046</td>
<td>-.007</td>
<td>.877</td>
</tr>
<tr>
<td>Salary Range</td>
<td>.006</td>
<td>.033</td>
<td>.009</td>
<td>.856</td>
</tr>
<tr>
<td>College Organizations</td>
<td>-.001</td>
<td>.029</td>
<td>-.001</td>
<td>.977</td>
</tr>
<tr>
<td>Satisfaction with classroom experiences</td>
<td>.303</td>
<td>.051</td>
<td>.368</td>
<td>.000**</td>
</tr>
<tr>
<td>PF1 Satisfaction with social experiences</td>
<td>.217</td>
<td>.053</td>
<td>.255</td>
<td>.000**</td>
</tr>
<tr>
<td>PF2-Present relationship with MU</td>
<td>.185</td>
<td>.058</td>
<td>.326</td>
<td>.001**</td>
</tr>
<tr>
<td>PF3-Perceived fit within the classroom</td>
<td>.054</td>
<td>.046</td>
<td>.062</td>
<td>.245</td>
</tr>
<tr>
<td>Satisfaction with occupational attainment</td>
<td>-.085</td>
<td>.043</td>
<td>-.097</td>
<td>.046*</td>
</tr>
</tbody>
</table>

** p < .01
* p < .05
Adjusted $R^2 = .534$
F ratio = 30.045
Summary

In this chapter, the extent to which satisfaction with undergraduate classroom experiences, with occupational attainment and with perceived fit within the university community may have influenced alumni satisfaction with their undergraduate experiences at University of Missouri-Columbia (MU) was examined. First, demographic and profile characteristics of the population and respondents were presented. The second section focused on the research questions that guided this study. Findings were presented for each of the research questions. Procedures that were used for findings included descriptive statistics, analyses of variances (ANOVA), correlation models, Factor Analyses and multiple regression models. In Chapter Five, implications of the results will be discussed in relation to the current and substantive literature and theoretical framework.
CHAPTER FIVE

Discussion and Conclusions

Introduction

The purpose of this study was to examine the extent to which satisfaction with undergraduate classroom experiences, with occupational attainment and with perceived fit within the university community influenced alumni satisfaction with their undergraduate experiences at University of Missouri-Columbia (MU). The outcome variable, alumni satisfaction, was conceptualized to be reflected in overall satisfaction with undergraduate experiences, in choosing to attend MU if alumni had to make the decision again, and in recommending MU to potential students. Furthermore, this study investigated how levels of alumni satisfaction varied with these demographic and profile characteristics: racial identification, membership in college organizations and year of graduation. The purpose of this chapter is to discuss the findings of the study within the context of the previous literature and theory, and then provide implications for theory, practice and policy. Finally the limitations, conclusions, and summary of the study will be presented.

Overview of the Study

This study was based on the premise that alumni who were satisfied with their university experiences benefited their alma mater through various activities. The
beneficial activities included alumni donations, mentorship of current students and attendance at university events. Other ways in which alumni expressed satisfaction were recommending the university to others (e.g., Chadwick & Ward, 1987; McAlexander & Koenig, 2001), stating they would choose their alma mater if they had to make the choice again (e.g., Volkwein & Bian, 1999) and a general statement of satisfaction with overall university experiences (e.g., Bowen, 1977; Kuh, 2005).

While studies showed most alums were satisfied with their university experiences, studies did not always discuss the particular variables that explained alumni/ae satisfaction. Some studies did focus on particular areas of alumni satisfaction for example, classroom experiences (Graham & Gisi, 2000; Volkwein & Cabrera, 1998), occupational attainment (Pike, 1994; Volkwein & Bian, 1999) and perceived fit (Mishler, 1983; McAlexander & Koenig, 2001). Other studies focused on the roles of demographic and profile characteristics, for example, race (Roper, 1999; Umbach & Porter, 2002), membership in college organizations (Chadwick & Ward, 1987; Hartley & Berkowitz, 1983) and cohort graduation year (McAlexander & Koenig, 2001; Keyes & Hogberg, 1990).

To analyze alumni/ae satisfaction, and more specifically, the contributions of satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community, the conceptual framework of higher education as a consumption good was used. The consumption good model has been used in various studies by Hartman and Schmidt (1995), Chadwick & Ward (1987) and Copeland, Hewson and Weiker (1998) to study alumni satisfaction. Using the theoretical concept that alumni view higher education as a consumption good and using three
concepts that defined alumni satisfaction (overall satisfaction, choosing alma mater if
decision had to be re-made, recommending alma-mater to potential students), this study
attempted to discuss how alumni satisfaction with classroom experiences, with
occupational attainment, and with perceived fit within the university community
explained overall satisfaction with university experiences. The expectation was that
results of this study would be of interest to alumni affairs departments, recruitment
officers, university administrators and classroom faculty.

Research Findings

Five research questions guided this study. Associated with each research question
was a hypothesis about the expected finding. Findings for the research questions within
the context of the previous literature and theory are presented in the following section.

Question 1. Is there a significant difference between members of the predominant racial
group and members of minority racial groups regarding their satisfaction with classroom
experiences, with occupational attainment, and with perceived fit within the university
community?

