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ATTITUDES TOWARD ALCOHOL USE, ALCOHOL-CONSUMPTION PATTERNS, AND THE ATTRITION OF FRESHMAN STUDENTS: IS THERE A RELATIONSHIP?

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By

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ABSTRACT

ATTITUDES TOWARD ALCOHOL USE, ALCOHOL-CONSUMPTION PATTERNS, AND THE ATTRITION OF FRESHMAN STUDENTS: IS THERE A RELATIONSHIP?

By

Julia Haggin Bonkowski

The researcher's purpose in this study was to examine attitudes toward alcohol use and self-reported alcohol-consumption patterns of returning and nonreturning freshmen 17 to 20 years of age, enrolled at a four-year public university. Independent variables examined in relation to attitudes toward alcohol use and alcohol-consumption patterns included demographics and selected life events. Several reasons students left or did not return to the university were also investigated.

The data were gathered using two 45-question anonymous survey instruments designed by the researcher and administered to a random sample of returning and nonreturning students between August and December 1990. Of the sample of 203 returners, 78% responded; of the 141 nonreturners, 46% responded. Data analysis was accomplished by performing one-way MANOVA, ANOVA, t-tests, and chi-square. Significance was determined at < .10.

Major findings were as follows: Both returners and nonreturners shared similar attitudes toward alcohol use. They

tended to approve of 17 to 20 year olds drinking 5+ drinks once or twice each weekend, did not have intentions of stopping or reducing their alcohol consumption, and did not believe alcohol negatively affected their academic performance. Returners consumed approximately 5 drinks at one time more often than nonreturners and were more likely to have an argument and/or a physical fight with friends after drinking than nonreturners. Both returners and nonreturners who drank approximately 5 drinks at one time were more likely to miss a class. However, nonreturners were more likely to earn less than a "C" on a quiz or an examination due to drinking. Approximately 55% of the returners and up to 31.6% of the nonreturners could be classified as moderate to heavy drinkers. Males and students with lower ACT scores drank greater amounts more often than other students. Approximately 15% of all the respondents were identified as children of alcoholics (COAs). Not returning because of financial problems was statistically significant for nonreturning students identified as COAs.

Dissertation Director: Dr. Louis F. Hekhuis

I affectionately dedicate my efforts to

John Lang Johnson, Ph.D.

and to my mother

Charlotte Briggs Johnson

plus

Lewis Kay Haggin and Suzanne Worley Haggin,

all of whom have served as my life-long teachers

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

CHAPTER I

INTRODUCTION

Attrition continues to be a widespread concern in American higher education. Numerous researchers (Bean, 1980; Pascarella & Terenzini, 1980; Spady, 1970; Stoecker, Pascarella, & Wolfle, 1988; Tinto, 1975) have indicated student persistence is multidimensional, with the highest percentage of college attrition occurring during the freshman year (Hodgkinson, 1987). Previous researchers have focused on the relationship of students' adjustment to a wide variety of institutional and academic variables. However, Tinto (1982) stated:

> Individuals who withdraw from college often show levels of academic performance that exceed those of the students who persist. Rather than arising primarily from inadequate skills, such withdrawals appear to arise from incomplete personal integration into the intellectual and social mainstream of institutional life. (p. 6)

Barton (1989) stated that approximately half of those who enroll in baccalaureate programs never finish. On a scale of one to five, Beal and Noel (1980) rated the four most important dropout-prone characteristics for four-year public college students to be "low academic achievement 4.41, limited educational aspirations 4.13, indecision about major/career goal 3.95, and inadequate financial resources 3.53" (p. 45). Kemerer (1984) characterized

students as being at risk for dropping out if they are academically underprepared, if they enroll as part time, if they stop out for a term or a semester, or if they are adding and dropping courses more than the average student. Based on the academic and social integration elements of Tinto's college attrition model, Wilder (1989) defined commitment to college as (a) goal commitment that reflects the student's determination to finish college and (b) institutional commitment, which refers to the student's disposition toward the particular college.

During the first year of the college experience, students are exposed to unfamiliar philosophies, conflicting values, and new freedoms. Gardner and Jeweler (1989) suggested that too much freedom is the single greatest problem college students face. Among 24 types of decisions that college freshmen ponder are whether to eat balanced meals or junk food and whether to use or not to use alcohol. Although the literature has shown that drinking habits have their foundation in the high school setting (Johnston, O'Malley, & Bachman, 1986), use of alcohol during the college years may have a significant influence on the college experience and, possibly, freshman student attrition.

Statement of the Problem

Alcohol use has been endemic to American society since colonial times. Following Prohibition, the quantity of alcohol consumed continued to proliferate in the United States, as illustrated by an increase of more than 30% since 1950 (Olson, 1985). During the

1970s, results of several studies indicated that alcohol use and abuse among college students was a serious problem (Engs, 1977; Gonzalez, 1978; Scheller-Gilkey, Gomberg, & Clay, 1979; Wechsler & McFadden, 1979). For this subset of American culture, alcohol has become the drug of choice (Boyer, 1987; Engs & Hanson, 1985; Greene, 1987). The primary reasons college students have found alcohol, specifically beer, more tempting than other drugs include its taste, the fact that alcohol is legal for those over 21, alcohol is socially acceptable, and students believe that alcohol is less damaging physically than other drugs (Greene, 1987; Kinnick, Genova, Ogden, & Rodriguez, 1985).

In a report issued by the Miller Brewing Company (1984), misuse was viewed as drunkenness, not alcoholism; according to one student, "People who can't handle it flunk out" (p. 3). Lavin (1980) implied that alcohol use is an accepted part of adolescence and that college staffs should lessen their preoccupation with alcoholism because consumption patterns in college are not a good predictor of eventual alcoholism. Kaplan (1979, p. 31) reported on Fillmore's 1975 pilot follow-up study of students who were initially studied by Straus and Bacon (1953). Fillmore had noted the following: 42% of the college men studied had been identified as problem drinkers while in college. Twenty years later (1973), only 17% were classified as problem drinkers. However, there was a trend for the college women studied to drink more heavily later in life (12%) than they had while in college (11%).

In a study of high school students who were residents of a drug rehabilitation center, there appeared to be a "strong linkage between drug abuse and dropping out of [high] school" (Ayerve, 1989, p. 3597-A). However, drug use, and specifically alcohol use and abuse, has not been studied as a factor contributing to the attrition of freshman college students.

A variety of characteristics that influence college-student attrition are continually being studied. Institutions of higher education are currently facing serious cutbacks in financial support at both the state and federal levels, while operational expenses steadily increase. The threat of fewer applicants to support the weakened economic base puts pressure on college administrators to focus on retention because institutional health during times of declining enrollment may be measured by student retention.

Purpose of the Study

The researcher's purpose in this study was to examine the attitudes toward alcohol use and the self-reported alcohol-consumption patterns of freshman students who were 17, 18, 19, or 20 years of age and who were enrolled at Ferris State University, a four-year public university, for a minimum of 12 credits during Fall Term 1989-90. Attitudinal and consumption variables were examined in relation to selected demographic variables and selected life events for returning and nonreturning students. A second purpose was to examine perceptions about parental drinking and students' reasons for leaving or not returning to Ferris. A third reason for

conducting this study was to examine selected variables in relation to reasons students leave or do not return to Ferris State University.

Attitudes addressed included approval or disapproval of the amount and frequency of alcohol consumption by friends/peers, the wish for parents to drink less alcohol, and whether self-reported alcohol use had an influence on the decision to return or not to return to Ferris during Winter Term 1989-90, Spring Term 1989-90, or Fall Term 1990-91. Questions regarding consumption patterns related to both peer and self-reported alcohol use. The demographic variables were used to identify several attributes of the returning and nonreturning students and also to screen respondents, assuring the researcher the participants did fit within the parameters outlined for the study. After many studies and several survey instruments were reviewed, life events questions were designed to focus on problems associated with alcohol use and abuse, and the relationship of those problems to student attrition.

The data were gathered using two 45-question survey instruments designed by the researcher. During the summer of 1990, one survey instrument was sent via U.S. mail to a simple random sample of Ferris State University nonreturning freshman students. The second survey instrument was administered on campus to a random sample of 1989-90 freshmen who returned as second-year students for Fall Term 1990-91.

Research Questions

Examining the data base gave the researcher an opportunity to pose a number of questions. The following research questions were addressed in this study:

1. Is there a statistically significant difference in the self-reported attitudes toward alcohol use and the self-reported alcohol-consumption patterns between returning and nonreturning Ferris State University Fall Term 1989-90 freshmen?

2. Do the self-reported attitudes of *returning* Ferris State University freshman students toward alcohol use differ with respect to:

    a. selected demographic variables?
    b. selected life event variables?

The 13 dependent attitudinal variables of *returning* students included personally trying 1 or 2 drinks of an alcoholic beverage, taking 1 or 2 drinks nearly every day, taking 4 or 5 drinks nearly every day, having 5 or more drinks once or twice each weekend; approval/disapproval of friends/peers trying 1 or 2 drinks of an alcoholic beverage, taking 1 or 2 drinks nearly every day, taking 4 or 5 drinks nearly every day, having 5 or more drinks once or twice each weekend; the number of friends/peers estimated to drink alcoholic beverages; status of alcohol use as perceived among friends/peers; personal feelings about status of alcohol use; personal thought regarding reduction of alcohol use or abstention; and negative effect of alcohol on personal academic performance.

The eight independent demographic variables for *returning* students included school/college of enrollment, parents' educational level, Ferris honor point average, high school grade point average,

ACT composite score, ethnicity, age, and gender. The 13 independent life event variables for *returning* students included the following: getting into a physical fight after drinking, getting into an argument after drinking, experiencing acquaintance/date rape after drinking, having trouble with boss or fellow workers, having difficulties of any kind with friends, having automobile accidents, being criticized by a family member, having trouble with the police, having an accident in the home or residence hall, missing a class, earning less than a "C" on a quiz or examination, earning less than a "C" for a class, and withdrawing from a class.

3. Do the self-reported attitudes of *nonreturning* Ferris State University freshman students toward alcohol use differ with respect to:

    a. selected demographic variables?
    b. selected life event variables?

The same 13 dependent attitudinal variables were used for the returning and *nonreturning* students; they were listed under Research Question 2. The seven independent demographic variables for *nonreturning* students included parents' educational level, Ferris honor point average, high school grade point average, ACT composite score, ethnicity, age, and gender. An additional demographic variable, school/college of enrollment, was used only for the returning students. The 13 independent life event variables for nonreturners were identical to those for the returners; they were listed under Research Question 2.

4. Do the self-reported alcohol-consumption patterns of *returning* Ferris State University freshman students differ with respect to:

    a. selected demographic variables?
    b. selected life event variables?

The eight dependent alcohol-consumption-pattern variables for *returning* students were average number of beer drinks at any one time, average number of wine or wine cooler drinks at any one time, average number of liquor shots or mixed drinks at any one time, frequency of drinking enough to feel pretty high, number of times consumed 5 or more drinks in a row during last term at FSU, approximate number of drinks per month during Fall 1989-90 enrollment, approximate number of drinks per month during Winter 1989-90 enrollment, and approximate number of drinks per month during Spring 1989-90 enrollment. The eight independent demographic variables and 13 independent life event variables for *returning* students, which were identical for both Research Questions 2 and 4, were listed under Research Question 2.

5. Do the self-reported alcohol-consumption patterns of *non-returning* Ferris State University freshman students differ with respect to:

    a. selected demographic variables?
    b. selected life event variables?

The eight alcohol-consumption-pattern dependent variables for *nonreturning* and returning students were the same; they were listed following Research Question 4. The seven independent demographic variables for *nonreturning* students were listed after Research Question 3. The 13 life event variables for *nonreturning* students,

which were identical for Research Questions 2, 3, 4, and 5, were listed following Research Question 2.

6. Is there a statistically significant difference in the Ferris State University freshman students' self-reported perception about the drinking behavior of their parents between the returning and nonreturning freshmen?

7. Is there a statistically significant relationship between the Ferris State University nonreturning freshman students' reported perceptions about the drinking behavior of their parents and the following reasons influencing the decision either to drop or not return?

    a. Transferring to another college university
    b. Having financial difficulties
    c. Being academically denied
    d. Feeling peer pressure to drink alcohol
    e. Personally using or abusing alcohol
    f. Other
        (1) Academic dissatisfaction
        (2) Residence hall life
        (3) Personal

8. Is there a statistically significant relationship between the peer-pressure-to-drink-alcohol reason Fall Term 1989-90 freshman students left Ferris State University and the following reasons influencing the decision either to drop or not return?

    a. Transferring to another college/university
    b. Having financial difficulties
    c. Being academically denied
    d. Other
        (1) Academic dissatisfaction
        (2) Residence hall life
        (3) Personal

9. Is there a statistically significant relationship between the personal-use-or-abuse-of-alcohol reason Fall Term 1989-90 freshman students left Ferris State University and the following reasons influencing the decision either to drop or not return?

    a. Transferring to another college/university
    b. Having financial difficulties
    c. Being academically denied
    d. Other
        (1) Academic dissatisfaction
        (2) Residence hall life
        (3) Personal

The research questions were investigated using an instrument that explored the attitudes toward alcohol use, the alcohol-consumption patterns of the returning and nonreturning students, and the reasons students did not return to Ferris State University. A limited amount of demographic information was collected, as well. Survey responses were examined at less than the .10 level of significance, using multivariate analysis of variance (MANOVA), analysis of variance (ANOVA), t-tests, and chi-square.

Significance of the Study

Because the relationship between attitudes toward alcohol use and alcohol-consumption patterns and freshman attrition was examined, this study has added a new dimension to the conventional attrition research literature. There appeared to be no published study that had focused on alcohol as a major factor in freshman student attrition, although a number of previous researchers concentrated on the alcohol-consumption patterns of college students (Engs, 1977; Engs & Hanson, 1985; Hanson, 1974; Hilton, 1987; Straus & Bacon, 1953).

Because the relationship between attitudes toward alcohol use and self-reported alcohol-consumption patterns and the attrition of Fall Term 1989-90 Ferris freshman students was examined, Ferris administrators will be able to review the findings and compare them with those of previous studies performed at the university. In the April 1989 "Report to the Ferris State University Board of Control Policy Subcommittee" (Ferris State University, 1989), a dropout rate

of 38% of the freshmen from Fall 1987 to Fall 1988 was disclosed. This high nonreturn rate may have been anticipated as the 1988 incoming Ferris freshmen who were surveyed through the Cooperative Institutional Research Program (CIRP) (Astin, 1988) indicated they were 4% less likely to expect satisfaction with their college than the national four-year public college and university norm (Kowalkoski & Swartz, 1989). In addition, patterns of responses to the CIRP survey revealed Ferris freshmen had lower positive academic behaviors and higher alcohol-consumption patterns than the national four-year college or university norm. Additional information regarding the relationship of alcohol to the attrition process may prove beneficial when allocating resources and refining future retention strategies at Ferris State University.

The survey instruments developed for this study will provide a reference for the design of future instruments that could be used by those interested in studying the relationship between alcohol and freshman student attrition. In addition, the findings may allow generalization to other four-year public colleges and universities whose freshman students parallel the reported characteristics of Ferris State University freshmen.

Definition of Terms

To provide a common basis for understanding, the following definitions are included for terms that were used in this study.

Academic denial: Students are denied further Ferris State University enrollment due to poor academic progress, as defined in

the "Academic Probation and Dismissal Policy" found in the 1988-90 Ferris State University School Bulletin. Studenis may have been academically denied following Fall Term 1989-90, Winter Term 1989-90, or Spring Term 1989-90.

Academic status: Self-reported Ferris State University cumulative honor point average.

Academic year: Fall Term 1989-90, Winter Term 1989-90, and Spring Term 1989-90.

Acceptable level of alcohol consumption (as defined by the Michigan Office of Substance Abuse Services): ZERO, ONE, THREE--Zero alcohol if one is under 21 years of age, driving, chemically dependent, or pregnant. One drink per hour sets the pace for moderate drinking, and no more than three drinks per day and never daily.