This study found that there were significant differences between the predominant
racial group (White/Caucasians) and minority racial groups in terms of their satisfaction
with classroom experiences and with perceived fit within the university community.
Satisfaction with classroom experiences was described by seventeen areas of classroom
experiences. Of these seventeen, satisfaction levels between Whites and African
Americans were significantly different in two areas: relationship with peers and sense of
belonging in the classroom. Whites were more satisfied with their relationships with peers than were African Americans. This finding was consistent with the hypothesis that members of the predominant racial group would be more satisfied with their classroom experiences than would members of the minority racial group. This finding was also consistent with literature (e.g., Allen, 1992) that African Americans who attended predominantly White institutions would be less satisfied with their classroom experiences than their White counterparts. Another literature that supported this finding was about the classroom experiences of the first African American male and female to graduate from MU’s College of Business (Yount, 2002). Marion Holmes, who was the first African American male to receive a degree from MU’s College of Business, recalled his classroom experience as one in which “the students ignored him as well as most of the professors” (Yount, 2002, May 3, para. 15). The second area with significantly different ratings between Whites and African Americans was the ‘sense of belonging in the classroom.’ Whites were more likely to express a sense of belonging in the classroom than were African Americans. Because “sense of belonging in the classroom” was a component of satisfaction with classroom experiences, this finding was consistent with the hypothesis that members of the predominant racial group would be more satisfied with their satisfaction with classroom experiences than members of minority racial groups. This finding was also consistent with literature by Thomas and Galambos (2004) and Mael and Ashforth (1992) about sense of belonging in institutions. Thomas and Galambos (2004) had found sense of belonging to be the most important issue explaining overall alumni satisfaction.
Of the seventeen areas that described satisfaction with classroom experiences, Whites were significantly different from Asian Americans in one area: exposure to new ideas. Whites were more satisfied with their exposure to new ideas than were Asian Americans. This finding was consistent with the hypothesis that members of the predominant racial group would be more satisfied with their classroom experiences than would members of the minority racial group. One literature that had specifically contrasted the experiences of Asian Americans and Whites was by Toutkoushian and Smart (2001). Using national data compiled by University of California’s Higher Education and Research Institute, Toutkoushian and Smart (2001) found that “Asian students reported lower gains than students in other race/ethnicity categories in their learning/knowledge” (p. 53). In the fourteen other areas of satisfaction with classroom experiences, there were no significant differences in levels of satisfaction between the predominant racial group and any of the minority racial groups.

In the second area of alumni satisfaction, satisfaction with occupational attainment, there were no significant differences among racial groups. This meant that levels of satisfaction with various aspects of occupational satisfaction – type of job, opportunities for advancement in job, present salary – were similar for all alumni, regardless of racial affiliation. This finding was contrary to what was hypothesized. The researcher expected members of the predominant racial group to report higher levels of satisfaction with occupational attainment than levels reported by members of minority racial groups. One aspect of occupational attainment was satisfaction with salary. With regard to salaries, Pascarella and Terenzini (1991) showed that the relative earnings benefits of African Americans who obtained baccalaureate degrees had been increasing
since the 1970s. The authors hypothesized that the increase might be due to public policies, for example, equal opportunity laws and affirmative action policies that might have benefitted minorities. However, the authors noted that the trend just meant that the pay gap between Whites and African Americans was decreasing and it did not mean that average salaries were equal for all racial groups.

In the third area of alumni satisfaction, satisfaction with perceived fit within the university community, there were two items that showed significant differences among racial groups. The first item was the response to the question “As an MU student, did you feel your views were similar to the views of the majority?” The finding was that Whites/Caucasians were more likely to respond “Yes” to the question than were Blacks/African Americans. This finding was consistent with the hypothesis that members of the predominant racial group would have higher levels of satisfaction with perceived fit within the university community than would members of the minority racial group. The finding was also supported in the literature by Allen, Epps and Haniff (1991) and DeSousa and Kuh (1996) which found that African Americans who studied at predominantly white institutions often experienced isolation and lack of connection with others on campus. An example of this isolation was well noted by one of the first African Americans to attend the University of Georgia, Hamilton Holmes, who “reported that on occasion he would go entire days without anyone on campus saying one word to him” (Slater, 1996, p. 77).

The second item where Whites and minorities differed in their responses was the response to the question: Do MU traditions influence your feelings of connectedness to the university?” Whites were more likely to acknowledge the influence of MU traditions
than were African Americans or Asian Americans. This finding was consistent with the hypothesis that members of the predominant racial group would express more satisfaction with perceived fit than would members of minority racial groups. The word “traditions” may have different connotations for members of the predominant race and members of minority racial groups. In addition to differences in interpretations of “traditions”, racial minorities are still a relatively new group of alums in many universities. For example, the first African Americans to graduate from University of Missouri-Columbia graduated as recently as 1957 (Slater, 1996). Being a new group, racial minorities might not be steeped in their university’s traditions or they might find aspects of their university’s tradition unappealing. The objection by racial minorities to aspects of a university’s tradition is supported by literature about Legion of Black Collegians, a group set up to support African American students on the University of Missouri-Columbia campus (Sanusi, 2001). The Legion of Black Collegians had objected to aspects of MU traditions in which nostalgia was expressed for periods when slavery was practiced. One of MU’s traditions was that, at football games, before the game started and after every touchdown, a confederate flag would be carried around the stadium. This tradition continued until the 1970s (University of Missouri-Columbia, Black Alumni Association, 1994). Another MU tradition was that during halftime of football games, MU’s marching band would play a song “Dixie,” the lyrics of which advocated for a return to the period when slavery was legal (Grant, 1970).

Question 2. To what extent are the three outcome variables (i.e., alumni satisfaction with undergraduate experiences, decision to attend MU again, likelihood of
recommending MU to potential students) related to satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community?

Relations between each of the three outcome variables and satisfaction with classroom experiences, satisfaction with occupational attainment and satisfaction with perceived fit within the university community were analyzed. The first outcome variable was a global measure of alumni satisfaction. The relations between the overall alumni satisfaction and with each aspect of “satisfaction with classroom experiences” were positive; this finding was consistent with the hypothesis. Studies about alumni satisfaction (e.g., Volkwein & Cabrera, 1998; Graham & Gisi, 2000; Blake, 1971) have emphasized how strongly and positively connected classroom experiences were to alumni satisfaction. Another issue of interest was which aspects of “satisfaction with classroom experiences” had stronger relationships with overall alumni satisfaction and which aspects had weaker relationships? The finding was that “satisfaction with overall classroom experiences” had the strongest connection to alumni satisfaction and “satisfaction with relationships with professors” had the weakest connection with overall alumni satisfaction. The finding that satisfaction with relationships with professors was not strongly related to satisfaction with classroom experiences was incongruent with the work of Volkwein and Cabrera (1998) who found satisfaction with relationships with professors to be the strongest indicator of satisfaction with classroom experiences. However, studies by Cornelius, Gray and Constantinople (1990) and Miglietti and Strange (1998) found that relationships with peers were more important than relationships with professors provide support for the findings of this study. A review of
literature undertaken by Hartman and Schmidt (1995) had also revealed satisfaction with relationships with peers to be the most important issue influencing alumni satisfaction.

Relations between alumni satisfaction and ‘satisfaction with occupational attainment’ were also positive and significant. This finding supported the hypothesis that satisfaction with university experiences would be positively associated with satisfaction with occupational attainment. This finding was consistent with findings from studies by Pike (1994) and Mishler (1983) about the relationship of alumni satisfaction and work experiences. Pike had noted that “alumni who were satisfied with their jobs were more likely to be satisfied with their college experiences, while alumni who were not satisfied with their jobs tended to be dissatisfied with college” (p. 107). The researcher also examined the extent to which alumni/ae satisfaction was strongly connected to satisfaction with occupational attainment. The finding was that satisfaction with opportunities for advancement in alums’ current job had the strongest connection and satisfaction with current job had the weakest connection.

Relationships between alumni satisfaction and perceived fit within the university community’ were also positive and significant. This finding was consistent with the hypothesis that satisfaction with university experiences would be positively associated with satisfaction with perceived fit within the university community. Studies by McAlexander and Koenig (2001), Gaier (2005), Delaney (2004), and Gallo and Hubschman (2003) have discussed how perceived fit within the university community related positively with alumni satisfaction. Gwinner and Beltramini (1995) found a positive relationship between how likely alumni were to participate in university activities (an issue related to perceived fit) and alumni/ae satisfaction with university
experiences. Further examination of the strengths of relationships in this study showed that satisfaction with “Your college’s concern for you as an individual student” was the issue that was most strongly attached to alumni satisfaction and the likelihood of alums mentoring a current MU student was the issue least strongly attached to alumni/ae satisfaction.

The second outcome variable was “Would you choose MU if you had to make the decision again?” Relations between this outcome variable and three areas of alumni/ae satisfaction were computed. The first relation was between decision to attend MU again and satisfaction with classroom experiences. The finding was that the relation between the two was positive and significant. This finding was evidence to support the hypothesis that the decision to attend MU again would be positively associated with satisfaction with classroom experiences. Examination of the relations showed that satisfaction with overall classroom experiences had the strongest connection to attending MU again and satisfaction with relationships with professors had the weakest connection with attending MU again. This finding was supported by Volkwein and Bian (1999) who had found satisfaction with classroom experiences to be strongly and positively related to the decision to attend the same institution again.

There were no significant relations between attending MU again and satisfaction with occupational attainment. While the relations were all positive, the strength of the relations was minimal at best. This finding was surprising as the researcher expected the relations to be positive and significant.

Relations between attending MU again and with satisfaction with perceived fit within the university community were positive and significant. This finding was
consistent with the hypothesis that choosing to attend MU again would be positively associated with satisfaction with perceived fit within the university community. Analysis of the relations showed that the desire to stay informed about MU news was the issue most strongly allied to the decision to choose MU if one had to make that decision again and the desire to mentor a current student was the issue most weakly allied to choosing MU if alums had to make the decision again.

The third outcome variable was “Would you recommend MU to potential students?” Relationships between this outcome variable and three areas of alumni satisfaction were analyzed. The first relation was between recommending MU to potential students and satisfaction with classroom experiences. The finding was that the relationship was positive and significant. This was supported by the proposed hypothesis that recommending MU to potential students would be positively associated with satisfaction with classroom experiences. Examination of the relations showed that satisfaction with overall classroom experiences had the strongest connection with recommending MU and satisfaction with relationships with professors had the weakest connection with recommending MU. Relationship with professors was significantly related with recommending alma mater to others but was less related than other issues were to recommending alma mater. This finding was inconsistent with the study by Chadwick and Ward (1987) that found relationships with professors to be the second strongest influence explaining decision to recommend alma mater. However, while this study was of alums who graduated from all academic departments from one university, Chadwick and Ward’s study was of business school alums who graduated from one large university in the Midwest.
There were no significant relations between recommending MU and satisfaction with occupational attainment. While the relations were all positive, they were non-significant. This finding was surprising as the researcher expected the relations to be positive and significant. Previous literature also supported the hypothesis of a positive relationship between recommending alma mater to potential students and satisfaction with occupational attainment. McGuire and Casey (1999) noted in their descriptive study, containing data from 46 institutions located in one state, that most alumni who would recommend their alma mater to others were also satisfied with their occupational attainment.

Relations between recommending MU to potential students and with ‘Satisfaction with perceived fit within the university community’ were positive and significant. This finding was consistent with the hypothesis that recommending MU to others would be positively associated with satisfaction with perceived fit within the university community. This finding was also consistent with the literature (e.g., Mael & Ashforth, 1992) about the relationship of perceived fit within the university to the decision to recommend the alma mater to others. Analysis of the relations showed that satisfaction with “Your college’s concern for you as an individual” had the strongest relation with recommending MU to others and likelihood of mentoring a current student had the weakest relation with recommending MU to others.

Question 3. What combination of demographic and profile characteristics (i.e., race, membership in college organizations, time since graduation), satisfaction with classroom experiences, satisfaction with occupational attainment, and satisfaction with perceived fit
within the university community explains overall alumni satisfaction with undergraduate experiences?

A regression model was used to explain overall alumni/ae satisfaction with undergraduate experiences. The model included five factors -- satisfaction with classroom experiences, satisfaction with perceived fit-PF1 (social experiences), satisfaction with perceived fit-PF2 (present relationship with MU), satisfaction with perceived fit-PF3 (fit within the classroom) and satisfaction with occupational attainment and profile characteristics of respondents as issues which might explain overall alumni satisfaction with undergraduate experiences. Findings from the analysis showed that satisfaction with classroom experiences, satisfaction with perceived fit-PF1, and satisfaction with perceived fit-PF2 were significant in explaining overall alumni satisfaction. Partial support of the findings were noted in the literature by Hartley and Berkowitz (1983) which had found that membership in alumni association was an affiliation that explained overall alumni satisfaction. Similarly, partial support of the findings was noted in the literature by Volkwein and Cabrera (1998) and Gallo and Hubschmann (2003). Volkwein and Cabrera (1998) and Gallo and Hubschmann (2003) found that satisfaction with classroom experiences was important in explaining alumni satisfaction. Studies by Ness (2003) supported findings of the study in the area of importance of satisfaction with classroom experiences and satisfaction with perceived fit-PF1. Consistent with findings of this study, Ness (2003) found that satisfaction with classroom experiences was more important than satisfaction with perceived fit-PF1 in explaining alumni satisfaction. More specifically, Ness (2003) found that the data collected from alumni in five different institutions revealed that satisfaction with classroom experiences had “four times the
effect of any other variable” (p. 18). Also consistent with findings for this study, Ness did not find race to be an important issue explaining alumni satisfaction. Perceived fit within the classroom, satisfaction with occupational attainment and all of the demographic and profile characteristics (race, membership in college organizations, length of time since graduation) were not significant in explaining overall satisfaction.