Alcohol consumption: Drinking alcohol; amount and frequency. The active ingredient in all alcoholic beverages (beer, wine, wine coolers, and distilled liquors) is ethyl alcohol (ethanol) (NIAAA, 1977). According to the Standard Drinks Chart (1984), as explained by a representative of the National Council on Alcoholism, one 12-ounce beer = .6 ounce of ethanol, one 5-ounce glass of wine = .6 ounce of ethanol, 1.5 ounces of 80-proof liquor = .6 ounce of ethanol, and one 12-ounce wine cooler = approximately .48 ounce of ethanol (Lindsay, 1990).

Heavy drinkers: Persons who consume 56 drinks or more per month, or 5 or more drinks at any one time.

Moderate drinkers: Persons who consume between 11 and 55 drinks per month, or 3 to 4 drinks at any one time.

Light drinkers: Persons who consume between 3 and 10 drinks per month, or 1 to 2 drinks at any one time.

Occasional light drinkers: Persons who consume between 1 and 2 drinks per month or less than 1 drink at any one time.

Nondrinkers: Persons who do not consume ethanol.

Alcoholic beverages: All beer, wine, wine coolers, and distilled liquors are considered alcoholic beverages.

Alcoholic drink: A 12-ounce bottle or can of beer, a 5-ounce glass of wine, a 12-ounce wine cooler, 1.5 ounces of distilled liquor, or a mixed drink with 1.5 ounces of distilled liquor (Lindsay, 1990).

Attitude toward alcohol consumption: The attitude one holds regarding acceptable levels of alcohol consumption.

Attrition: This definition includes freshman students who were enrolled for a minimum of 12 credits after the fifth day of classes during Fall Term 1989-90 at Ferris State University but who did not return to Ferris State University some time during the 1989-90 academic year or who did not plan to return during Fall Term 1990-91, as evidenced by their lack of participation in registration for Fall Term 1990-91 by May 9, 1990. Students may have processed an authorized withdrawal during Fall Term 1989-90, Winter Term 1989-90, or Spring Term 1989-90; have been denied enrollment for academic reasons; transferred to another institution; or planned not to

return to Ferris State University for Fall Term 1990-91 for a variety of elective reasons.

Authorized withdrawal: Method whereby freshman students were officially allowed to withdraw from all or part of their academic credits at Ferris State University during Fall Term 1989-90, Winter Term 1989-90, and/or Spring Term 1989-90, as processed by the various deans' offices between the fifth and thirty-fifth days of each term.

Freshman students: Individuals who graduated from high school; who were age 17, 18, 19, or 20; and who attended college for the first time at Ferris State University during all or part of the 1989-90 academic year, beginning in Fall Term 1989-90.

Nonreturners: Freshman students who were initially enrolled at Ferris State University for Fall Term 1989-90 for a minimum of 12 credits but who were not enrolled for Winter Term 1989-90 and/or Spring Term 1989-90 beyond the fifth day of classes, or did not register for Fall Term 1990-91 by May 9, 1990.

No-shows: Freshman students who were nonreturners and who were initially enrolled at Ferris State University for a minimum of 12 credits and who completed Fall Term 1989-90 but were dropped from the enrollment list after the fifth day of classes during either Winter or Spring Term 1989-90 due to nonpayment of tuition.

Returners: Freshman students who were initially enrolled at Ferris State University for a minimum of 12 credits for Fall Term 1989-90, and who returned to Ferris State University for Winter Term 1989-90, Spring Term 1989-90, and Fall Term 1990-91.

Limitations and Delimitations

Limitations

1. Individuals who consumed alcohol and who were under the age for legal consumption of alcohol might have chosen not to respond to the survey, even though anonymity was assured.

2. At the time of the survey, freshmen identified as nonreturners might have changed their minds and registered by telephone for Fall Term 1990-91 during June or July 1990, or in person during September 1990.

3. The response rate of nonreturning students might have been low because those individuals who had left Ferris State probably felt no alliance with the university and/or had no interest in a study regarding attitudes toward alcohol use and alcohol-consumption patterns of freshman college students.

Delimitations

1. The returning-student sample was drawn from a population of returning freshman students who were enrolled at Ferris State University during Fall Term 1989-90 and who also attended Ferris during Winter Term 1989-90, Spring Term 1989-90, and Fall Term 1990-91.

2. The nonreturning-student sample was drawn from a population of nonreturning freshman students who were enrolled at Ferris State University during Fall Term 1989-90.

3. Survey participants were classified as nonreturners if they had processed an authorized withdrawal, did not pay tuition by the

fifth day of Winter or Spring Term 1989-90, were academically denied, or did not register by May 9, 1990, for Fall Term 1990-91.

4. The data gathered for the returning students were limited to a one-time response using person-to-person administration of the questionnaire.

5. The data gathered for the nonreturning students were limited to a one-time response using a mail questionnaire.

Organization of the Study

Presentation of the study is accomplished in five chapters. Chapter I contained an introduction to the study, a statement of the problem, purpose of the study, research questions investigated, significance of the study, a definition of terms, identification of the limitations and delimitations, and an overview of the organization of the study.

Chapter II provides a historical review of literature relevant to alcohol use in the American culture, definitions of problematic drinking (alcohol abuse and alcohol dependence), issues associated with problem drinking by college students, studies relative to college students' alcohol usage patterns, the relationship between academic performance and the use of alcohol, studies relative to the prediction of freshman student persistence, and a summary of the literature review.

Chapter III includes a description of the method for conducting the study. The research design, the population surveyed, selection of the samples, instrumentation, instrument development, reliability

of the instrument, and an overview of the analysis of the data with the statistical treatment used for each research question and/or hypothesis are explained.

The findings of the study are contained in Chapter IV. Selected frequencies, percentages, and a summary of the means are presented. The hypotheses were tested by performing MANOVA, ANOVA, t-tests, and chi-square analyses. Significance for each test was determined at less than the .10 alpha level.

The summary, conclusions, implications for further study, recommendations, and reflections are presented in Chapter V.

CHAPTER II

REVIEW OF THE LITERATURE

Historical Perspective

Alcohol Use as Part of the American Culture

Alcohol use has been endemic to American society, as noted by Olson (1985):

> The per capita consumption of alcoholic beverages in the United States has varied widely over the last 140 years. Before 1850, per capita consumption was falling from the high levels (6 to 7 gallons annually of pure alcohol per adult) characteristic of early America. Between 1850 and the beginning of World War I, it varied between 1.75 and 2.75 gallons, reaching its high point just before the war. Prohibition reduced per capita consumption to its lowest level in U.S. history, probably less than 1.5 gallons. (p. 2)

Even though alcohol consumption had never been lower, the failure of Prohibition demonstrated the ineffectiveness of governmental dictates that attempt to eliminate drinking. According to Olson (1985), the quantity of alcohol consumption has continued to proliferate in the United States, as illustrated by an increase of more than 30% among the general population since 1950. In Hilton's study published in 1986 (cited in Hilton, 1987), he concluded that "abstention rates had fallen for women in their 20s between 1964 and 1979" (p. 169). Hilton (1987) went on to report:

> High intake occasions, at any level of frequency, were reported by greater proportions of younger male drinkers than older ones. For example, the proportion of male drinkers who

> reported consuming eight or more drinks a day as often as once a week was 16% among those aged 18-29. . . . The proportions of male drinkers who reported ever drinking as many as eight drinks in a day during the past year (1984) was 56% among those aged 18-29. (p. 169)

In addition, Hirschorn (1987) reported the following:

> Surveys and interviews also suggest that alcohol use among college students is significantly greater than in the population at large and somewhat greater than among men and women in the student-age group who are not in college. . . . Unlike drug use, drinking and getting drunk at college are, in the words of one health official, "a rite of passage." (p. 32)

Following examination of a number of studies, Rouse and Ewing (1978) concluded that collegiate drinking patterns and the ethos of college life do reflect the mores of the larger society. Fulton and Spooner (1987) suggested that "responsible drinking will become a general value and norm within college student subcultures only when it is a value and norm of the culture at large" (p. 131).

In the meantime, alcoholism has been defined as a disease (Jellinek, 1960; Lewis, Niven, Czechowicz, & Trumble, 1987). The stereotype of the skid-row derelict (Torres, 1982) has been recast to include individuals from all walks of life. The American public is slowly becoming sensitized to the needs of the problem drinker and the alcoholic (Hawley & Brown, 1981). Organizations such as Alcoholics Anonymous and Al-Anon have offered effective group support and treatment to alcoholics and their families.

One of the most practical approaches for controlling consumption has been to establish prevention policies. Educational efforts concerned with alcohol problems have focused on changing public attitudes with anticipation that changes in behavior would

follow. In the "Cooperative Commission" report (Plaut, 1967), it was recommended that educational programs seek to create negative attitudes with regard to drunkenness and drinking norms. Olson (1985) stated that the objective of prevention through education has been to "alter drinking practices in the general population or to break the link between those practices and adverse consequences" (p. 25).

Definitions of Problematic Drinking: Alcohol Abuse and Alcohol Dependence

Definitional issues regarding amount and frequency of alcohol use have hampered attempts among researchers to determine the extent of problem drinking (Hawkins, 1982). Knupfer (1984) indicated it is not just drinking per se that places individuals at risk regarding drinking problems because frequent drinking of larger amounts at one sitting leads to intoxication. There is a distinction between individuals who drink irresponsibly periodically and those who have a drinking problem, even though both drinking styles present themselves as social concerns. The irresponsible drinker who becomes intoxicated is a short-term danger to him/herself and others, whereas the problem drinker faces serious trouble on a more permanent basis (Hewitt, 1977; NIAAA, 1977).

According to Hilton (1987):

> As when interpreting any system of measuring drinking problems in a general population survey, readers must be aware that the resulting prevalence rates are strongly influenced by arbitrary decisions about where cutpoints should be drawn. (p. 167)

In 1974, the U.S. Department of Health, Education, and Welfare Public Health Service (cited in Torres, 1982) defined the **heavy drinker** as one who, for at least a year, drank daily and had six or more drinks on one occasion at least twice a month, or had six or more drinks at least once a week for over a year, but reported no problems. The *problem drinker* was defined as a heavy drinker with problems. A *moderate drinker* was one who was neither a teetotaler nor a heavy drinker. If one was a heavy drinker and had alcohol-related problems in at least three of the following four areas, *alcoholism* (alcohol dependence) was presumed: (a) social disapproval of drinking by friends, parents, or spouse; (b) trouble with the police or on the job; (c) frequent blackouts, tremors, hallucinations, or convulsions; and (d) loss of control over drinking (cited in Torres, 1982).

The Alcohol and Other Drug Education Service at Kansas State University categorized the drinking behavior of students as follows (cited in Brown, 1984):

Heavy drinker: One who consumes five or six glasses of beer, wine, or liquor more than once a week.

Moderate drinker: One who consumes three or four glasses of beer, wine, or liquor less than weekly.

Social drinker: One who has one or two glasses of beer, wine, or liquor less than weekly.

Abstainer: One who does not consume beer, wine, or liquor at all.

In a study conducted through the New York State Research Institute on Alcoholism by Barnes and Welte (1988), indications of alcohol abuse were the drinking of five or more drinks at a time and the "frequency of being drunk or very high from alcohol during the past year" (p. 41).

According to the National Clearinghouse for Alcohol and Drug Information, alcohol abuse is a general term applied to the misuse of alcohol that results in one or more psychological, medical, or social problems for the drinker. The same agency defined a problem drinker as one who experiences personal, social, and/or professional problems whenever he/she drinks.

In the Seventh Special Report to the U.S. Congress on Alcohol and Health from the Secretary of Health and Human Services (1990), two distinct forms of problematic drinking were identified:

> Alcohol abuse involves persistent patterns of heavy alcohol intake in which health consequences and/or impairment in social functioning are associated. Alcohol dependence is differentiated from alcohol abuse on the basis of such manifestations as craving, tolerance, and physical dependence that result in changes in the salience of drinking in one's life and in impairment in the ability to exercise restraint over drinking. (p. 7)

Alcohol dependence was defined by the World Health Organization (WHO) and cited by the U.S. Department of Health, Education, and Welfare (NIAAA, 1971) as follows:

> . . . Alcoholism can be defined as the use of alcoholic beverages to the extent that health or economic or social functioning are substantially impaired. . . . Lack of self-control may be manifested either by the inability to abstain from drinking for any significant time period, or by the ability to remain sober between drinking episodes but an inability to refrain from drinking to intoxication whenever drinking an alcoholic beverage. (p. 106)

Elements of the public health approach to alcohol-related problems and abuse as presented by Holder and Stoil (1988) are highlighted below:

> The view that alcohol abuse is the destructive use of alcoholic beverages by anyone in any situation rather than simply the compulsive use of alcohol by alcoholics. . . . The belief that alcohol abuse directly or indirectly affects all citizens and therefore raises public health concerns . . . and that prevention must employ a variety of strategies, including public information and education, changes in social contexts of drinking, and limitations on the availability of alcoholic beverages. (p. 292)

To categorize the alcohol-use patterns of the Ferris State University freshman students, the researcher devised a system to be used in this study based on a combination of definitions and equivalences. Reference was made but not limited to Barnes and Welte (1988), Brown (1984), Hilton (1987), the National Clearinghouse for Alcohol Information (1982), and the U.S. Department of Health, Education and Welfare Public Health Service/NIAA (1971, 1974). This system, as presented in the Definition of Terms section in Chapter I, provided the basis for classifying the amount and frequency of alcohol consumed by the Ferris State University Fall Term 1989-90 returning and nonreturning freshman students.

Issues Associated With Problem Drinking by College Students

The negative consequences associated with problem drinking (alcohol abuse and alcohol dependence) are numerous and affect all segments of society. During the 1970s, several studies clearly indicated that alcohol use and abuse among college students was a

serious issue (Engs, 1977; Gonzalez, 1978; Wechsler & McFadden, 1979). College officials recognized an alarming relationship between alcohol use/abuse and academic problems, accidents, and acquaintance/date rape (Berkowitz & Perkins, 1987; Gonzales, 1988; Ness, 1985; Woodruff, 1987).

In a study conducted by Towson State University's Center for Study and Prevention of Campus Violence (Dodge, 1990), approximately 36% of the 1,850 undergraduates reported they had been victims of such crimes as sexual assault, armed robbery, theft, and vandalism while at college. Nearly half (46.2%) of the students indicated they had consumed alcohol or used drugs before being victimized. Likewise, 46% of the 8% who acknowledged committing crimes reported they were intoxicated by alcohol or other drugs at the time of their crime.

Gonzales (1988) stated:

> A young intoxicated woman is seen as sexually available and often is taken advantage of or becomes a victim of assault. . . . For females the usual vigilance that a young woman must have regarding safety is temporarily suspended. . . . A chemically dependent female who has been raped while drunk or high usually feels so bad about their high or drunken state they blame themselves and remain silent about the episode. . . . The issues are particularly complicated if the violence occurred in the circumstance defined as "date rape." (p. 164)

Moos, Moos, and Kulik (1976) revealed that male and female heavy drinkers were more likely to argue with other students, oversleep, and miss or cut classes than were nondrinkers. A significantly higher proportion of men have exhibited problems related to drinking as compared to women (Engs, 1977, 1982; Engs & Hanson, 1985; Kuder & Madison, 1976; Orford, Waller, & Petc, 1974;

Wechsler & Rohman, 1981). Many studies have shown men tend to drink alcoholic beverages more frequently and in higher quantities than women (Barnes & Welte, 1988; Blane & Hewitt, 1977; Engs, 1977; Engs & Hanson, 1985; Glassco, 1975; Hanson, 1977; Hockhauser, 1977), so the higher percentage of males having problems related to drinking is not surprising.

The College Alcohol Survey, released in early November 1988, indicated that alcohol-related problems had not decreased on most college campuses. David S. Anderson, Associate Research Professor at George Mason University's Center for Health Promotion, and Angelo F. Gadaleto, Associate Professor at West Chester University's Department of Counselor, Secondary, and Professional Education, have conducted the survey every three years since 1979. Although alcohol education and prevention programs are now offered by 97% of the 213 colleges responding to that survey (Magner, 1988a), alcohol was "a factor in more than half of the incidents that result in physical injury, violent behavior, violation of campus policies, and damage to dormitories and other campus buildings" (p. A-37).