Another finding was that satisfaction with instruction was the most important variable explaining overall alumni satisfaction with undergraduate experiences. The strong influence of satisfaction with instruction is consistent with the findings by Delaney (2005) who had examined the relative contribution of issues influencing alumni satisfaction. In a comparison of the relative contribution of two areas of alumni satisfaction, Graham and Gisi (2000) found satisfaction with instruction to be a stronger influence on alumni satisfaction than satisfaction with student services.

Findings from this model contradicted the hypothesis that belonging to the predominant racial group, membership in college organizations and long duration of time since graduation would be significant variables explaining overall satisfaction with undergraduate experiences. Previous literature had found that profile characteristics to be important in explaining alumni satisfaction. For example, Delaney (2004) compared alumni satisfaction levels between two graduation years and found earlier graduates were more satisfied with their experiences than more recent graduates which made Delaney suggest that “perhaps alumni may regard their college experiences more favorably after a few years of work experience “ (p. 98). Belcheir (2002) compared satisfaction by cohort graduation year using a ten-year span (1992 to 2001) of graduates from one university.
Belcheir’s finding was consistent with Delaney’s finding that earlier graduates were more satisfied than more recent graduates.

Question 4. What combination of demographic and profile characteristics, satisfaction with classroom experiences, with occupational attainment, and with perceived fit within the university community explains the extent to which alums would choose to attend MU again?

A regression model was used to explain the decision to choose the alma mater again if alums had to make that choice. There were three issues that were significant in explaining the choice: satisfaction with classroom experiences, satisfaction with perceived fit-PF1 (social experiences) and satisfaction with perceived fit-PF2 (present relationship with MU). Two issues -- satisfaction with perceived fit-PF3 (fit within the classroom) and satisfaction with occupational attainment and profile characteristics of respondents (race, membership in college organizations, length of time since graduation) were not significant in explaining the decision to choose MU if alums were faced with that decision. The findings of the model were mixed in terms of the related hypothesis. The findings that satisfaction with classroom experiences, satisfaction with perceived fit-PF1 and satisfaction with perceived fit-PF2 were significant in explaining the model were consistent with the hypothesis. The non-significance of satisfaction with perceived fit-PF3, satisfaction with occupational attainment, and demographic and profile characteristics (race, sex, membership in college organizations, cohort graduation class) was contrary to the hypothesis. The finding about the importance of satisfaction with classroom experiences in explaining decision to attend institution again was supported by
literature by Volkwein and Bian (1999) and Graham and Gisi (2000). Volkwein and
Bian found that the most important area influencing willingness to attend the same
institution again was satisfaction with classroom experiences. Part of the findings of this
study were inconsistent with the previous literature. Volkwein and Bian (1999) found that
satisfaction with occupational attainment was an issue that was important in explaining
whether alumni of State University of New York –Albany (SUNY – Albany) would
chose to attend SUNY-Albany if they had to make the decision again. Another part of
the findings refuted by literature was the effect of length of time since graduation.
Gillmore (1991) compared satisfaction between alumni who graduated ten years prior to
the study and alumni who graduated five years prior to the study. Gillmore found that,
“generally, the differences between the two groups were not large, but in every case, the
five year alumni gave higher ratings than the ten year” (p. 5).

Question 5. *What combination of demographic and profile characteristics, satisfaction
with classroom experiences, with occupational attainment, and satisfaction with
perceived fit within the university community explains the extent to which alums would
recommend MU to potential students?*

A regression model was used to explain the decision to recommend MU to
potential students. The model included five factors (satisfaction with classroom
experiences, satisfaction with perceived fit-PF1, satisfaction with perceived fit-PF2,
satisfaction with perceived fit-PF3, and satisfaction with occupational attainment) and
profile characteristics of respondents (race, sex, membership in college organizations,
graduation year) as issues that might explain the decision to recommend MU to potential
students. Findings from the regression showed that satisfaction with classroom experiences, satisfaction with perceived fit-PF1, satisfaction with perceived fit-PF2 and satisfaction with occupational attainment were significant in explaining alumni decision to recommend MU to potential students. Satisfaction with perceived fit-PF3 and all of the demographic and profile characteristics (race, membership in college organizations, length of time since graduation) were not significant in explaining overall satisfaction.

The significance of satisfaction with classroom experiences was supported by Chadwick and Ward (1987) who found that satisfaction with classroom experiences was the second most important issue explaining decision to recommend alma mater to others. Partial support of the findings in this model were supported by McAlexander and Koenig (2001) and Delaney (2004) who found satisfaction with perceived fit-PF1 (social experiences) to be an important issue explaining the decision to recommend one’s alma mater to others. Another finding that was supported by literature was the insignificance of the length of time since graduation. Mael and Ashforth (1992) had found that alumni satisfaction was not significantly different between alumni who graduated in different years.

Some aspects of the findings of this model were unexpected, especially the negative relationship between satisfaction with occupational attainment and recommending MU to others. One of the findings of this study was satisfaction with occupational attainment was barely significant in explaining the decision to recommend alma mater to others, and moreover, the more satisfied alums were with their occupational attainment, the less likely they were to recommend MU to potential students. This finding was contrary to the findings from previous studies by Hartmann
and Schmidt (1995) and Chadwick and Ward (1987) that had found occupational-related
issues as the most important variable explaining the decision to recommend alma mater
to others.

Implications for Theory

The conceptual model that was used to frame this study was that alumni view
higher education as consumption good. In evaluation of this model, several issues were
considered: did the model provide good explanations for alumni satisfaction? Was the
model able to separate the relative effects of satisfaction with classroom experiences,
with occupational attainment and with perceived fit? Do the findings imply demographic
and profile characteristics are not important?

The responses to all of the above questions support the use of the conceptual
model, higher education as a consumption good. The model used in the study provided
good explanations of alumni satisfaction. The three regression models were very useful in
explaining issues influencing the outcomes of interests. What made the models most
useful was their ability to clearly distinguish between the three outcomes (overall alumni
satisfaction, decision to attend alma mater again, decision to recommend alma mater to
others) in terms of issues explaining the outcomes. The three outcomes are issues that are
often considered in evaluating satisfaction with tangible products. For example, if one
purchased a vehicle, evaluation of satisfaction with the purchase might entail asking the
buyer: were you satisfied with the automobile? Would you choose the same automobile if
you had to make the decision again? Would you recommend the automobile to potential
buyers? The three outcome models in this study were just a rephrase of the satisfaction
questions in the context of higher education. Findings of the first outcome model – alumni satisfaction with undergraduate experiences – was the model that was most supported by the consumption good conceptual model. Findings of the other two outcome models – choosing MU again and recommending MU – were also supported by the consumption good conceptual model.

The concept of viewing higher education as a consumption good places emphasis on relationships. Extant literature has discussed the importance of relationships in explaining alumni satisfaction. Graham and Gisi (2002) discussed how “interactions with peers whose values match those of the institution, and how ‘connected’ the students feel to the campus all support students’ development in college” (p. 280). These interactions and connections are the crux of relationships in a consumer goods frame.

The theoretical concept of alumni satisfaction as a consumption good does not address specifically difference in satisfaction by racial groups. However, the theory is based on the effect of a performance variable. The performance variable pertains to relations between agents: in the context of alumni studies, performance entails interactions between alumni and peers, professors and other agents of the university. To the extent that satisfaction with these interactions differ by race, and that members of the predominant racial group are more satisfied by the interactions, alumni satisfaction would be expected to differ by race; thus the hypothesis for the research question was that alumni who belonged to the predominant racial group would be more satisfied with alumni satisfaction than alumni from minority racial groups.

The model was able to separate the relative effects of satisfaction with classroom experiences, with occupational attainment and with perceived fit. The researcher
conceptualized that issues influencing alumni satisfaction would be explained by three areas of satisfaction: satisfaction with classroom experiences, with occupational attainment and with perceived fit within the university community. When the data analysis was conducted, issues explaining satisfaction with classroom experiences and with occupational attainment emerged as conceptualized. However, the factor analysis further refined the issues explaining satisfaction with perceived fit into three [factor] components (PF1, PF2, PF3). One component explained satisfaction with social experiences, the second component explained present relationship with the alma mater, and the third component explained perceived fit within the classroom. Four of the five issues that emerged from the analysis (satisfaction with classroom experiences, satisfaction with perceived fit-PF1 (social experiences), satisfaction with perceived fit PF-2 (present relationship) and satisfaction with occupational attainment were useful in varying degrees. There was only one issue – satisfaction with perceived fit PF-3 (fit within the classroom) that did not contribute much to our understanding of the three outcomes.

An interesting aspect of this study indicated that demographic and profile characteristics were non-significant in explaining the three outcome models. One explanation for this finding is that the other issues had explained so much of the model that there wasn’t much that the demographic and profile characteristics could add to the explanation. Even after outcome models were analyzed with demographic and profile characteristics as the only issues explaining outcomes, the demographic and profile characteristics were still not significant in explaining outcomes. Another explanation for the non-significance of the profile characteristics is that demographic and profile
characteristics might not have direct relationships with the outcomes; they might be characteristics indirectly influencing the outcomes.

Alumni satisfaction as a consumption good is composed of three components: performance, outcome, satisfaction. “Performance” is described by interactions between the alumni and agents of the alma mater: peers, professors, organizations. One of the assumptions of the consumption good concept was that performance could make a direct impact on satisfaction, without acting through any intermediate issue. This direct connection was useful in studying direct relations between outcomes of interest and satisfaction with classroom experiences, with occupational attainment and with perceived fit within the university community.

The conceptual model of higher education as a consumption good especially in the emphasis it places on relationships was very useful in understanding alumni satisfaction. Relationships such as those between alumni and peers, alumni and professors, alumni and college organizations, and alumni and university activities could be, and were, studied in the context of the model. The consumption good model was also useful in its basis on perceptions; thus, alumni perceptions about various experiences could be used as the basis for the study.

Implications for Practice and Policy

Findings from this study have implications for practice and policy which can be extended to classroom practices, university events and alumni relations. The implications could be viewed under the three areas of alumni satisfaction (i.e., satisfaction with
classroom experiences, with occupational attainment, and with perceived fit within the university community) that guided this study.

Satisfaction with Classroom Experiences

There were three outcome variables – all measuring alumni satisfaction with university experiences. The models for each of these outcome variables (overall satisfaction with undergraduate experiences, choosing MU if you had to make the decision again, recommending MU to others) revealed that satisfaction with classroom experiences was the most important variable explaining satisfaction. Satisfaction with classroom experiences was described by how much you learned from college classes, academic rigor or challenge of classes and amount of class time devoted to each topic. The findings underscored the importance of academic satisfaction – even in a study that emphasized satisfaction with affective issues. Another finding of this study was that there was a significant difference between Whites/Caucasians and Blacks/African Americans in terms of satisfaction with relationships with class peers. Another racial disparity in classroom issues was that Whites were more likely to feel a sense of belonging in the classroom than were African Americans. Classroom instructors should be mindful of how relationships develop in class and what roles faculty could play in fostering positive relationships among all class members.

Asian Americans were less satisfied with exposure to new ideas in the classroom than were Whites/Caucasians. The implication for practice, especially in classrooms with sizeable number of minorities, might be for instructors to use more diverse teaching practices e.g., group work to tap into the various experiences of class members.
Satisfaction with Occupational Attainment

The university, per se, does not control events in the occupational field, which might explain findings of weaker correlations between occupational satisfaction and overall alumni satisfaction than between satisfaction with classroom experiences and overall alumni satisfaction. However, the university prepares alumni for the workforce – in cognitive areas like subject and skill development and in affective areas like building relationships with others (teamwork in classes, leadership and participation in university organizations, etc.). From this study, there was no strong implication for practice as the correlation between attending MU again and satisfaction with occupational attainment was positive but not strong enough to generate implications. Also, correlations between recommending MU to potential students and satisfaction with occupational attainment were not statistically significant.