Studies Relative to College Students' Alcohol-Use Patterns

Hanson (1974) conducted a study of 3,700 students from 37 colleges and then compared his findings to a study conducted 20 years earlier of 15,700 students. Findings in the recent study revealed an increase in the percentage of students who drank. In addition, a reduction in the differential between the number of men and women who drank was noted. Hanson indicated that results of the

recent study showed 70% of the female freshmen and 80% of the male freshmen drank.

An increase in the number of college students who consume alcohol, compared to a generation ago, has been reported in a number of other surveys. Recent studies performed by Indiana University and the State University of New York College at Potsdam (1983) and Arizona State University (1987), as reported by Hirschorn in the March 25, 1987, issue of The Chronicle of Higher Education, indicated that as many as 90% of all college students are drinkers and that the use of alcohol on the nation's college and university campuses is higher than in the United States population at large. Rivinus (1988a) stated, "85% of college students drink beverage alcohol compared with 70% of the general population" (p. 4). In comparing the drinking patterns of college students in 1974 and 1982, Engs and Hanson (1985) established that there was a significant "increase in the percentage of students who were heavy drinkers and a decrease in those who said they drank less than once a year or not at all" (p. 74).

Maddox and Williams (1968) reported that black college students had a higher rate of heavy drinking than white students, but studies by Engs (1977), Kaplan (1979), and Moos et al. (1976) indicated that black students in comparison to whites have lower or similar rates of alcohol consumption. In 1988, Barnes and Wilte investigated alcohol use and abuse among adults in New York State and found that:

> Minority groups have lower rates of overall drinking than whites. However, black males have higher rates of heavier

> drinking than white or Hispanic males. . . . Thirty-one percent (31%) of black males are heavier drinkers in contrast to rates of 23% for both white and Hispanic males. (p. 4)

Engs and Hanson (1985) found a significant difference in the drinking patterns of students between the freshman and senior years. Even though heavy drinking decreased from the first to the fourth year, the percentage of drinkers (79% the first year and 84.8% the fourth year) increased. Most of the students in their study drank at least once a year, and approximately one-fifth were heavy drinkers, with beer being the most widely consumed alcoholic beverage.

Students themselves reported their drinking habits as excessive in the freshman and sophomore years, with a decline toward the later college years as the students developed a sense of maturity and responsibility (Hartford, Wechsler, & Rohman, 1983; Miller Brewing Company, 1984; Moos, 1979). However, in a study of Ferris State University students (n = 564) conducted for the FSU Substance Abuse Task Force by Cancelosa, Denyes, Hoffman, and O'Neil (1991), a higher percentage of seniors reported consuming heavier amounts of alcohol per week than freshmen, sophomores, or juniors.

Incoming Ferris State University Students surveyed through the Cooperative Institutional Research Program (Astin, 1989; Kowalkoski & Swartz, 1989) revealed that alcohol-consumption patterns were higher among the Ferris group than the national four-year college or university norm. For example, 71% of the Ferris incoming freshmen had drunk beer as compared to 53% of the national sample. In the category of having drunk wine or liquor, 75% of the incoming Ferris

students had consumed wine or liquor--12% more than the national norm. In a 1991 study (Cancelosa et al., 1991), Ferris students who were freshmen in the 1988 CIRP survey were juniors. Of those juniors responding (n = 188), 83.6% indicated they did drink and 24.6% indicated they drank, on the average, 11 to 39 drinks per week. It appears that either the students who drink less have left or the ones who have stayed have increased their drinking during their enrollment at Ferris.

Predisposition

Moos et al. (1976) found the likelihood that the father had a college degree or the likelihood that the mother had some college education did not significantly differentiate male or female heavy drinkers from their abstinent counterparts. Peer pressure (Burkett & Carrithers, 1980; Dupont, 1988; Farrow, 1980; Mitchell, Hong, & Corman, 1979; North & Orange, 1980) and having one or both parents be abusers of alcohol have been related to the predisposition of alcohol abuse in adolescents and young adults (Jalali, Jalali, Crocetti, & Turner, 1981; Landers & Hollingdale, 1988; Mitchell et al., 1979; Parker & Parker, 1980; Rivinus, 1988b).

Adult Children of Alcoholics (ACOAs) recognize the propensity of their members to become problem drinkers or alcoholics (McKenna & Pickens, 1981). Donovan (1981) wrote about a group formed at Brown University for the offspring of alcoholics. The group was devised to provide support for students newly aware of their parents' alcoholism and also to assist the students in times of acute crises

that related to the use of alcohol. Providing information to stimulate awareness that the students could abandon the roles they had assumed in the alcoholic family system was a primary objective of the group.

In a study by Claydon (1987), 1,302 freshman students completed the 30-item Children of Alcoholics Screening Test (CAST) developed by Pilat and Jones (1982). Findings supported the widely held hypotheses that alcohol problems tend to run in families and that males generally have higher levels of alcohol abuse than females. "The COAs [children of alcoholics] were approximately four times more likely to report a possible drinking problem for themselves as those from nonalcoholic homes" (p. 114).

In their recently published study pertaining to data gathered in 1984, Perkins and Berkowitz (1991) hypothesized that:

> Collegiate children and grandchildren of alcoholics are more likely than other students to exhibit signs of problem drinking and that reported incidents of problem drinking would be most prevalent among students who have experienced both parent and grandparent alcoholism. (p. 237)

Perkins and Berkowitz measured student problem drinking by quantifying "frequent heavy consumption, frequent negative consequences, frequent intoxication and personal concern about one's own drinking" (p. 238). Incidents that occurred one or more times within the previous year as a result of the personal use of alcohol were defined as negative consequences:

> (1) physical injury to oneself; (2) physical injury to others; (3) fighting; (4) behavior that resulted in negative reactions from others; (5) damage to property; (6) missing class; (7) inefficiency in homework, classroom, or lab performance; (8)

> late papers, missed exams, or failure to study for exams; (9) damaged friendships of [sic] relationships; or (10) impaired driving. (p. 238)

Even though the collegiate children of alcoholics (COAs) experienced fewer negative consequences due to their personal use of alcohol, the COAs reported "heavier consumption, more frequent intoxication and a greater incidence of self-concern" (p. 240). It appears that the collegiate children and grandchildren of diagnosed alcoholics cultivated an awareness of and control over their personal drinking, thereby minimizing the negative consequences of drinking.

> In contrast, students in [the] sample who had experienced significant familial dysfunction in relation to parental alcoholism, but whose parents were not formally recognized as alcoholic, reported frequent negative consequences more often than other students, yet without greater indication of heavy consumption and intoxication. Family denial of parental alcoholism may have prevented these students from developing the necessary self-monitoring mechanisms to reduce negative consequences of alcohol use that COAs with a diagnosed or treated parent may have developed. (p. 240)

Peer Pressure, Modeling of Adult Behavior, and Other Influences

Several researchers (Burkett & Carrithers, 1980; North & Orange, 1980; Stumphauser, 1980; Vingilis, 1981) have agreed that peer pressure is the most important contributing variable in adolescent alcohol abuse.

In a longitudinal study of alcohol consumption among college students, Igra and Moos (1979) concluded that residence-hall living supported the college subculture of informal social relations characterized by drinking-oriented peers. However, Banks and Smith

(1980) claimed that students in their study believed their decisions about alcohol consumption were made independently of environmental or peer pressure.

Others have contended that drinking patterns are learned from the adult parent (Addeo & Addeo, 1975; Barnes, 1981; Farrow, 1980; Shearin, 1980). However, Hawkins (1982) stated that the primary reasons for adolescent alcohol abuse are (a) peer influence, (b) the search for adult status, and (c) the lack of comfort with one's sexuality. Hawkins believed that feeling awkward with groups or with individuals of the opposite sex, especially in unfamiliar social situations, greatly increases the risk of alcohol use by adolescents. Addeo and Addeo (1975) reported that peer pressure to drink was intensified in the residence-hall environment of college campuses as groups of teenagers and young adults are without the close supervision of adults or parents, and, initially, the surroundings are unfamiliar.

The Relationship Between Academic Performance and the Use of Alcohol

In 1972, Jessor and Jessor reported that college male problem drinkers valued and expected less academic achievement and had lower grade point averages than nonproblem or minimal drinkers. Data collected throughout the freshman year disclosed that male heavy drinkers completed a lower average number of academic credits than did female nondrinkers. A more recent study by Moos et al. (1976) not only confirmed the findings by Jessor and Jessor regarding lower aspirations toward academic achievement and lower academic

performance by male heavy drinkers but also showed that heavy-drinking females appeared to value academic achievement less than did both nondrinking males and females. In addition, Demone (1972) found that the male adolescent problem drinker is more frequently absent from school and is more likely to receive grades of D or below than is the abstainer.

Engs and Hanson (1985) found that:

> Among beer drinkers the lower the grade point average the more the individual was likely to drink beer on a monthly or weekly basis. . . . For wine drinkers, on the other hand, the higher the GPA the higher the percentage of drinking wine on a monthly, weekly and daily basis with 10.7% of those with a 4.0 average down to 7.2% of those with below a 2.0 drinking on a weekly basis. (p. 71)

Both male and female heavy drinkers reported proportionately higher dropout rates and lower aspirations for academic achievement than did nondrinkers (Moos et al., 1976).

Studies Relative to the Prediction of Freshman Student Persistence

The research on attrition is endless. A multitude of researchers have attempted to explain the attrition phenomenon by investigating various characteristics of dropouts.

In a study of 13 small colleges by Chickering and Hannah (1969), results indicated that dropouts lacked purpose, did not talk to appropriate institutional personnel, experienced disorientation, and had minimal institutional interaction. The degree of interaction and adaptation to the college was less than desirable. It was concluded that faculty needed to be more accessible and

sensitive to students and that the college climate should facilitate more interaction.

In 1975, Tinto presented his explanation of attrition factors. A discussion of Tinto's model follows:

> It is the levels of goal and institutional commitment, in periods of stable market conditions, as they are affected and modified by the individual's experiences in the academic and social systems of the college, that determine his decision to remain in college. Given sufficiently low goal commitment, individuals tend to withdraw not so much because of poor grade performance as because of insufficient rewards gained in the social system of the college. As a result, low levels of commitment to the institution and to the goal of college completion distinguish the voluntary withdrawal from the person who is an academic dismissal. (Tinto, 1975, p. 117)

Tinto's model of persistence-withdrawal behavior has been the subject of extensive study (Bean, 1980; Mallette, 1989; Pascarella & Terenzini, 1980, 1983; Terenzini & Pascarella, 1977, 1978). Terenzini and Pascarella showed support for Tinto's model through several studies. Academic and social integration were examined using an Adjective Rating Scale, factor analysis, and discriminant analysis.

In discussing persistence in higher education, Stoecker, Pascarella, and Wolfle (1988) suggested generalizability of the findings using Tinto's model was limited because, previously, most studies had been conducted on single-institution samples. However, Stoecker et al. confirmed their support of Tinto's model following their nine-year study that used a national, multi-institutional sample.

Contrary to elements of Tinto's model, Suina (1988) found in his study of 190 Pueblo Indian students at six colleges that the

level of college-degree aspiration and ACT scores were not valid predictors of persistence. However, the findings indicated that social services for the students could positively affect attrition and that persisters were more integrated into the academic and social systems of the institution than nonpersisters. The latter is supportive of Tinto's model. The study also serves as a reminder that examining persistence among college students who are culturally and linguistically distinct from the general population may expand current information that has been generated through study of more traditional population samples.

In Lanning's (1977) review of attrition studies based on traditional variables, he concluded that "little agreement exists concerning the predictive value of numerous variables on college persistence and/or withdrawal" (p. 34). Lanning contended, "More appropriate considerations would seem to require a systematic attempt to uncover the personal reasons that individuals have for withdrawing and then trying to deal with those by means of organizational or institutional changes" (p. 37).

Using six predictor variables, Crymes (1988) conducted a study examining how accurately student retention could be forecast. The sample was composed of 165 freshman students. A two-group discriminant function analysis and a multiple regression procedure were used to determine the test set of predictors that could distinguish between persisting and nonpersisting students. High school grade point average, lower concern about financial problems,

and academic satisfaction were the most important variables that discriminated between persisting and nonpersisting students.

In a study by Lackie (1988), 404 male and female students from two colleges completed a survey instrument during the third week and again in the thirteenth week of their first semester in college. Academic adjustment was found to be the greatest contributor to overall adjustment problems, followed by social, personal, and college-match adjustment.

It is important to distinguish between the behavior associated with academic dismissal and voluntary withdrawal. While academic dismissal is a result of poor grade performance, voluntary withdrawal appears "to relate to the lack of congruency between the individual and both the intellectual climate of the institution and the social system composed of peers" (Tinto, 1975, p. 117).

Background variables such as high school grade point average and ACT scores represent facts about students before college enrollment. According to Bean (1982), these variables "can be used to indicate the types of problems an institution can expect when admitting student with certain attributes" (p. 26). Over extended periods of time, the relationship between high school grade point average and ACT scores and retention appears to weaken.

Summary

Historically, alcohol use has been endemic to American society. The quantity of alcohol consumption in the United States has continued to proliferate among the general population since 1950. A

1987 study indicated that a greater proportion of males aged 18 to 29 reported heavy drinking than did older males and that, since 1964, women in their twenties have begun to report lower abstention rates. Although collegiate drinking patterns have reflected the mores of the larger society, alcohol use among college students not only exceeds that of the general population but is greater than that of noncollege men and women within the same age group. Alcoholism has been defined as a disease; the negative consequences associated with problem drinking are numerous and affect all segments of society. Prevention through education has sought to change public attitudes toward problem drinking and alcoholism.

Defining problematic drinking and drawing cutpoints for the amount and frequency of consumption have made the study of alcohol-related problems difficult. However, a number of studies have been conducted relative to problem drinking by college students.

Issues associated with problem drinking (alcohol use or abuse) by college students include academic difficulties, accidents, acquaintance/date rape, and being victimized by or participating in sexual assault, armed robbery, theft, and/or vandalism. Both male and female heavy drinkers are more likely than nondrinkers to argue with other students. Male students experience a higher percentage of problems related to drinking than do females because they drink more frequently and in higher quantities than women. Although alcohol education and prevention programs exist in a number of colleges, alcohol-related problems continue to plague the college community.

Studies relative to college student alcohol usage patterns have indicated that, over the past 40 years, there has been an increase in the percentage of students who drink. It is estimated that as many as 90% of all college students are drinkers. With regard to problem drinking according to ethnicity and years in college, the literature is in disagreement. However, in a number of studies beer has been reported to be the most widely consumed alcoholic beverage by college students. It appears that parents' educational level is not a significant factor in problem drinking. Peer pressure and being the child of an alcoholic seem to have the most influence on the drinking patterns and consequences of drinking by college students. Some studies have indicated that alcohol abuse is also related to the search for adult status and the lack of comfort with one's sexuality. In addition, the residence hall environment and the lack of supervision of adults or parents are major influences leading to problem drinking.

In studies that have examined academic performance according to the use of alcohol, there appeared to be a negative relationship between alcohol consumption and academic achievement. Both male and female drinkers reported a proportionately higher dropout rate than did nondrinkers.

A multitude of studies related to the prediction of freshman student persistence helped to explain characteristics of returners and nonreturners. The theory of commitment to educational goals and commitment to the institution, as they are affected by the academic

and social integration of students, has been researched extensively. Recently, attention has been drawn to the need to assess the culturally diverse by looking at the personal reasons that individuals have for withdrawing. High school grade point average, lower concern about financial problems, and academic satisfaction appear to be important variables that distinguish between students who persist and those who drop out. However, it is important to distinguish between the reasons for academic dismissal and voluntary withdrawal as the relationship between high school grade point average and ACT scores and retention appears to weaken over time.

The need to study the relationship between attitudes toward alcohol use and alcohol-consumption patterns with respect to freshman attrition was reinforced following a review of the literature. There is a lack of publications relating alcohol to attrition, yet factors leading to the attrition of college students are often parallel to the negative consequences of alcohol consumption.

CHAPTER III

METHOD

The researcher's major goal in this study was to examine the attitudes toward alcohol use and the alcohol-consumption patterns of returning and nonreturning students at Ferris State University. Another goal was to examine perceptions about parental drinking and the reasons influencing the decision either to drop or not return to Ferris State University. A third goal was to examine selected variables in relation to reasons students leave Ferris State University. The method provided a framework for a valid and systematic investigation into the relationship of alcohol to the persistence and attrition of Fall Term 1989-90 freshman students.

The method section includes a discussion of the research design, population, sample, instrumentation, data analysis, and statistical treatment of each research question.

Design of the Study

The study was quantitative and descriptive. Data were collected from the returning students by administering an anonymous on-campus survey during Fall Term 1990-91. The data from the nonreturning students were collected during summer and fall 1990 using a mail survey that provided maximum anonymity.

The study was cross-sectional, using a simple random sample of both returning and nonreturning students. The sample of returning students was drawn from 2,228 returning freshman students who were 17, 18, 19, or 20 years of age during Fall Term 1989-90 and who were continuously enrolled at Ferris State University for a minimum of 12 credits during the 1989-90 academic year. The 203 students represented close to 10% of the 2,228 returners.

The sample of nonreturning students was drawn from 461 nonreturning freshman students who were 17, 18, 19, or 20 years of age and who were enrolled at Ferris State University for a minimum of 12 credits during Fall Term 1989-90. The 141 students represented approximately 30% of the 461 nonreturners.

Research Question 1 involved performing one-way MANOVAs and t-tests to compare the attitudes toward alcohol use and the alcohol-consumption patterns between returning and nonreturning freshmen. Research Questions 2 through 5 involved comparing two sets of dependent and two sets of independent variables, using one-way multivariate analysis of variance (MANOVA), ANOVA, and t-tests. The two dependent variable sets included attitudes toward alcohol use and alcohol-consumption patterns; the two independent variable sets consisted of demographics and selected life events. This analysis was intended to show whether alcohol was a contributing factor in the decision to leave or not return to Ferris State University.

Research Question 6 involved using chi-square to examine the difference between returning and nonreturning students' reported perceptions about parental drinking. For Research Question 7,

chi-square was used to compare a total of eight reported reasons students leave Ferris State University with perceptions about parental drinking. Using chi-square, Research Questions 8 and 9 involved comparing the two alcohol-related reasons students might not have returned to Ferris State University with six separate reasons that might have influenced the decision either to drop or not return to Ferris State University.

The Population of the Study

Returners

The population consisted of 2,228 of the 2,838 freshmen who entered Ferris State University during Fall Term 1989-90 and who were defined as returning students. Specifically, the population of returning students included freshman students who were 17, 18, 19, or 20 years of age; who were enrolled at Ferris State University for a minimum of 12 credits during Fall Term 1989-90; who were continually enrolled for Fall, Winter, and Spring Terms 1989-90; and who returned to Ferris State University for Fall Term 1990-91. The 1989-90 population total of 2,228 returning students, as defined, was generated from the Office of Institutional Studies at Ferris State University.

Nonreturners

The population consisted of 461 of the 2,838 freshmen who entered Ferris State University during Fall Term 1989-90 and who were defined as nonreturning students. Nonreturning students

included the following categories: authorized withdrawals, no-shows, academically denied students, and students who neglected to register by May 9, 1990, for Fall Term 1990-91. Specifically, the nonreturning population of the study was defined as nonreturning freshman students who were 17, 18, 19, or 20 years of age, who were enrolled at Ferris State University for a minimum of 12 credits during Fall Term 1989-90, but who were not enrolled for Winter Term 1989-90 and/or Spring Term 1989-90 beyond the fifth day of classes, or did not register for Fall Term 1990-91 by May 9, 1990. The 1989-90 population total of 461 nonreturning students, as defined, was generated from several areas within the university: the Office of Institutional Studies and the Office of the Registrar, both of which are under the leadership of the Office of Academic Affairs; the Ferris Housing Office, which is a function of Student Services; and the Ferris Computer Center.

A total of 149 freshman students who were enrolled for fewer than 12 credits (n = 88) during Fall Term 1989-90 or who were age 21 years or older (n = 61) were removed from the population of the study either because they were not full time or because they were of legal drinking age. Thus, the 2,228 returners, 461 nonreturners, and 149 students who were less than full time or 21 years of age or older constituted the population total of 2,838.

The Sample

Sample Size of Returners

The sample size of returners consisted of 203 randomly selected returning freshman students and was determined by using the formula $n = Z^2\ p\ q/e^2$. The estimate of the percentage of students whose decision to return might not have been related to alcohol was represented by p. For this sample size, the confidence level of 90% was used with 5% error. The following formula shows the sample calculation:

$$n = Z^2\ p\ q/e^2$$

$$n = 1.645\ sq\ x\ (.75\ x\ .25)\ /\ .05\ sq$$

$$n = 202.95$$

By using the above formula, the sample size was determined to be 203.

Sample Size of Nonreturners

The sample size consisted of 141 randomly selected nonreturning freshman students and was determined by using the formula $n = Z^2\ p\ q/e^2$. The population size correction factor formula $n_o\ x\ N/n + (N-1)$ was also used because the population size was small. For this sample size, the confidence level of 90% was used with 5% error. The p-value was defined as "proportion of successes" and was determined to be 25%. The estimate of the percentage of students whose attrition decision might have been related to alcohol was represented by p. Previous researchers have indicated that freshmen leave a university primarily for reasons other than

alcohol. Several reasons students have given for leaving Ferris State University, according to Bonkowski and Shible (1990) and Keigley and Bonkowski (1990), have been transferring to another college or university, financial difficulties, and joining the military. In addition, between 80% and 95% of all students consume alcohol (Rivinus, 1988a), and yet approximately 50% receive baccalaureate degrees (Barton, 1989). While 5% would have been a likely estimate of the number of students whose decision to leave Ferris State University might have been related to alcohol, p could have been as high as 25%, although it was unlikely according to previous research. Therefore, 25% represented a very conservative estimate of p. Using .05 as p resulted in a sample size of 52, whereas .25 used as p yielded a sample size of 202.95. By calculating the population size correction factor for n = 202.95, the result was a sample size of 141.

The following formula shows the sample calculation:

$$n = \frac{Z^2 pq}{e^2}$$

$$n = \frac{1.645^2 \times (.25 \times .75)}{.05^2}$$

$$n = 202.95$$

The n = 202.95 was then entered into the population size correction formula:

$$n = \frac{n_0 \times N}{n + (N-1)}$$

$$n = \frac{202.95 \times 461}{202.95 + 460}$$

$$n = 141$$

Simple Random Sampling of Returners

The sample was selected from the newly enrolled Fall Term 1989-90 returning freshman population at Ferris State University using simple random sampling. According to Scheaffer, Mendenhall, and Ott (1986), "a simple random sample of size *n* occurs if each sample of *n* elements from the population has the same chance of being selected" (p. 67).

A master list of returning freshman students in alpha order was provided by the Office of Institutional Studies. A cross-check was performed using the list of nonreturning freshman students to assure that all students defined as returning did appear on the master list and that there was no contamination of the population by nonreturners.

The master list of the 2,228 returning students was downloaded from the Ferris State University mainframe computer in a format that could be read using the P-C File + (3.0) database software program. Because randomization is an available function in the P-C File + (3.0) database program, the downloaded file was randomized and 203 records were cloned to a separate data file.

Simple Random Sampling of Nonreturners

The sample was selected from the newly enrolled Fall Term 1989-90 nonreturning freshman population at Ferris State University using simple random sampling. A master list of nonreturning freshman students in alpha order was provided by the Office of Institutional Studies. A cross-check was performed using lists from the Office of the Registrar, the Housing Office, and the Computer Center at Ferris State University to assure that all students defined as nonreturning appeared on the master list. Sampling units on the master list were numbered. The first name was number 1, the second name was number 2, and so on. The numbering sequence continued until all names on the master list had been assigned a number.

A list of random numbers was used in selecting the sample. The random number generator program, written in BASIC, was used to produce the list (see Appendix A), which was made available to the researcher through the Office of Assessment Services at Ferris State University. One hundred forty-one names that previously had been assigned numbers and that appeared on the list of random numbers were then selected to be elements in the sample.

Replacement of Random Sample Elements: Returners and Nonreturners

There was no need to replace any of the returning students within the returning sample. However, seven replacements were needed for the nonreturning sample. Identification of the replacements was accomplished using a random number table (Kendall & Smith, 1939; cited in Parket, 1974) (see Appendix B).

Reasons for replacement were as follows: Two parents wrote to the researcher indicating that their sons had joined the service and would not be able to participate in the survey, three of the nonreturners identified themselves as Professional Golf Management students who had left campus only to serve their internships, and two of the 141 nonreturners' questionnaires were returned because of invalid addresses.

Survey Procedures for Returners

The class schedule, permanent address, campus address, and campus/local phone number of each student in the sample of 203 returning students were identified and compiled. Each returning student in the sample was then contacted regarding a time when the questionnaire could be administered. The survey was administered to a total of 159 returning students.

Before completing the questionnaire, students were advised of their voluntary participation and were assured of anonymity. Once a survey was completed, the student placed it inside a pre-addressed envelope, sealed the envelope, and returned the envelope to the researcher via the Ferris campus mail system. To improve the response rate of the returners, one follow-up letter was sent. Of the 159 surveys completed by returning students, all were usable. The total number of surveys returned was 159, which represented a 78% response rate.

Mail Survey Procedure for Nonreturners

All students who made up the sample of 141 nonreturners received an introductory letter from the president of Ferris State University in summer 1990, followed one week later by a mail survey accompanied by a letter of transmittal and a preaddressed, stamped post card that was to be returned to confirm participation. The return post card was designed to eliminate unnecessary mailings to the respondents while maintaining their anonymity. Three of the four follow-up mailings included an identical survey that was duplicated on different colors of paper. Return deadlines were adjusted on the questionnaires, as were the dates and contents of each letter of transmittal. Each mailing of the instrument also included a preaddressed, postage-paid #9 envelope for return of the survey. One post card reminder was sent to all nonrespondents.

As recommended by Dillman (1978), each letter of transmittal was individually signed with a blue ball-point pen, and first-class stamps were affixed to both the #10 and #9 envelopes and the return post cards for all mailings. Use of official letterhead and envelopes was intended to enhance the professional aspect of the survey. Phone calls were made to encourage return of the surveys, followed by a final mailing. Assurance of anonymity was constantly conveyed to the students through every phase of the fieldwork.

A total of 66 surveys were returned. Of the 65 surveys completed by nonreturning students, two were unusable because they arrived after the statistical analysis had been performed. A parent had completed another questionnaire and returned it. That survey

was also unusable. Therefore, out of a total of 66 surveys received from nonreturning students, the total number of usable surveys was 63. The return of 66 of the 141 surveys represented a respectable response rate of 47%. According to Alreck and Settle (1985), "Mail surveys with response rates over 30 percent are rare. Response rates are often only about 5 or 10 percent" (p. 45).

Instrumentation

Two questionnaires were developed to gather data; one instrument was used to survey the nonreturning students using a mail survey, whereas the second instrument was administered on campus to gather data from the returning students. The surveys were identical except for Questions 2, 27 through 32, and 39. Five other questions were slightly modified to be appropriate for the returning students. In Q-17 through Q-19 for nonreturners, the question began, "When you were enrolled at Ferris. . . ."; for the returners, the question read, "Since you have been enrolled at Ferris. . . ." For nonreturners, Q-23 began, "Did your use of alcohol. . . ." while Q-23 for returners read, "Has your use of alcohol. . . ." In Q-24 the nonreturners' questionnaire began, "During the term(s) I attended Ferris. . . ."; for the returners, Q-24 began, "During the 1989-90 year I attended Ferris. . . ." Response choices for the slightly modified questions (17 through 19, 23, and 24) were identical on both questionnaires.

Instrument Development

Previous research. Several studies recently conducted at Ferris State University have made reference to or focused on the use and abuse of alcohol by Ferris students. Anderson and McCoy (1987) reported perceptions of on-campus students, off-campus students, resident assistants, and "significant others" about alcohol use on the Ferris campus. During summer 1988, Kowalkoski and Swartz surveyed a sample of 2,510 freshman-orientation students using the Student Information Form (see Appendix C) developed through the Cooperative Institutional Research Program (CIRP). Since 1966, Astin and Green have produced a longitudinal profile of the American freshman population using the 215-question Student Information Form. The instrument contained items in the following categories: demographics, academics, social items, religion, and emotional characteristics. Attitudes toward alcohol and alcohol-consumption patterns were compared with national norms. A locally developed questionnaire (see Appendix D) regarding specific attitudes toward alcohol use and alcohol-consumption patterns was administered simultaneously with the Student Information Form to the 2,510 freshman-orientation students (Shible & Bonkowski, 1988).

Data were gathered for a third study between July and September 1989 (Bonkowski & Shible, 1990) (see Appendix E for survey instrument). The Quality of Student Life Follow-Up survey contained items on the following topics: demographics, reasons for academic withdrawal, attitudes toward alcohol, and behavioral characteristics related to alcohol use. The sample consisted of a systematic sample

of 209 students who were surveyed following their freshman year at Ferris State University.

A fourth study was further developed by Keigley and Bonkowski (1990) to determine the relationship of alcohol to the persistence of freshman students. Items measured on the Spring 1990 Ferris State University survey, located in Appendix F, included demographics, attitudes toward alcohol use, level of alcohol consumption, and selected life events, as well as categorical questions identifying the students' intention to return to Ferris. The number of 1989-90 freshmen surveyed in this study totaled 348.

Pretesting. A pretest of the entire final nonreturning student instrument (Appendix G) was conducted with a group of freshman students who were attending Ferris State University during summer 1990. No changes in the questionnaire were necessary according to the pretest.

For the returning students, a pretest of the entire final instrument (see Appendix H) was conducted during fall 1990 with a group of second-year students attending Ferris. No changes in the survey instrument were necessary according to the pretest.

Items that were *new* and that were subject to pretesting at Ferris State University included the following seven questions: Q-1, Q-2, Q-22, and Q-33 through Q-36 for both questionnaires. Items used in *previous studies* at Ferris State University or at the state or national level and that appeared unrevised on both the returning and nonreturning student instruments included the following three questions: Q-13, Q-14, and Q-45.

Items used in previous studies at Ferris State University or at the state or national level and that were reused with modification included the following 35 questions: Q-3 through Q-12, Q-15 through Q-21, Q-23 through Q-32, and Q-37 through Q-44. The rationale for the revisions was as follows: Stating the age of peers as "17, 18, 19, or 20" for Q-3 through Q-10 limited friends/peers to individuals who are under 21 and who are not of legal drinking age. For Q-11 and Q-12, the word "peers" was added since the word "peer" appears as a more adult form of the word "friends." Adding "wine cooler" to the list of alcoholic drinks in Q-15 through Q-19 updated the list of alcoholic beverages. Also, by making Q-17 through Q-19 specific to time of enrollment at Ferris; listing the categories of "beer," "wine or wine cooler," and "shot of liquor or mixed drink" and expanding the responses to include "0," "less than 1," "1-2," "3-4," "5," and "6 or more," the continuous data were indicative of the degrees of alcohol consumption as defined in Chapter I. In Q-20, Q-21, and Q-23, phrases identifying the respondents as Ferris students were inserted. The response "withdrew from a class" was deemed more informative than the response "hangover" for Q-24. In Q-25, the time period for considering reducing or stopping use of alcohol was expanded from "<u>At any time</u> during the LAST 8 MONTHS" to "How often . . ." with response choices being continuous instead of categorical. The response choices in Q-26 were also made continuous by using "Strongly agree," "Agree," "Disagree," and "Strongly disagree" instead of "Yes," "No," "Uncertain," and "I am a non-user." For Q-27 through Q-32, specific time frames (Winter 1989-90,

Spring 1989-90, and Fall 1990-91) were added. For the returning students, responses to Q-27 through Q-32 were categorical, whereas responses for Q-27 through Q-32 on the nonreturning student survey were made continuous. In Q-37, both mother and father were included in one question in an effort to gauge social status without adding several questions to the instrument. Although the educational level of the father has been identified as a significant demographic variable in many studies, the current prevalence of single-parent families may limit the reliability of data regarding only the father. In Q-38, "Spring Term 1990" was changed to "at the end of my last term at FSU" for the nonreturners. "I was at Ferris" was added to Q-39 in case a nonreturner had enrolled at another college or university since leaving Ferris. The response choices were simplified for both Q-40 and Q-41 to minimize distraction for the respondent. The ACT composite ranges in Q-42 were designed to conform to the bell-shaped pattern of incoming Ferris students' scores and to offer continuous data for purposes of analysis (Swartz, 1990). Responses to the ethnicity question (Q-43) were congruent with the classifications used for reporting ethnicity at Ferris. Finally, Q-44 was expanded to include "17" because the age at which the students entered Ferris during Fall Term 1989-90 was probably different from the age they would have been when they completed the questionnaire.