Satisfaction with Perceived Fit within the University Community

Satisfaction with perceived fit was an important issue that emerged from the findings of this study. When 47 items were subjected to a factor analysis, five components or factors emerged. Three of these five component areas were associated with perceived fit: perceived fit within the university, present relationship with MU and perceived fit within the classroom. Also, when regression models were used to explain outcomes, in all three outcome models, present relationship with MU emerged as a significant issue explaining overall alumni satisfaction with undergraduate experiences, decision to attend MU again, and decision to recommend MU to others. Having
established the importance of perceived fit to overall alumni satisfaction with undergraduate experiences, specific areas of perceived fit could be analyzed.

One area of perceived fit was role of MU traditions. Alumni from the predominant racial group were most influenced by the role of MU traditions. Alumni from two racial groups (African Americans and Asian Americans) were significantly less influenced by MU traditions than were Whites. This difference might reflect the history of the institution in that African Americans and Asian Americans only recently started to graduate from the institution. Another area of perceived fit was desire to mentor a current student. In correlations with each of the outcome variables, desire to mentor a current student was statistically significant but was the weakest correlation with the outcome variable. The nature of this study was not exhaustive enough to explore whether other obligations, geographical distance from the college campus, a lack of desire to make such a personal commitment or some other reason contributed to the weak correlations.

One of the issues that emerged from the findings was the importance of alumni’s present relationship with their alma mater. This is an area that the alumni association could build. Marketing models that inform this study often emphasize building relationships with clients. The clients (alumni) are greatly influenced by activities that make them interact with agents of the university so the MU Alumni Association might consider sponsoring more diverse alumni activities not only on campus but also in other locations where alumni reside.
Limitations of the Study

This study explored three aspects of alumni satisfaction: satisfaction with overall undergraduate experiences, decision to attend MU again, and decision to recommend MU to others. While comprehensive in its scope, this study was lacking in number of participants sufficient enough to generalize findings. Thus, the findings of this study are limited to the graduation years selected for the study and to the participants in this study. The response rate for the pilot study was 23 percent while the response rate for this study was 17 percent. One speculation for the comparatively low response rate for this study is the tone of the cover letter inviting participation in the study. The pilot study was exempt from the university’s Institutional Review Board (IRB)’s regulations and the invitation letter may have been more inviting to potential participants than the IRB-approved invitation letter for this study.

Recommendations for Future Research

This study was an exploratory study in determining factors that explained alumni satisfaction with undergraduate experiences. Future related research could focus on:

1. Confirmatory Factor Analysis. Confirmatory factor analysis is conducted after exploratory analyses and it confirms whether the factors that emerged from the exploratory study were indeed factors that should have emerged.

2. Alumni satisfaction for graduation years different from those selected for this study might be explored. Results could be compared from the different studies.
3. This study was limited to alumni who received no more than a baccalaureate degree from MU. Another study might focus on alumni who received graduate and professional degrees. Results from the different degree programs could be compared.

4. In this study, differences among racial groups was conceptualized as differences between members of the predominant racial group and members of the minority racial group s. Other studies could conduct a minority-to-minority comparison. For example, is alumni satisfaction explained by different factors for African Americans and Asian Americans?

5. Within one graduation class, college-to-college comparison studies could be conducted. For example, a future study could compare alumni satisfaction between alumni of the College of Education and alumni of the College of Engineering.

6. Future research should ask respondents if they attended other institutions before they graduated from MU. Responses of alums who attended other institutions should be compared with those of alums who only attended MU.

Summary and Conclusions

Alumni could be positive ambassadors for their alma mater. The relationships nurtured during the years alumni attended the university could blossom after graduation into donations to alma mater, involvement in alumni activities or promotion of the university in their geographical locations. Alumni Associations should make every effort to tap into the support that most alumni would provide if asked. University recruitment officials also benefit from the information provided by alumni. In many instances, recruitment officers make better connections with potential students if they enlist the support of a local prominent alumnus or alumna. Alumni feedback is also important to
the faculty. Feedback from alumni regarding issues that influence satisfaction with classroom experiences might assist the faculty in class preparation. Alumni feedback is akin to student evaluations at the end of the semester – except that these former students have occupational experiences to temper their feedback. Without students, there would be no university; and without feedback from alumni, students would not be fully prepared for post-graduation life.

This study has found that satisfaction with classroom experiences and, to a lesser extent, satisfaction with perceived fit-1 (social satisfaction) are issues important to alumni satisfaction. This finding is corroborated by similar findings by Delaney (2004) who concluded from their study that,

perhaps one of the most striking findings from this study is the significance of the social dimension in alumni assessment of their higher education experience.

While alumni reported a high level of satisfaction with the academic programme and career preparation, their feedback suggests they seek more from their college experience: a sense of community; a more fulfilling social life; and an education that prepares them better for their personal and family lives after graduation. (p.103).
SURVEY INSTRUMENT

AN EXPLORATORY STUDY OF THE ROLES OF UNDERGRADUATE CLASSROOM EXPERIENCES AND OCCUPATIONAL ATTAINMENT IN ALUMNI SATISFACTION WITH THEIR UNIVERSITY EXPERIENCES
Survey of Alumni of University of Missouri-Columbia

This questionnaire is being mailed to randomly selected University of Missouri-Columbia alumni who received baccalaureate degrees in 1994, 1998 or 2002. In this survey, issues pertaining to alumni satisfaction will be explored for the purpose of improving college undergraduate experiences.

Your responses will be kept confidential and will not be individually identified. Your input is very important to the findings of this study.

**Satisfaction with Undergraduate Experiences at University of Missouri-Columbia (MU)**

Please circle the choice that most closely corresponds to your answer.

How satisfied are you with each of the following aspects of your university experience?