Questionnaire length and layout. The questionnaires used for this research were developed as a result of previous studies and

included questions that had been administered at the national, state, and local levels. Because a mail survey was used for the nonreturning students, an attempt was made to make the questionnaires for this study brief, yet comprehensive.

In an effort to develop a cost-efficient survey that would elicit a high response rate, major reference was made to the Total Design Method (TDM) as recommended by Dillman (1978). The TDM process included placing demographic items last, noting directions after each question, and using a booklet layout.

Item source and content balance. Questions not common to one of the Ferris State University survey instruments (Bonkowski & Shible, 1989; Keigley & Bonkowski, 1990; Shible & Bonkowski, 1988) were drawn from survey instruments used in national (Engs, 1975; Johnston et al., 1990) or state studies (Barnes & Welte, 1988; DiCicco, Davis, & Orenstein, 1984).

Attitudinal items from national studies that were used for returning and nonreturning students included the following: approval of peers trying one or two drinks of an alcoholic beverage, taking one or two drinks nearly every day, having four or five drinks nearly every day, or having five or more drinks once or twice each weekend (Q-3 through Q-6); perceived risk of peers trying one or two drinks of an alcoholic beverage, taking one or two drinks nearly every day, taking four or five drinks nearly every day, or having five or more drinks once or twice each weekend (Q-7 through Q-10); estimate of number of peers who drink alcoholic beverages

(Q-11); status of alcohol use among peers (Q-12); and personal feelings about status of alcohol use (Q-13).

An attitudinal item previously used in a state study (DiCicco et al., 1984) was wishing one or both parents would drink less (Q-14 for returning and nonreturning students). Personal belief regarding reduction in or abstention from alcohol use (Q-25), and belief alcohol had a negative effect on academic performance (Q-26) were locally generated attitudinal items used for both returning and nonreturning students. Whether personal use of alcohol or friends/peers' use of alcohol caused students to *consider* not returning (Q-27 through Q-32) were new questions used only for returning students. The degree to which personal use of alcohol influenced the decision to return or not return to Ferris (Q-27 through Q-29) and the degree of influence regarding peer use of alcohol in the decision to return or not return to Ferris (Q-30 through Q-32) were new questions used only for nonreturning students.

Consumption-pattern items included: ever having beer, wine, wine coolers, or liquor to drink (Q-15); having beer, wine, wine coolers, or liquor within the last year (Q-16); the approximate number and kinds of drinks usually consumed at one time while enrolled at Ferris (Q-17 through Q-19); the number of occasions when alcoholic beverages were consumed enough to feel pretty high (Q-20); the times five or more drinks were consumed <u>in a row</u> during the last term at Ferris (Q-21); and the approximate number of drinks *per month* consumed during Fall, Winter, Spring, and Summer Terms 1989-90

when enrolled at Ferris (Q-33 through Q-36). Most of the consumption-pattern items were questions used in national studies that were modified for use with both the returning and nonreturning students in the Ferris State University sample.

The demographic variables were a result of modifying questions from both national and local studies. For the nonreturning students' survey, the mother's or father's level of schooling (Q-37), cumulative credit hour load (Q-38), full-time status by term (Q-39), Ferris honor point average (Q-40), high school grade point average (Q-41), ACT composite score (Q-42), ethnicity (Q-43), age (Q-44), and gender (Q-45) were included. The questionnaire administered to the returning students included the nine demographic variables previously stated plus a tenth--school/college of enrollment for Fall Term 1990-91 (Q-2).

The following life event items were generated as a result of local studies at Ferris: transferring to another college/ university, having financial difficulties, being academically denied, feeling peer pressure to drink alcohol, and personally using or abusing alcohol (Q-2 for nonreturners). Having a physical fight after drinking, having an argument after drinking, and experiencing acquaintance/date rape after drinking (Q-22 for both returners and nonreturners) were life event items also generated from local studies at Ferris State University. Having trouble with boss or fellow workers, having difficulties of any kind with friends, having an automobile accident, being criticized by a family member, having

trouble with the police, and having an accident in the home or residence hall (Q-23 for returners and nonreturners) were items modified from a statewide study (Barnes & Welte, 1988). Missing a class, earning less than a "C" on a quiz or examination, earning less than a "C" for a class, or withdrawing from a class (Q-24 for returners and nonreturners) were also locally generated items.

Questions 1, 38, and 39 were designed to be used for screening respondents and were not intended for statistical analysis.

Scale sensitivity. All 45 items on both the returning and nonreturning students' survey instruments used forced-choice responses as opposed to open-ended questions. Some questions were treated as categorical for the purpose of analysis, whereas others were considered as interval data. A major portion of the variables were continuous; hence the response system was intended to approximate the degree in the underlying variable. For example, Q-3 asked, "Do YOU approve of your friends/peers age 17, 18, 19 or 20 doing each of the following . . . Trying 1 or 2 drinks of an alcoholic beverage?" The respondent was offered the choices of "Strongly Approve," "Approve," "Disapprove," and "Strongly Disapprove." It is believed that most young people today do have an opinion regarding the use of alcohol. By leaving out a neutral choice, respondents were forced to indicate a point of view.

Interval data were treated as continuous and analyzed with parametric statistics. Much has been written and researched regarding the number of response options necessary for a study. Cox

(1980) indicated that five-point scales appear adequate in subject-centered scales such as the Likert scale. In stimulus-centered scales, as many as nine alternatives may be appropriate if stimuli (scales) are heterogeneous and the respondents are sophisticated as to the response choices and committed to answering the questions. Some researchers have agreed that two or three categories are not appropriate (Cox, 1980; Green & Rao, 1970). However, Jacoby and Matell (1971) indicated that three categories may be sufficient. For this study, response options, scales, and categories of the continuous measures ranged from four to eight.

To measure students' approval of alcohol-consumption levels, a range of four response options was used. The range included "Strongly Approve," "Approve," "Disapprove," and "Strongly Disapprove." The range of one to four was considered to be a continuum and treated as interval data. Other similar scales included "No Risk," "Slight Risk," "Moderate Risk," and "Great Risk"; "Strongly Agree," "Agree," "Disagree," and "Strongly Disagree"; and "Not At All," "Very Little," "Somewhat," and "To a Great Extent" (Gable, 1986).

Number and types of drinks consumed at any one time was measured using a range beginning with none and ending with six or more. Other continuous scales included "None," "A Few," "Some," "Most," and "All" (estimate of number of peers who drink alcoholic beverages); "Look Up to a Lot," "Look Up to Some," "Neither Up or Down," "Look Down on Some," and "Look Down on a Lot" (Status of

alcohol use among peers); "Look Up to It a Lot," "Look Up to It Some," "Neither Up or Down," "Look Down on It Some," and "Look Down on It a Lot" (personal feelings about status of alcohol use); "No Occasion," "A Few Occasions," "About 1/2 of the Occasions," "Most of the Occasions," and "Nearly All of the Occasions" (the frequency of occasions when alcoholic beverages were consumed enough to feel pretty high); "None," "Once," "Twice," "3-5 Times," "6-9 Times," and "10 or More Times" (the times five or more drinks were consumed in a row during the last term at Ferris); "None," "1-2," "3-5," "6-10," "11-19," "20-39," "40-55," and "56+" (approximate number of drinks per month consumed when enrolled at Ferris); "1.99 or below," "2.00-2.49," "2.50-2.99," "3.00-3.49," and "3.50-4.00" (Ferris honor point average and the high school grade point average); "0-5," "6-10," "11-15," "16-20," "21-25," "26-36" (ACT composite score); and "17," "18," "19," and "20" (age upon entry during Fall Term 1989-90).

Demographic variables. Demographic variables were placed at the end of the nonreturning students' questionnaire as recommended by Dillman (1978). The nine demographic variables for nonreturning students were mother's or father's level of schooling (Q-37), full-time status by term (Q-38), cumulative credit hour load (Q-39), Ferris honor point average (Q-40), high school grade point average (Q-41), ACT composite score (Q-42), ethnicity (Q-43), age (Q-44), and gender (Q-45). A tenth demographic variable, school/college of enrollment during Fall Term 1990-91 (Q-2), was added for returning students.

Timetable and mail questionnaire supplements (nonreturning students).

Week 1: On July 27, 1991, an introductory letter (Appendix I) was sent to the 141 students identified as nonreturners using a list of random numbers (Appendix A).

Week 2: On August 3, 1990, the survey instrument, copied on white paper and dated for return by August 10, 1990 (Appendix G), first letter of transmittal (Appendix J), preaddressed and stamped #9 return envelope (Appendix K), and return stamped post card (Appendix L) were mailed in a #10 window envelope (Appendix M).

Week 3: On August 10, 1990, a second survey instrument, copied on peach paper and dated for return by August 17, 1990 (Appendix G), a second letter of transmittal (Appendix N), preaddressed and stamped #9 return envelope (Appendix K), and return stamped post card (Appendix L) were mailed in a #10 window envelope (Appendix M) to individuals from whom no return post card (Appendix L) was received, as noted on the Nonreturning Freshman Student Survey Log: 1990 (Appendix O).

Week 4: On August 17, 1990, a reminder post card (Appendix P) was sent to all nonrespondents.

Week 6: On August 29, 1990, a third survey instrument, copied on yellow paper and dated for return by September 7, 1990 (Appendix G), a third letter of transmittal (Appendix Q), a preaddressed and stamped #9 return envelope (Appendix K), and a return stamped post

card (Appendix L) were mailed in a #10 window envelope (Appendix M) to all nonrespondents.

Seven individuals in the original random sample were replaced by using numbers in a random table (Appendix B) to determine selection.

On August 29, 1990, an introductory letter (Appendix I) was sent to the seven replacement students identified as nonreturners.

Week 7: On September 7, 1990, a fourth but identical survey (Appendix G) was copied on white paper using blue ink instead of black. The date for return was September 14, 1990. The survey was mailed to the identified replacement individuals along with a redated letter of transmittal (Appendix J), a preaddressed and stamped #9 envelope (Appendix K), and a return stamped post card (Appendix L) in a #10 window envelope (Appendix M).

Weeks 16 through 19: From November 1 through November 25, 1990, an attempt was made to contact all nonrespondents by telephone with subsequent mailings that included a redated questionnaire (Appendix G), a fourth letter of transmittal (Appendix R), a preaddressed and stamped #9 return envelope (Appendix K), and a return stamped post card (Appendix L) in a #10 window envelope (Appendix M).

Timetable and administration of the on-campus questionnaire (returning students).

Week 1: From October 15 through October 22, 1990, students enrolled in two marketing research classes and one marketing data-analysis class at Ferris State University were given verbal and

written instructions (Appendix S) regarding distribution of the questionnaires (Appendix H). To facilitate making contact, schedule sheets indicating the class schedule, permanent address, local address, and local/campus phone number of each student in the sample were distributed in late October to the marketing students (Appendix T).

Weeks 2 through 5: From October 22 through November 25, 1990, each marketing student was assigned to make contact with three or four (designated) 1989-90 freshman students within four days to arrange for delivery of the letter of transmittal (Appendix U) and the returning student questionnaire (Appendix H). Returning students who were contacted and who were willing to participate in the survey then returned the completed surveys in the preaddressed return envelopes provided (Appendix V). Respondents also mailed the return stamped post card (Appendix L) to the researcher. Return envelopes were designed to be returned to the researcher via the Ferris State University campus mail system. If they wanted the results of the study, respondents were able to make that request by using the second preaddressed envelope provided (Appendix W).

As a follow-up, a second letter of transmittal (Appendix X), a copy of the questionnaire (Appendix H) with a return date of November 16, 1990, a preaddressed return envelope (Appendix V), and a results-requested envelope (Appendix W) were sent to nonrespondents via campus mail.

Institutional cooperation. The Ferris State University Office of Academic Affairs and the Substance Abuse Task Force Committee Chair had jointly endorsed the proposed study (Appendix Y). This support permitted the researcher to obtain the names, addresses, and phone numbers of both the returning and nonreturning students from Carol Maki (Institutional Studies) while allowing the researcher to remain within the legal boundaries established by the Family Educational Rights and Privacy Act of 1974 (as interpreted on May 30, 1990, by Barbara Yockey, Assistant Legal Counsel, Ferris State University). Permission was obtained through the endorsement to use official university letterhead stationery and envelopes. Ferris State University President Helen Popovich agreed to sign an introductory letter to nonreturning students. The president authorized the Ferris Computer Center to place her personal signature on each of the introductory letters by using a digitized font. The result was a set of personalized introductory letters that Dr. Popovich did not have to sign individually.

The first three mailings to the nonreturning students (the introductory letter and the first and second letters of transmittal) were produced by a mail-merge process instituted with the cooperation of the Ferris Computer Center under the direction of Jerry Nogy, Wayne Maki, Bruce Werner, and Calla Dean. A request to waive programming fees for the mail-merge digitized-font process was made by the dean of the College of Arts & Sciences, Dr. Sue Hammersmith. The request was granted by Jerry Nogy and Wayne Maki of the Ferris Computer Center. The Office of Academic Computing at

Ferris, through the cooperation of Denise Erickson, assisted with the preparation of lists by offering instruction and assistance with various software packages. The mainframe computer at the university was used for analysis, using the Statistical Package for the Social Sciences (SPSS-X). Dr. Manfred Swartz, Penny Papo, and Linda Burnes of the Office of Assessment Services provided the list of random numbers, format for the survey instrument, data entry, and consultation regarding the SPSS-X software package. Marketing research professor Dr. Marilyn Keigley performed the MANOVA, ANOVA, t-tests, and chi-square analysis and provided countless hours of research consultation. Dr. James Maas and Mike Cooper also provided statistical consultation.

Anonymity. To protect the anonymity of both the returning and nonreturning student respondents, only group data were collected and reported. No coding system for identification was used on any of the questionnaires. Returned questionnaires were dated according to the date the researcher received them from the Office of Academic Affairs. Although returned post cards were indicative of an individual's participation in the study, it was impossible to link individually returned questionnaires with returned post cards for either returning or nonreturning students.

Instrument Reliability

Reliabilities were calculated on the dependent variables to determine internal consistency of the instrument using Cronbach's coefficient alpha (Cronbach, 1947). The variables were factored

into a matrix consisting of five factors, or sets, of variables. Factor 1 primarily included consumption variables. The variables for Factor 1 were as follows: Q-33, "Drinks per month at FSU-FALL 89-90"; Q-34, "Drinks per month at FSU-WTR 89-90"; Q-21, "Number of times last FSU term--5+ drinks"; Q-20, "How often felt high after drinking alcohol"; Q-17, "When enrolled, average # beers at one time"; Q-19, "When enrolled, average # shots at one time"; and Q-11, "Estimated how many friends drink." The coefficient alpha was .8916, which is indicative of strong reliability.

Factor 2 included the following four attitudinal variables: Q-8, "Think friends age 17-20 risk harm if they . . . take 1-2 drinks nearly every day"; Q-5, "Approve of 17-20 years olds . . . having 4-5 drinks nearly every day"; Q-4, "Approve of 17-20 year olds . . . taking 1-2 drinks nearly every day"; and Q-9, "Think friends age 17-20 risk harm if they . . . take 4-5 drinks nearly every day." The coefficient alpha for Factor 2 was .8119. A high reliability resulted for Factor 2, which included four variables measuring attitudes toward daily drinking.

Factor 3 was a homogeneous category and included the following attitudinal variables: Q-10, "Think friends age 17-20 risk harm if they . . . have 5+ drinks once or twice each weekend"; Q-6, "Approve of 17-20 year olds . . . having 5+ drinks once or twice each weekend"; Q-7, "Think friends age 17-20 risk harm if they . . . try 1-2 drinks/alcoholic beverage"; and Q-3, "Approve of 17-20 year olds . . . trying 1-2 drinks/alcoholic beverage." The coefficient alpha

was .6956. Although there was correlation, it was not as strong as it was for Factors 1 and 2.