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<th>Satisfaction with Undergraduate Experiences at University of Missouri-Columbia (MU)</th>
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<td>Please circle the choice that most closely corresponds to your answer.</td>
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<td><strong>Overall University Experience</strong></td>
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<td>2. Your college’s concern for you as an individual student</td>
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<td>3. Friendships formed at MU</td>
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<td>4. Overall academic experience</td>
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<td>5. Overall social experience</td>
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<td>6. How well MU classes prepared you for your career</td>
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<td>7. Your participation in university-sponsored events</td>
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<tr>
<td>8. Your participation in non-university events</td>
</tr>
<tr>
<td>9. Quality of mentoring provided by your adviser</td>
</tr>
<tr>
<td>10. Academic growth during your years at MU</td>
</tr>
<tr>
<td>11. Personal growth during your years at MU</td>
</tr>
<tr>
<td>12. Would you choose MU if you had to make the decision again?</td>
</tr>
<tr>
<td>13. Would you recommend MU to potential students?</td>
</tr>
<tr>
<td>14. As an MU student, did you feel your views were similar to the views of the</td>
</tr>
<tr>
<td>majority?</td>
</tr>
<tr>
<td>15. Do you feel you got your “money’s worth” from your MU education?</td>
</tr>
<tr>
<td>16. Was your MU academic experience better than what you expected?</td>
</tr>
<tr>
<td>17. Were your MU social experiences better than what you expected?</td>
</tr>
<tr>
<td>18. Would you participate in MU alumni activities within the next year?</td>
</tr>
<tr>
<td>19. Do you plan to make a financial contribution to MU within the next year?</td>
</tr>
<tr>
<td>20. Would you mentor a current MU student?</td>
</tr>
<tr>
<td>21. Do you plan to stay informed about MU news?</td>
</tr>
<tr>
<td>22. Do you plan to stay in touch with other MU alumni?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Definitely No</th>
<th>Very Unlikely</th>
<th>Not Sure</th>
<th>Very Likely</th>
<th>Definitely Yes</th>
<th>Not Applicable</th>
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<tr>
<td>12. Would you choose MU if you had to make the decision again?</td>
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<td>13. Would you recommend MU to potential students?</td>
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<tr>
<td>14. As an MU student, did you feel your views were similar to the views of the</td>
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<tr>
<td>majority?</td>
<td></td>
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</tr>
<tr>
<td>15. Do you feel you got your “money’s worth” from your MU education?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Was your MU academic experience better than what you expected?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Were your MU social experiences better than what you expected?</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>18. Would you participate in MU alumni activities within the next year?</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>19. Do you plan to make a financial contribution to MU within the next year?</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>20. Would you mentor a current MU student?</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>21. Do you plan to stay informed about MU news?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Do you plan to stay in touch with other MU alumni?</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Overall University Experience Continued

<table>
<thead>
<tr>
<th>Question</th>
<th>Definitely No</th>
<th>Very Unlikely</th>
<th>Not Sure</th>
<th>Very Likely</th>
<th>Definitely Yes</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>23. Do you associate MU with some of your most pleasant experiences?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>24. Do MU traditions influence your feelings of connectedness with the university?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Satisfaction with Classroom Experiences at University of Missouri-Columbia

These questions are about your perceptions of your classroom experiences. Although your experiences probably varied with each class, we want you to consider your most common classroom experiences in answering these questions. Please circle the choice that most closely corresponds to your answer.

How satisfied are you with each of the following aspects of your classroom experiences?

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all Satisfied</th>
<th>Less than Moderately Satisfied</th>
<th>Moderately Satisfied</th>
<th>More than Moderately Satisfied</th>
<th>Completely Satisfied</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>25. Overall classroom experiences</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>26. How much you learned from college classes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>27. Relationships with professors</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>28. Relationships with class peers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>29. Professors’ knowledge of subject</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>30. Average class size</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>31. Openness of classes to diverse opinions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>32. Overall quality of instruction</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>33. Amount of class time devoted to each topic</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>34. Academic rigor or challenge of classes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>35. Your exposure to new ideas</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>36. Reputation of your academic department</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Please circle the choice that most closely corresponds to your answer.

In most of your classes, would you say you:

<table>
<thead>
<tr>
<th>Question</th>
<th>Definitely No</th>
<th>Very Unlikely</th>
<th>Not Sure</th>
<th>Very Likely</th>
<th>Definitely Yes</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>37. Had similar views with professors on issues discussed in class?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>38. Had similar views with most classmates on issues discussed in class?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>39. Had life experiences similar with those of your professors?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>40. Had life experiences similar with those of most classmates?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>41. Felt a sense of belonging in the classroom?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>42. Had professors who were supportive of you?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>43. Felt comfortable expressing your opinions?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>44. Were better prepared academically for the class than were others?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>45. Enjoyed the classroom experience?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>46. Missed seeing class members after the class was over?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>47. Had classroom experiences better than what you expected?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
</tbody>
</table>
**Satisfaction with Occupational Attainment**

These questions pertain to your satisfaction with your **current or most recent job**.

How satisfied are you with each of the following aspects of your present job? Please circle the choice that most closely corresponds to your answer.

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all Satisfied</th>
<th>Less than Moderately Satisfied</th>
<th>Moderately Satisfied</th>
<th>More than Moderately Satisfied</th>
<th>Completely Satisfied</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>48. Your satisfaction with your current job</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>49. Length of time it took to obtain your current job</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>50. Opportunities for advancement in your current job</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>51. Your present salary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>52. How well did your MU college classroom experiences prepare you for your current job?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>53. How well did your MU experiences, outside of the classroom, prepare you for your current job?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>54. How closely related is your current job to the major in which you received your MU degree?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>55. Which one of the following options best describes your primary work status at this time? Please circle only one selection.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-Employed full time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-Caring for my family/home full time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3-Employed part time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-Unemployed, seeking employment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-Unemployed, not seeking employment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-Other, please specify</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

56. If you are currently employed, what is your annual salary range (please circle selection)?

<table>
<thead>
<tr>
<th>Salary Range</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - $100,000 or more</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>2 - $80,000 - $99,999</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>3 - $60,000 - $79,999</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>4 - $40,000 - $59,999</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>5 - $20,000 - $39,999</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>6 - Less than $20,000</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Demographic and Profile Information