Factor 4 was a homogeneous category and included the following two attitudinal variables: Q-26, "Alcohol negatively affected academics," and Q-25, "Should reduce personal use of alcohol." The coefficient alpha was .6721. Because the survey was administered to college students between the ages of 17 and 20 years, the reliability might have been weaker than it would have been for a mature adult population. Alcohol use has been described as a "rite of passage" for college students (Hirschorn, 1987); therefore, not admitting alcohol might have had an adverse effect on academics, and/or denying the need to reduce alcohol use could be expected.

Factor 5 was a homogeneous category and included the following attitudinal variables: Q-13, "Approve alcohol use/self," and Q-12, "Friends approve alcohol use." The coefficient alpha was .4918. These questions were taken from a survey used nationally for high school students. The response choices "Looked up to. . . ." and "Looked down on. . . ." might have been too rudimentary for the college freshmen. Because the correlation was weak, these questions need to be revised for college students and are not recommended for future studies involving college students.

Data Analysis

Categorical and Interval Data

The majority of questions on the survey were considered continuous, interval data. These questions were discussed in the

section on Scale Sensitivity. The interval questions were summarized using means. Multivariate analysis, analysis of variance, and t-tests were employed in the data analysis. The alpha level of < .10 was used.

Specific yes/no questions, gender, ethnicity, and the reasons influencing nonreturn were treated as categorical. Statistical analysis for categorical questions was accomplished using percentages and chi-square. The significance level of < .10 was used.

Statistical Treatment

Research Question 1

Is there a statistically significant difference in the self-reported attitudes toward alcohol use and the self-reported alcohol-consumption patterns between returning and nonreturning Ferris State University Fall Term 1989-90 freshmen?

Ho 1: There is no statistically significant difference in the self-reported attitudes toward alcohol use and the self-reported alcohol-consumption patterns between returning and nonreturning Ferris State University Fall Term 1989-90 freshmen.

One-way MANOVA was performed to analyze 13 dependent variables that included attitudes toward alcohol use (Figure 3.1) of the returning and nonreturning freshman students. One-way MANOVA was also performed to analyze the seven dependent variables that included the alcohol-consumption patterns (Figure 3.2) common to both the returning and nonreturning students. MANOVA was selected to help avoid Type I error. T-tests were then performed to isolate significance for returners and nonreturners. The .10 alpha level was used.

Trying 1 or 2 drinks of an alcoholic beverage
Taking 1 or 2 drinks nearly every day
Taking 4 or 5 drinks nearly every day
Having 5 or more drinks once or twice each weekend
Try 1 or 2 drinks of an alcoholic beverage
Take 1 or 2 drinks nearly every day
Take 4 or 5 drinks nearly every day
Have 5 or more drinks once or twice each weekend
Number of friends/peers estimated to drink alcoholic beverages
Status of alcohol use as perceived among friends/peers
Personal feelings about status of alcohol use
Personal belief regarding reduction of alcohol use or abstention
Negative effect of alcohol on academic performance

Figure 3.1: Attitudes toward alcohol use--returners and nonreturners.

Average number of beer drinks at any one time
Average number of wine or wine cooler drinks at any one time
Average number of liquor shots or mixed drinks at any one time
Frequency of drinking enough to feel pretty high
Number of times consumed 5 or more drinks in a row during last term at FSU
Approximate number of drinks per month during Fall 1989-90 enrollment
Approximate number of drinks per month during Winter 1989-90 enrollment

Figure 3.2: Alcohol-consumption patterns--returners and nonreturners.

Research Question 2

Do the self-reported attitudes of *returning* Ferris State University freshman students toward alcohol use differ with respect to:

a. selected demographic variables?
b. selected life event variables?

Ho 2: There is no statistically significant difference in the self-reported attitudes of returning Ferris State University freshman students toward alcohol use with respect to:

a. selected demographic variables
b. selected life event variables

The 13 dependent variables that included returning and nonreturning students' attitudes toward alcohol use were listed in Figure 3.1.

The eight independent demographic variables for returning students are listed in Figure 3.3.

School/college of enrollment
Parents' educational level
Ferris honor point average
High school grade point average
ACT composite score
Ethnicity
Age
Gender

Figure 3.3: Selected demographic characteristics--returners.

The 13 independent life events variables for both returning and nonreturning students are listed in Figure 3.4.

Getting into a physical fight after drinking
Getting into an argument after drinking
Experiencing acquaintance/date rape after drinking
Having trouble with boss or fellow workers
Having difficulties of any kind with friends
Having automobile accidents
Being criticized by a family member
Having trouble with the police
Having an accident in the home or residence hall
Missing a class
Earning less than a "C" on a quiz or examination
Earning less than a "C" for a class
Withdrawing from a class

Figure 3.4: Selected life events--returners and nonreturners.

One-way MANOVA was performed to analyze 13 attitudes (Figure 3.1) of the returning freshmen using each of the eight independent demographic variables for returning students (Figure 3.3). One-way MANOVA was also performed to analyze 13 attitudes (Figure 3.1) of the returning freshmen using each of the 13 independent life event variables (Figure 3.4). MANOVA was selected to help avoid Type I error.

ANOVA was performed for each of the demographic and life event variables where one-way MANOVA findings indicated significance of less than .10 (probability level). T-tests were then performed to isolate significance for all possible demographic and life event variables. Where a demographic or life event variable resulted in significance for three categories or more, all possible groups of two were tested.

Research Question 3

Do the self-reported attitudes of *nonreturning* Ferris State University freshman students toward alcohol use differ with respect to:

a. selected demographic variables?
b. selected life event variables?

Ho 3: There is no statistically significant difference in the self-reported attitudes of nonreturning Ferris State University freshman students toward alcohol use with respect to:

a. selected demographic variables
b. selected life event variables

The 13 dependent variables that included nonreturning students' attitudes toward alcohol use were the same for returning and nonreturning students and were listed in Figure 3.1. The seven independent demographic variables for nonreturning students are listed in Figure 3.5.

Parents' level of schooling
Ferris honor point average
High school grade point average
ACT composite score
Ethnicity
Age
Gender

Figure 3.5: Selected demographic characteristics--nonreturners.

The 13 independent variables regarding selected life events were identical for returners and nonreturners and were listed in Figure 3.4.

One-way MANOVA was performed to analyze 13 attitudes (Figure 3.1) of the nonreturning freshmen using each of the seven

independent demographic variables for nonreturning students (Figure 3.5). One-way MANOVA was also performed to analyze 13 attitudes (Figure 3.1) of the nonreturning freshmen using each of the 13 independent life event variables (Figure 3.4). MANOVA was selected to help avoid Type I error.

ANOVA was performed for each of the demographic and life event variables where one-way MANOVA findings indicated significance of less than .10 (probability level). T-tests were then performed to isolate significance for all possible demographic and life event variables. Where a demographic or life event variable resulted in significance for three categories or more, all possible groups of two were tested.

Research Question 4

> Do the self-reported alcohol-consumption patterns of *returning* Ferris State University freshman students differ with respect to:
>
> a. selected demographic variables?
> b. selected life event variables?

> Ho 4: There is no statistically significant difference in the self-reported alcohol-consumption patterns of returning Ferris State University freshman students with respect to:
>
> a. selected demographic variables
> b. selected life event variables

The eight dependent variables that include alcohol-consumption patterns of returning students are listed in Figure 3.6.

Average number of beer drinks at any one time
Average number of wine or wine cooler drinks at any one time
Average number of liquor shots or mixed drinks at any one time
Frequency of drinking enough to feel pretty high
Number of times consumed 5 or more drinks in a row during last term at FSU
Approximate number of drinks per month during Fall 1989-90 enrollment
Approximate number of drinks per month during Winter 1989-90 enrollment
Approximate number of drinks per month during Spring 1989-90 enrollment

Figure 3.6: Alcohol-consumption patterns--returners.

One-way MANOVA was performed to analyze eight alcohol-consumption patterns (Figure 3.6) of the returning freshmen, using each of the eight independent demographic variables for returning students (Figure 3.3). One-way MANOVA was also performed to analyze eight alcohol-consumption patterns (Figure 3.6) of the returning students, using each of the 13 independent life event variables (Figure 3.4). MANOVA was selected to help avoid Type I error.

ANOVA was performed for each of the demographic and life event variables where one-way MANOVA findings indicated significance of less than .10 (probability level). T-tests were then performed to isolate significance for all possible demographic and selected life event variables. Where a demographic or life event variable resulted in significance for three categories or more, all possible groups of two were tested.

Research Question 5

Do the self-reported alcohol-consumption patterns of *non-returning* Ferris State University freshman students differ with respect to:

a. selected demographic variables?
b. selected life event variables?

Ho 5: There is no statistically significant difference in the self-reported alcohol-consumption patterns of nonreturning Ferris State University freshman students with respect to:

a. selected demographic variables
b. selected life event variables

The seven dependent variables that include alcohol-consumption patterns common to both the returning and nonreturning students were listed in Figure 3.2.

One-way MANOVA was performed to analyze seven alcohol-consumption patterns (Figure 3.2) of the nonreturning freshmen using each of the seven independent demographic variables for nonreturning students (see Figure 3.5). One-way MANOVA was also performed to analyze seven alcohol-consumption patterns (Figure 3.2) of the nonreturning freshmen using each of the 13 independent life event variables as listed in Figure 3.4. MANOVA was selected to help avoid Type I error.

ANOVA was performed for each of the demographic and life event variables where one-way MANOVA findings indicated significance of less than .10 (probability level). T-tests were then performed to isolate significance for all possible demographic and life event variables. Where a demographic or life event variable resulted in

significance for three categories or more, all possible groups of two were tested. The .10 alpha level was used.

Research Question 6

> Is there a statistically significant difference in the Ferris State University freshman students' self-reported perceptions about the drinking behavior of their parents between the returning and nonreturning freshmen?
>
> Ho 6: There is no statistically significant difference in the Ferris State University Fall Term 1989-90 freshman students' self-reported perceptions about the drinking behavior of their parents between the returning and nonreturning freshmen.

The parental drinking perception question was, "Have you ever wished that either one or both of your parents would drink less?" and the responses were "parents don't drink at all," "no," and "yes." This same question has been used for more than eight years by the Cambridge & Somerville Program for Alcoholism Rehabilitation on school surveys and with teenagers in alcohol education groups. The question has been deemed to be both reliable and valid as a method to identify children of alcoholic parents (DiCicco et al., 1984).

Chi-square was used to compare the self-reported perceptions about drinking behavior of parents between the returning and nonreturning freshmen. The .10 significance level was used.

Research Question 7

Is there a statistically significant relationship between the Ferris State University nonreturning freshman students' reported perception about the drinking behavior of their parents and the following reasons influencing the decision either to drop or not return?

a. Transferring to another college university
b. Having financial difficulties
c. Being academically denied
d. Feeling peer pressure to drink alcohol
e. Personally using or abusing alcohol
f. Other
    (1) Academic dissatisfaction
    (2) Residence hall life
    (3) Personal

Ho 7: There is no statistically significant relationship between the Ferris State University Fall Term 1989-90 nonreturning freshman students' self-reported perception about the drinking behavior of parents and the following reasons influencing the decision either to drop or not return:

a. Transferring to another college university
b. Having financial difficulties
c. Being academically denied
d. Feeling peer pressure to drink alcohol
e. Personally using or abusing alcohol
f. Other
    (1) Academic dissatisfaction
    (2) Residence hall life
    (3) Personal

Chi-square was used to compare the perception about parental drinking behavior with each decision to leave. Decisions to leave for this research question included transferring, financial difficulties, academic denial, peer pressure to drink alcohol, personal use or abuse of alcohol, academic dissatisfaction, residence hall life, and personal.

A substantial number of respondents (31/63) indicated reasons for leaving in the "other" category. Three additional sets of variable categories were developed: experiencing academic

dissatisfaction, disliking residence hall life, and personal. Additional chi-square tests were performed on those variables. A .10 significance level was used.

Research Question 8

Is there a significant relationship between the peer-pressure-to-drink-alcohol reason Fall Term 1989-90 freshman students left Ferris State University and the following reasons influencing the decision either to drop or not return?

a. Transferring to another college/university
b. Having financial difficulties
c. Being academically denied
d. Other
   (1) Academic dissatisfaction
   (2) Residence hall life
   (3) Personal

Ho 8: There is no statistically significant relationship between the peer-pressure-to-drink-alcohol reason Fall Term 1989-90 freshman students left Ferris State University and the following reasons influencing the decision either to drop or not return:

a. Transferring to another college/university
b. Having financial difficulties
c. Being academically denied
d. Other
   (1) Academic dissatisfaction
   (2) Residence hall life
   (3) Personal

Chi-square was used to compare the peer-pressure-to-drink-alcohol reason for leaving with the following reasons influencing the decision either to drop or not return: transferring to another college/university, having financial difficulties, being academically denied, experiencing academic dissatisfaction, disliking residence hall life, and personal. A .10 significance level was used.

Research Question 9

Is there a statistically significant relationship between the personal-use-or-abuse-of-alcohol reason Fall Term 1989-90 freshman students left Ferris State University and the following reasons influencing the decision either to drop or not return?

a. Transferring to another college/university
b. Having financial difficulties
c. Being academically denied
d. Other
   (1) Academic dissatisfaction
   (2) Residence hall life
   (3) Personal

Ho 9: There is no statistically significant relationship between the personal-use-or-abuse-of-alcohol reason Fall Term 1989-90 freshmen left Ferris State University and the following reasons influencing the decision either to drop or not return:

a. Transferring to another college/university
b. Having financial difficulties
c. Being academically denied
d. Other
   (1) Academic dissatisfaction
   (2) Residence hall life
   (3) Personal

Chi-square was used to compare the personal-use-or-abuse-of-alcohol reason for leaving with the following reasons influencing the decision either to drop or not return: transferring to another college/university, having financial difficulties, being academically denied, experiencing academic dissatisfaction, disliking residence hall life, and personal. A .10 significance level was used.

Approval

An application submitted to the Michigan State University Committee for Research Involving Human Subjects (UCRIHS) contained the following: abstract, subject population, procedures for

anonymity/confidentiality, risk/benefit ratio, consent procedures, signed statement from the committee chairman, a copy of the proposed "methods" section, and the information-gathering instrument. The researcher submitted the application on July 16, 1990, and was granted approval on July 26, 1990, to proceed with the survey of nonreturning Ferris State University students (see Appendix Z).

On August 9, 1990, application was made to the Ferris State University Institutional Review Board regarding the survey of the returning students. Following a meeting with the Institutional Review Board on September 10, 1990, approval for the protocol was granted on September 25, 1990 (see Appendix Z).

A second application was submitted to the UCRIHS at Michigan State University because the survey instrument for the returning students (Questions 2, 17-19, 23, 24, 27-32, and 39) had been modified from the original application. Approval to proceed was granted by UCRIHS on October 17, 1990 (see Appendix Z).

CHAPTER IV

FINDINGS

The study was designed for the collection and analysis of data regarding the attitudes toward alcohol use and the alcohol-consumption patterns of freshman students who were 17, 18, 19, or 20 years of age and who were enrolled at Ferris State University for a minimum of 12 credits during Fall Term 1989-90. Returning and nonreturning students were surveyed. A total of nine research questions were examined.

For Research Question 1, one-way MANOVA and t-tests were used to compare the attitudes toward alcohol use and alcohol-consumption patterns between returning and nonreturning freshmen. Attitudinal and consumption variables were analyzed in relationship to selected demographic characteristics and selected life events for returners and nonreturners in Research Questions 2 through 5 by performing one-way MANOVA, ANOVA, and t-tests. Research Question 6 involved using chi-square to examine the difference between returning and nonreturning students' reported perception about parental drinking. For Research Question 7, chi-square was used to compare several reasons students leave Ferris State University with perceptions about parental drinking. Using chi-square, Research Questions 8 and 9 involved comparing the two alcohol-related reasons students might

not have returned with six separate reasons that might have influenced the decision either to drop or not return to Ferris State University.

The method presented in Chapter III provided a framework for a valid and systematic investigation into the relationship of alcohol to the persistence and attrition of Fall Term 1989-90 freshman students at Ferris State University. The statistical analysis of the data follows.

Survey Participants

Response Rate

Survey instruments were mailed to a random sample of 141 nonreturning Ferris State University Fall Term 1989-90 freshman students. A total of 66 surveys were returned. Of the 65 surveys completed by nonreturning students, two were unusable because they arrived after the statistical analysis had been performed. A parent had completed another questionnaire and returned it, making it unusable. Therefore, out of a total of 66 surveys returned, the total number of usable surveys was 63. The return of 66 of the 141 mail surveys represented a respectable response rate of 47%, as previously noted (Alreck & Settle, 1985).

Survey instruments were also distributed to a random sample of 203 returning Ferris State University Fall Term 1989-90 freshman students during Fall Term 1990-91. A total of 159 returning students responded by completing the survey. Of the 159 surveys

returned, all 159 were usable, which resulted in a response rate of 78% (159/203).

Demographics--Returners

Highlights of the data as presented in Table 4.1 are as follows: (a) the male/female ratio of respondents closely paralleled the male/female ratio at Ferris State University, (b) more than half of the respondents' parents had had some college (17.6%) or had completed college (34.6%), (c) 74.2% of the respondents were age 18 when they matriculated, and (d) ethnic groups represented by the respondents were limited to African American (6.3%) and Caucasian (93.7%).

Demographics--Nonreturners

An examination of the data from Table 4.1 indicates the following: (a) the male/female ratio of respondents was reverse that of the male/female ratio at Ferris State University, (b) more than half of the respondents' parents had had some college (29.5%) or had completed college (29.5%), (c) 77.4% of the respondents were age 18 when they matriculated, and (d) ethnic groups represented by the respondents included African American (11.1%), Native American (3.2%), Asian American (1.6%), Caucasian (79.4%), and other (4.8%).

In Table 4.2, nonreturning students indicated transferring to another college/university (30%) and having financial difficulties (30%) as the most frequent reasons for leaving Ferris State University. Academic denial was the reason noted second most often (17%). The percentage of alcohol-related reasons (6.3% + 1.6%) for

Table 4.1.--Demographic profile of Ferris State University Fall Term 1989-90 freshmen--returners and nonreturners.

	Returners (n = 159)		Nonreturners (n = 63)	
	No.	%	No.	%
Gender				
Males	83	52.2	29	46.8
Females	76	47.8	33	53.2
Total	159	100.0	62	100.0
Parents' educational level:				
High school or less	48	30.2	14	23.0
Some college	28	17.6	18	29.5
Completed college	55	34.6	18	29.5
Graduate/professional	28	17.6	10	16.4
Total	159	100.0	60	100.0
Age:				
17 years	22	13.8	8	12.9
18 years	118	74.2	48	77.4
19 years	17	10.7	5	8.1
20 years	2	1.3	1	1.6
Total	159	100.0	62	100.0
Ethnicity				
International	0	0.0	0	0.0
Black/African American	10	6.3	7	1.1
Indian/Native American	0	0.0	2	3.2
Oriental/Asian American	0	0.0	1	1.6
Hispanic	0	0.0	0	0.0
White/Caucasian	149	93.7	50	79.4
Other	0	0.0	3	4.8
Total	159	100.0	63	100.0

Note. Numbers of missing responses for nonreturners: gender = 1, parents' educational level = 3, and age = 1.

leaving or not returning was approximately the same as each of the following categories: academic dissatisfaction (8%), disliked residence hall life (8%), and personal (8%).

Table 4.2.--Reasons Ferris State University Fall Term 1989-90 freshmen did not return (n = 63).[a]

Reason	No.	%
Transferred	19	30
Financial	19	30
Academic denial	11	17
Peer pressure to drink alcohol	4	6
Personal use or abuse of alcohol	1	2
Academic dissatisfaction	5	8
Disliked residence hall life	5	8
Personal	5	8
Other/miscellaneous	7	11

[a]Respondents could check more than one response.

A substantial number of respondents (22/63) indicated the reason for leaving in the original "Other" category. Therefore, three additional categories were developed for answers common to five or more respondents: academic dissatisfaction, disliking residence hall life, and personal (see Figure 4.1). Because 7 of the 22 "Other" responses could not be grouped, the "Other" category was redefined as "Other/miscellaneous" (see Figure 4.2).

Academic Dissatisfaction

Not allowed to change my major when requested
Classes I needed were taken before I could get them
Hard to get classes
Didn't like my program or the school
Classes I needed were already closed before I could schedule

Residence Hall Life

Dorm too noisy
Loud dorm rooms, and no rules applying to that problem
My resident advisor
Unfairness, dorm mildewing, etc.
Housing

Personal

Pregnant
Family problems
Males are overbearing and rambunctious/push/close to date rape/
more so at Ferris than any other place I've been
Did not like university life
My best friend of 12 years attempted suicide and was returning
home, which was a major influence in my final decision

Figure 4.1: Reasons for leaving: other.

Other/Miscellaneous

Joined U.S. Navy
Internship
Distance
Moved to another state
Full-time job
Graduation
Theft of [?] on campus--resulted in loss of co-op job

Figure 4.2: Reasons for leaving: other/miscellaneous.

The frequency and percentage of "yes" responses to the various life experiences for returners and nonreturners can be seen in Table 4.3.

Table 4.3.--Frequency and percentage of "Yes" responses to life event experiences: returners and nonreturners.

Life Event Experience	Returners (n = 159)		Nonreturners (n = 63)	
	No.	%	No.	%
Q-22. After drinking experienced:				
A physical fight	21	13.2	4	6.3
An argument	61	38.4	15	23.8
Acquaintance/date rape	5	3.1	5	7.9
Q-23. Alcohol-related problems:				
Trouble with boss/fellow workers	1	.6	1	1.6
Difficulties of any kind with friends	25	15.7	3	4.8
Automobile accident	4	2.5	1	1.6
Criticism by a family member	17	10.7	7	11.1
Trouble with the police	12	7.5	3	4.8
Having an accident in home/ residence hall	3	1.9	3	4.8
Q-24. While enrolled at FSU, experienced at least once as a result of alcohol use:				
Missed a class	78	49.1	22	34.9
Earned less than a "C" on a quiz or exam	23	14.5	9	14.3
Earned less than a "C" for a class	9	5.7	4	6.3
Withdrew from a class	5	3.1	2	3.2

As seen in Table 4.3, several life event experiences occurred more frequently than others as a result of alcohol use. Missing a class as a result of alcohol use (49.1% of the returners and 34.9% of the nonreturners), having an argument after drinking (38.4% of the returners and 23.8% of the nonreturners), having difficulties of any kind with friends after drinking (15.7% of the returners), earning less than a "C" on a quiz or an examination due to alcohol use (14.5% of the returners and 14.3% of the nonreturners), and experiencing criticism by a family member after drinking (10.7% of the returners and 11.1% of the nonreturners) were the most frequently occurring events.

Summary of the Means--Attitudes Toward Alcohol Use

An examination of the data presented in Table 4.4 reveals that returning and nonreturning students shared similar attitudes toward peer use of alcohol. To measure the students' attitudes toward their 17- to 20-year-old friends'/peers' use of alcohol (Q-3 through Q-6), a continuous scale of 1 to 4 was used. The scale included "Strongly approve" (1), "Approve" (2), "Disapprove" (3), and "Strongly disapprove" (4). For example, returning students had a mean of 1.962 and nonreturning students had a mean of 2.073 for Q-3. Both returning and nonreturning students approved of friends/peers trying 1-2 drinks of an alcoholic beverage. For Q-4, returning students had a mean of 3.083 while nonreturning students had a mean of 3.158. Both returning and nonreturning students disapproved of taking 1-2 drinks nearly every day. With a mean of 3.554 for the

Table 4.4.--Means of the 13 attitudinal variables: returners and nonreturners.

Variable	Returners (n = 159)			Nonreturners (n = 63)		
	Mean	SD	No.[a]	Mean	SD	No.[a]
Approve of 17-20 year olds:						
Q-3. Trying 1-2 drinks/alcoholic beverage	1.962	.434	159	2.073	.504	55
Q-4. Taking 1-2 drinks nearly every day	3.083	.640	157	3.158	.727	57
Q-5. Having 4-5 drinks nearly every day	3.554	.603	157	3.464	.785	56
Q-6. Having 5+ drinks once or twice each weekend	2.494	.887	158	2.825	.947	57
Think friends age 17-20 risk harm if they:						
Q-7. Try 1-2 drinks/alcoholic beverage	1.506	.693	158	1.556	.604	54
Q-8. Take 1-2 drinks nearly every day	2.739	.878	157	2.745	.907	55
Q-9. Take 4-5 drinks nearly every day	3.667	.646	156	3.589	.804	56
Q-10. Have 5+ drinks once or twice each weekend	2.742	.976	159	3.088	.987	57
Other attitudes:						
Q-11. Estimated how many friends drink	4.113	.693	159	3.850	.988	60
Q-12. Friends approve alcohol use	2.610	.787	159	2.733	.841	60
Q-13. Approve alcohol use/self	3.196	.786	158	3.233	.789	60
Q-25. Should reduce personal use of alcohol	2.885	1.020	148	2.937	1.099	48
Q-26. Alcohol negatively affected academics	3.201	.797	149	3.170	.871	53

[a]Indicates number responding.

returning students and a mean of 3.464 for the nonreturning students, attitudes toward friends/peers having 4-5 drinks nearly every day fell midway between disapprove and strongly disapprove for both groups (Q-5). However, with the respective means of 2.494 and 2.825, returning students leaned more toward approving of friends/peers having 5 or more drinks once or twice each weekend, whereas the mean for nonreturning students was closer to disapproving of friends/peers having 5 or more drinks once or twice each weekend (Q-6).

Thinking friends age 17 to 20 risk harm was measured using a range of four responses: "No risk" (1), "Slight risk" (2), "Moderate risk" (3), and "Great risk" (4). As seen in Table 4.4, both returning and nonreturning students shared similar attitudes for Q-7 through Q-9. They tended to think peers took a slight risk if they tried 1-2 drinks of an alcoholic beverage, tended to take a moderate risk if they took 1-2 drinks nearly every day, and tended to take a great risk if they took 4-5 drinks nearly every day. For Q-10, returners tended to think peers took a moderate risk if they had 5 or more drinks once or twice each weekend, whereas nonreturning students thought peers definitely took a moderate risk.

To measure the students' attitudes toward the number of friends/peers they estimated drank alcoholic beverages in Q-11, a continuous scale of 1 to 5 was used. The scale included "None" (1), "A few" (2), "Some" (3), "Most" (4), and "All" (5). With a mean of 4.113, returners estimated that most of their friends/peers drank,

whereas nonreturners, with a mean of 3.850, estimated that close to most of their friends/peers drank (see Table 4.4).

For Q-12, attitudes were measured using a range of five responses: "Look up to a lot" (1), "Look up to some" (2), "Neither up or down" (3), "Look down on some" (4), and "Look down on a lot" (5). With respective means of 2.610 and 2.733, as seen in Table 4.4, returners and nonreturners indicated that alcohol use among their group of friends/peers was close to being neither looked up to nor looked down on. The same scale was used for measuring the mean regarding approval of their personal use of alcohol in Q-13. With respective means of 3.196 and 3.233, both returners and nonreturners neither looked up to nor looked down on their personal use of alcohol.

When responding to the question of how often students thought they should reduce or stop their use of alcohol (Q-25), the scale of responses consisted of "Often" (1), "Sometimes" (2), "Seldom" (3), and "Never" (4). With respective means of 2.885 and 2.937, as seen in Table 4.4, both returning and nonreturning students indicated they seldom thought they should reduce or stop their use of alcohol.

For Q-26, attitudes were measured using a range of four responses: "Strongly agree" (1), "Agree" (2), "Disagree" (3), and "Strongly disagree" (4). With respective means of 3.201 and 3.170, both returning and nonreturning students disagreed that alcohol had negatively affected their academic performance (see Table 4.4).

In summary, the attitudes of returning and nonreturning students toward the use of alcohol by their friends/peers or

themselves were similar, as evidenced by the close approximation of the means shown in Table 4.3. Both returners and nonreturners tended to approve of 17 to 20 year olds drinking 5 or more drinks once or twice each weekend and believed there was a moderate risk involved with that type of binge drinking. Consuming alcohol was acceptable, and most of their friends drank. Neither returners nor nonreturners had intentions of stopping or reducing their consumption of alcohol, nor did they believe alcohol negatively affected their academic performance.

Discussion--Frequency of Responses to Q-15 and Q-16

In response to Q-15, "Have you ever had any beer, wine, wine coolers, or liquor to drink?" 100% (n = 159) of the returners responded; 97.5% (n = 155) indicated they had had beer, wine, wine coolers, or liquor to drink. Only 59 of the 63 nonreturning students responded to that same question. Of those nonreturners who responded, 96.6% (n = 57) indicated they had had beer, wine, wine coolers, or liquor to drink.

In response to Q-16, "Have you had any beer, wine, wine coolers, or liquor to drink within the last year?" 98.7% (n = 153) of the returning students indicated yes and 1.3% (n = 2) indicated no. However, 2.5% (n = 4) of the 159 returners chose not to respond to Q-16. Of the 57 nonreturners who chose to respond, 100% (n = 57) indicated yes, they had had beer, wine, wine coolers, or liquor to drink within the last year. However, 9.5% (n = 6) chose not to respond to Q-16.

In Table 4.5, the means of the eight consumption variables for returners and nonreturners are presented. It is noteworthy that the number of returners who responded to any of the consumption questions never exceeded 155 and that the number of nonreturners who responded to any of the consumption questions never exceeded 57. Of the returners (n = 155) who admitted to having had an alcoholic drink sometime, not all admitted whether they had had alcohol within the last year (n = 153). However, the fact that 155 of the returning students responded to two of the consumption questions confirms that 155 instead of 153 of the returning students had had alcohol within the last year during their enrollment at Ferris. In response to Q-15 and Q-16, the number of nonreturners (n = 57) who indicated that they not only had had an alcoholic drink at sometime but that they had also had alcohol within the last year during their enrollment at Ferris State University was consistent.

Summary of the Means--
Consumption Variables

In Table 4.5, returners indicated that they consumed more alcoholic beverages than nonreturners for each consumption variable. For example, when returners and nonreturners were asked how much beer, on the average, they usually drank at any one time during their enrollment at Ferris (Q-17), responses resulted in a mean of 4.329 for returners and a mean of 3.554 for nonreturners. Because the scale of six response options for Q-17 included "None" (1), "Less than 1" (2), "1-2" (3), "3-4" (4), "5" (5), and "6 or

Table 4.5.--Means of the eight consumption variables: returners and nonreturners.

Variable	Returners (n = 159)			Nonreturners (n = 63)		
	Mean	SD	No.[a]	Mean	SD	No.[a]
Enrolled at FSU, average amount drunk at any one time:						
Q-17. Beer	4.329	1.729	152	3.554	1.757	56
Q-18. Wine or wine cooler	2.815	1.589	146	2.333	1.532	51
Q-19. Shot of liquor or mixed drink	3.268	1.601	149	2.340	1.379	50
Q-20. Enrolled at FSU, how often drank enough to feel high	2.890	1.198	155	2.193	1.231	57
Q-21. Last term enrolled at FSU, number of times 5+ drinks in a row	3.645	1.720	155	2.526	1.743	57
Q-33. Enrolled FSU Fall 1989-90, approx. number of drinks per month	4.658	2.144	152	3.887	2.154	53
Q-34. Enrolled FSU Winter 1989-90, approx. number of drinks per month	4.755	2.033	151	3.816	2.065	38
Q-35. Enrolled FSU Spring 1989-90, approx. number of drinks per month	4.873	2.109	150	--	--	--

[a]Indicates number responding.

more" (6), returning students reported they consumed in excess of 3-4 beers, on the average, at any one time during their enrollment at Ferris. In comparison, nonreturning students consumed between 2 and 3 beers. Likewise, for Q-18 and Q-19, returners indicated they consumed more wine or wine coolers and shots of liquor or mixed drinks than nonreturners.

For Q-20, consumption variables were measured using a range of five responses: "No occasion" (1), "A few occasions" (2), "About 1/2 of the occasions" (3), "Most of the occasions" (4), and "Nearly all of the occasions" (5). As seen in Table 4.5, returning students, with a mean of 2.890, indicated they drank enough to feel pretty high close to half of the occasions, whereas nonreturning students, with a mean of 2.193, indicated they drank enough to feel pretty high on a little more than a few of the occasions they drank.