1. What is your sex?  ____Female  ____Male
2. What is your race/ethnicity? (indicate group you most closely identify with) ________
3. Are you a member of the MU Alumni Association? (check one)  
   ____Yes. Why did you join? ---------------------------------------------
   ____No. Why didn’t you join? --------------------------------------------

4. At the time you began your undergraduate studies at MU, were you over age 25?  
   (check one)  ---- Yes  ---- No

5. During the time of your undergraduate studies at MU, were you a member of a Greek 
   organization?  ---- Yes  ---- No

6. What college organizations did you join while at MU? -------------------------

7. Since you graduated from MU, have you ever made a financial contribution to 
   University of Missouri-Columbia?  ---- Yes  ---- No

8. What was your primary means of financing your MU education? (check one)  
   ------ Self, savings  
   ------ Self, job  
   ------ Family  
   ------ Grants  
   ------ Loans  
   ------ Other (please specify) ---------------------------------------------

9. From which college did you receive your baccalaureate degree? (check one)  
   ----- College of Agriculture  
   ----- College of Arts & Science  
   ----- College of Business  
   ----- College of Education  
   ----- College of Engineering  
   ----- School of Health Professions  
   ----- College of Human Environmental Sciences  
   ----- School of Journalism  
   ----- Sinclair School of Nursing

10. How many degrees did you receive from MU? ________

THANK YOU FOR YOUR PARTICIPATION IN THIS STUDY

Please return this survey in the provided return envelope to:  
Mizzou Alumni Association  
123 Reynolds Alumni Center  
Columbia, MO 65211-2100
Appendix B

Date

Alumnus’s name
Alumnus’s address

Dear (insert first name):

You are invited to participate in a dissertation research project. The research project will explore the roles of undergraduate classroom experiences and occupational attainment in explaining alumni satisfaction with their university experiences. Enclosed in this mailing is a short questionnaire that is being mailed to randomly selected alumni of University of Missouri-Columbia who received baccalaureate degrees in 1994, 1998 or 2002.

I hope you will take the time to participate in this study as your input is vital in helping the university understand how to improve classroom procedures and how to prepare alumni for the workplace. Other than about 15 minutes of your time that it would take to complete the questionnaire, there are no physical risks or discomforts associated with being in this research study.

Your participation is completely voluntary. You may choose to answer all of the questions or skip some of the questions. Your responses to the questions will be kept confidential. A number on the return envelope will be used to keep track of respondents so that reminder letters will not be sent to them. The primary investigator is the only person who has the list of alumni selected for the study. All data collected for the study will be stored in a secure location for three years by the primary investigator. The results of the study will not individually identify any participant.

If you have questions or concerns about the study, you may contact Jumoke Sanusi, Primary Investigator, at 573-474-0127, jos46d@mizzou.edu or Dr. Vicki J. Rosser, Dissertation Advisor, at 573-884-1806, rosserv@missouri.edu. This study was approved by University of Missouri-Columbia’s Institutional Review Board. Any questions or concerns about human subject participation may be directed to University of Missouri-Columbia’s Campus Institutional Review Board, at 573-882-9585, umcresearchcirb@missouri.edu

Please make every effort to complete and return the questionnaire within two weeks of receiving it. After completing the questionnaire, return it to me in the enclosed self-addressed stamped envelope. Your completion of the questionnaire indicates your willingness to participate. If you do not wish to participate in this study, please return the blank survey form to me in the provided envelope so that reminder letters will not be sent to you.

Thank you for your time in this research project.

Sincerely yours,

Jumoke Sanusi
Primary Investigator
Appendix C

Dear Mizzou graduate:

More than one week ago a questionnaire seeking your input about your Mizzou experiences was mailed to you. If you have completed and returned your questionnaire, please disregard this reminder and thank you for your prompt reply and response. If you have not completed and returned your questionnaire, please consider doing so now as your input is needed to make this research accurately reflect issues pertaining to your graduating class’s classroom and occupational experiences.

Thank you for taking about 15 minutes to participate in this research project. Your response is greatly appreciated.

Sincerely yours,

Jumoke Sanusi
Primary Investigator
Appendix D

Date

Alumnus’s name
Alumnus’s address

Dear first name:

Last month a questionnaire was mailed to you seeking your participation in a study that examined issues explaining alumni satisfaction with their University of Missouri-Columbia experiences. This research was undertaken to document ways in which the university could improve classroom experiences for students and occupational experiences for alumni.

I am writing to you because your questionnaire has not been returned. In order for the research results to be truly representative of the graduating years, responses from each randomly selected alumnus is essential. In the event that your questionnaire has been misplaced, a replacement is enclosed.

I would also like to remind you that your response is entirely confidential. No individual names will be associated with the research report and the research findings will include only aggregate data. The questionnaire should take no longer than 15 minutes to complete.

Your contribution to this research project is greatly appreciated. Thank you for your time and participation.

Sincerely yours,

Jumoke Sanusi
Primary Investigator
Dear Alumnus/a,

Your alumni association at the University of Missouri works hard everyday to serve your interests. Your opinions, needs, and concerns have always been an important part of our planning efforts, and once again we ask for your input.

Please help us better understand what you expect of your university and your alumni association by completing this alumni survey. It only takes a few minutes, and your input is critical to helping us meet your expectations and build a better university for future students.

As one of the sponsors of this study we are grateful for your participation. Your alumni association is listening and committed to taking action based on the feedback we receive. Thank you for your assistance.

Sincerely,

Todd A. McCubbin M Ed '95
Executive Director

123 Reynolds Alumni Center-Columbia. MO 65211

(573) 882-6611 or (800) 372-6822
References


Communication Quarterly, 47(3), 281-299.


Grant, M. (1970). Letter to the editor. Blackout, 1(5). [In Western Historical Manuscript Collection, University of Missouri-Columbia, 3628F16]


Research in Higher Education, 44(3), 149-171.


VITA

Jumoke O. Sanusi was born in London, England. She attended elementary, middle and high school in Lagos, Nigeria. After high school, she continued her education in the United States. She received a B.A. degree in economics and business administration from Principia College, Elsah, IL in 1989; an M.A. in economics from University of California-Davis in 1991; and a Ph.D. in Higher Education, Educational Leadership and Policy Analysis from University of Missouri-Columbia in 2007.