To measure the consumption variables for Q-21, a scale of six responses was used. The scale included "None" (1), "Once" (2), "Twice" (3), "3-5 times" (4), "6-9 times" (5), and "10 or more times" (6). The mean for returning students was 3.645, and the mean for nonreturning students was 2.526, as seen in Table 4.5. Returning students indicated that, during their last term at Ferris, they had 5 or more drinks in a row close to 3-5 times, whereas nonreturning students indicated that, during their last term at Ferris, they had 5 or more drinks in a row between 1 and 2 times.

For Q-33 through Q-35, the consumption variables were measured using a scale of eight responses: "None" (1), "1-2" (2), "3-5" (3),

"6-10" (4), "11-19" (5), "20-39" (6), "40-55" (7), and "56+" (8). For Q-33, returners had a mean of 4.658 for Fall Term 1989-90, and nonreturners had a mean of 3.887 for the same time period. As seen in Table 4.5, returning students drank in excess of 10 but probably less than 19 drinks per month during their Fall Term 1989-90 enrollment at Ferris, whereas nonreturning students reported they drank close to 6-10 drinks per month during Fall Term 1989-90. For Q-34, returners had a mean of 4.755 and nonreturners had a mean of 3.816. During Winter Term 1989-90, returning students drank close to 11-19 drinks per month, whereas nonreturning students drank close to 6-10 drinks per month. For Q-35, the returning students had a mean of 4.873. Returning students drank, on the average, even more during Spring Term 1989-90 than they did during Fall or Winter terms. Fifty-five out of 63 of the nonreturning students indicated they were not at Ferris during Spring Term 1989-90, so a comparison of the means for Spring Term 1989-90 was not possible.

In summary, the consumption patterns of returning and nonreturning students differed, as seen in Table 4.5. Returners drank more than nonreturners, drank more often than nonreturners, and increased the amount they drank each term. Although nonreturners drank slightly more during Fall Term 1989-90 than they did during Winter Term 1989-90, it appears that nonreturners never drank as much as the returners.

Results of Hypothesis Testing

Hypothesis 1

The first hypothesis, in its null form, was stated as follows:

> Ho 1: There is no statistically significant difference in the self-reported attitudes toward alcohol use and the self-reported alcohol-consumption patterns between returning and nonreturning Ferris State University Fall Term 1989-90 freshmen.

The purpose of the first hypothesis (Research Question 1) was to examine the self-reported attitudes toward alcohol use and the self-reported alcohol-consumption patterns between returners and nonreturners. As shown in Table 4.6, the MANOVA of the attitudes of returners and nonreturners was not significant (probability level = .300), but the consumption patterns of returners and nonreturners were significant at a probability level of .002. Following performance of ANOVA, it became evident that the individual consumption probability levels for questions Q-17, Q-19 through Q-21, Q-33, and Q-34 (marked with an asterisk) were the primary contributors to the MANOVA significance for returners and nonreturners. Using individual t-tests affirmed significance for each of the previously listed consumption variables.

Collectively, in every case presented in Table 4.7, returners consumed more alcohol than did nonreturners. For example, returning students consumed in excess of 3-4 beers, on the average, at any one time, whereas nonreturning students consumed approximately 3 beers, on the average, at any one time (Q-17). The pattern was consistent: Returning students consumed in excess of 1-2 shots or mixed drinks, on the average, at any one time, whereas nonreturning students

Table 4.6.--One-way MANOVA of the attitudinal and consumption variables according to returners and nonreturners.

MANOVA:	Wilks' Lambda	F-Value	Prob. Level
Attitudes	.91830	1.17707	.300
Consumption	.87188	3.46360	.002

Consumption Variable	Returners and Nonreturners	
	F	Prob. Level
Q-17. When enrolled, average no. of beers at one time	8.74872	.004*
Q-18. When enrolled, average no. of wines at one time	1.33804	.249
Q-19. When enrolled, average no. of shots at one time	8.77670	.003*
Q-20. How often felt high after drinking alcohol	14.54950	.000*
Q-21. Number of times last FSU term--5+ drinks	15.22662	.000*
Q-33. Drinks per month at FSU--Fall 1989-90	3.66435	.057*
Q-34. Drinks per month at FSU--Winter 1989-90	5.09477	.025*

*Significant at $p < .10$.

Table 4.7.--T-tests of means of consumption variables according to returners and nonreturners.

Variable	Returners		Nonreturners		t	Prob. Level
	Mean	SD	Mean	SD		
Q-17. When enrolled, average no. of beers at one time	4.33	1.73	3.55	1.76	2.86	.005*
Q-19. When enrolled, average no. of shots at one time	3.27	1.60	2.34	1.38	3.67	.000*
Q-20. How often felt high after drinking alcohol	2.89	1.20	2.19	1.23	3.73	.000*
Q-21. Number of times last FSU term--5+ drinks	3.65	1.72	2.53	1.74	4.18	.000*
Q-33. Drinks per month at FSU--Fall 1989-90	4.66	2.14	3.89	2.15	2.25	.025*
Q-34. Drinks per month at FSU--Winter 1989-90	4.76	2.03	3.82	2.07	2.54	.012*

*Significant at $p < .10$.

consumed less than 1 shot or mixed drink, on the average, at any one time (Q-19); returning students drank enough alcoholic beverages to feel pretty high on close to half of the occasions they drank alcoholic beverages, whereas nonreturning students drank enough alcoholic beverages to feel pretty high on only a few occasions when they drank alcoholic beverages (Q-20); returning students drank 5 or more drinks in a row approximately 3 times during their last term at Ferris, and nonreturners drank 5 or more drinks in a row between 1 and 2 times during their last term at Ferris (Q-21); and returning students drank approximately 11-19 drinks per month during both Fall Term 1989-90 (Q-33) and Winter Term 1989-90 (Q-34). Nonreturning students drank approximately 6-10 drinks per month for both terms.

Therefore, Hypothesis 1, as previously stated, was rejected. Even though there was no statistically significant difference in the attitudes toward alcohol use between returning and nonreturning students, there was a statistically significant difference in the self-reported alcohol-consumption patterns between returning and nonreturning Ferris State University Fall Term 1989-90 freshmen.

Hypothesis 2

The second hypothesis, in its null form, was stated as follows:

Ho 2: There is no statistically significant difference in the self-reported attitudes of returning Ferris State University freshman students toward alcohol use with respect to:

a. selected demographic variables
b. selected life event variables

The purpose of Hypothesis 2 (Research Question 2) was to examine the attitudes of returners toward alcohol use according to selected demographic and life event variables.

An examination of the data in Table 4.8 indicates that there were no differences in attitudes of returners toward alcohol use with respect to the following six demographic variables: school/college in which students were enrolled, parents' educational level, Ferris State University honor point average, high school grade point average, age, and ethnicity.

Table 4.8.--One-way MANOVA of attitudinal variables according to nonsignificant demographic variables: returners.

Variable	Wilks' Lambda	F-Value	Prob. Level
Q-2. School/college of enrollment	.67520	.99814	.481
Q-37. Parents' educational level	.68499	1.31684	.103
Q-40. Ferris State Univ. HPA	.71497	1.15917	.243
Q-41. High school GPA	.68421	1.32107	.101
Q-44. Age	.91090	.47040	.988
Q-45. Ethnicity	.86936	1.49109	.129

An examination of Table 4.9 with respect to the two demographic variables, ACT composite score and gender, reveals significance at probability levels of .070 and .037, respectively. The primary contributors to the MANOVA significance for ACT composite score and

gender are marked with an asterisk. Using individual t-tests with ACT composite score revealed no significance for Q-3 and Q-13.

As seen in Table 4.10, three groups of ACT scores were used to compare differences in means using individual t-tests. Because none of the returning respondents indicated they had an ACT composite score of 0-5 and only four indicated they had an ACT composite score of 6-10, those response choices were collapsed into Group 3 for purposes of data analysis and discussion. The lowest group (Group 3) included ACT composite scores of 6-15, the middle group (Group 4) included ACT composite scores of 16-20, and the high group (Group 5) was for scores of 21 and above. According to individual t-tests performed on each possible pair of ACT groupings, only one pair (Groups 3 + 5) was significant when compared to thinking friends age 17 to 20 risk harm if they try 1-2 drinks of an alcoholic beverage every day (Q-7).

As seen in Table 4.10, with a probability level of .046, the highest and lowest ACT groups differed in thinking friends age 17 to 20 would risk harm if they tried 1-2 drinks of an alcoholic beverage (Q-7). The low ACT group had a mean of 1.64, and the highest ACT group had a mean of 1.34. Returning students with higher ACT scores were inclined to think that friends took "no risk," whereas returning students with lower ACT scores tended to think there could be "slight risk" for harm.

Table 4.9.--One-way MANOVA of significant attitudinal variables according to ACT composite score and gender: returners.

MANOVA:	Wilks' Lambda	F-Value	Prob. Level
ACT composite score	.75368	1.47204	.070
Gender	.84023	1.88682	.037

Variable	ACT Composite Score		Gender	
	F-Value	Prob. Level	F-Value	Prob. Level
Approve of 17-20 year olds:				
Q-3. Trying 1-2 drinks/alcoholic beverage	2.40363	.094*	1.93506	.166
Q-4. Taking 1-2 drinks nearly every day	2.18201	.117	7.49675	.007*
Q-5. Having 4-5 drinks nearly every day	1.32445	.269	17.38551	.000*
Q-6. Having 5+ drinks once or twice each weekend	.08787	.916	5.95022	.016*
Think friends age 17-20 risk harm if they:				
Q-7. Try 1-2 drinks/alcoholic beverage	2.60774	.077*	5.41458	.021*
Q-8. Take 1-2 drinks nearly every day	1.46454	.235	3.75199	.055*
Q-9. Take 4-5 drinks nearly every day	.29195	.747	3.86365	.051*
Q-10. Have 5+ drinks once or twice each weekend	.64036	.529	.32609	.569
Other attitudes:				
Q-11. Estimated how many friends drink	.23114	.794	.04630	.830
Q-12. Friends approve alcohol use	.21098	.810	.22772	.634
Q-13. Approve alcohol use/self	2.39815	.095*	2.20033	.140
Q-25. Should reduce personal use of alcohol	.87927	.417	.12754	.722
Q-26. Alcohol negatively affected academics	3.70345	.027*	2.91671	.090*

*Significant at $p < .10$.

Table 4.10.--T-tests of means of attitudinal variables according to ACT composite scores and gender: returners.

Variable	ACT Composite Score: Group 3 (6-15) Mean	SD	Group 4 (16-20) Mean	SD	Group 5 (21+) Mean	SD	Sig. Groups	t	Prob. Level
Think friends age 17-20 risk harm if they:									
Q-7. Try 1-2 drinks/alcoholic beverage	1.64	.78	1.53	.69	1.34	.58	(3+5)	2.03	.046*
Other attitudes:									
Q-26. Alcohol negatively affected academics	3.21	.70	2.98	.85	3.43	.74	(4+5)	-2.88	.005*

Variable	Gender: Males Mean	SD	Females Mean	SD	t	Prob. Level
Approve of 17-20 year olds:						
Q-4. Taking 1-2 drinks nearly every day	2.96	.71	3.21	.52	-2.52	.013*
Q-5. Having 4-5 drinks nearly every day	3.38	.66	3.75	.47	-4.06	.000*
Q-6. Having 5+ drinks once or twice each weekend	2.32	.84	2.68	.90	-2.55	.012*
Think friends age 17-20 risk harm if they:						
Q-7. Try 1-2 drinks/alcoholic beverage	1.40	.68	1.62	.69	-2.10	.038*
Q-8. Take 1-2 drinks nearly every day	2.63	.87	2.86	.88	-1.71	.090*
Q-9. Take 4-5 drinks nearly every day	3.57	.75	3.78	.48	-2.15	.033*
Other attitudes:						
Q-26. Alcohol negatively affected academics	3.09	.87	3.32	.69	-1.82	.070*

*Significant at $p < .10$.

With a probability level of . 005, the middle and highest ACT groups (Groups 4 + 5) differed on Q-26 (see Table 4.10). The middle ACT group had a mean of 2.98 and the highest ACT group had a mean of 3.43. Returning students with an ACT composite score of 16-20 disagreed that alcohol negatively affected their academic performance, whereas returning students with an ACT composite score of 21 or over were midway between disagreeing and strongly disagreeing that alcohol had a negative effect on their academic performance.

As seen in Table 4.10, male and female returners differed in attitudes on Q-4 through Q-9, and Q-26. Returning females tended to be less approving of 17 to 20 year olds taking 1-2 drinks nearly every day (Q-4), having 4-5 drinks nearly every day (Q-5), and having 5 or more drinks once or twice each weekend (Q-6). For example, in Q-5 the mean for returning males was 3.38, whereas the mean for returning females was 3.75 (probability level = .000). Returning females were more likely to strongly disapprove of 17 to 20 year olds having 4-5 drinks nearly every day, whereas returning males were more likely to disapprove.

Refer to Table 4.10 for Q-7, Q-8, and Q-9. Returning females thought friends/peers age 17, 18, 19, or 20 risked harming themselves physically or in other ways if they took 1 or 2 drinks of an alcoholic beverage, took 1 or 2 drinks nearly every day, or took 4 or 5 drinks nearly every day. For example, see Q-9 in Table 4.10.

The mean for returning males was 3.57, whereas the mean for returning females was 3.78 (probability level = .033). Returning females were more likely to think friends/peers were at great risk if they took 4 or 5 drinks nearly every day, whereas returning males thought there was a moderate to great risk for harm.

Returning males and returning females differed in their attitudes regarding the belief that alcohol negatively affected their academic performance (Q-26 in Table 4.10). An examination of the mean for males (3.09) indicates that males disagreed, whereas examining the mean for females (3.32) indicates that returning females disagreed even more than returning males that alcohol negatively affected their academic performance. The probability level in this t-test was .070.

As seen in Table 4.11, attitudes of returners toward alcohol use did not differ with respect to the following four life events: having a physical fight after drinking, experiencing acquaintance/ date rape after drinking, being criticized by a family member, and having trouble with the police.

An examination of Table 4.12 with respect to attitudes of returners according to five life experience variables (having an argument after drinking, having difficulties with friends, missing a class, earning less than a "C" on a quiz or exam, and earning less than a "C" in a class) reveals significance at probability levels of .050, .006, .002, .001, and .054, respectively. The primary contributors to the MANOVA significance for getting into an argument

Table 4.11.--One-way MANOVA of attitudinal variables according to five nonsignificant selected life event variables: returners.

Variable	Wilks' Lambda	F-Value	Prob. Level
Q-22/1. Experienced physical fight after drinking	.87815	1.37691	.179
Q-22/2. Experienced date rape after drinking	.97916	.21115	.998
Q-23/4. Alcohol--criticism by family member	.88844	1.24604	.255
Q-25/5. Alcohol--trouble with police	.86357	1.56772	.103

Table 4.12.--One-way MANOVA of significant attitudinal variables according to argument, difficulties with friends, missed a class, less than a "C" on a quiz or exam, and less than a "C" in a class: returners.

MANOVA:	Wilks' Lambda	F-Value	Prob. Level
Experienced argument after drinking	.84659	1.79817	.050
Alcohol--difficulties with friends	.80501	2.40360	.006
Alcohol use--missed a class	.78827	2.66536	.002
Alcohol use--less than "C" on a quiz/exam	.76411	3.06345	.001
Alcohol use--less than "C" in a class	.84847	1.77219	.054

Variable	Argument After Drinking		Difficulty With Friends		Missed Class		Less Than "C" on a Quiz		Less Than "C" in a Class	
	F	p	F	p	F	p	F	p	F	p
Approve of 17-20 year olds:										
Q-3. Trying 1-2 drinks/ alcoholic beverage	.10924	.742	.02566	.873	.95608	.330	.44006	.508	.50003	.481
Q-4. Taking 1-2 drinks nearly every day	.83992	.361	.49864	.481	3.58577	.060*	1.17495	.280	.57912	.448
Q-5. Having 4-5 drinks nearly every day	.20517	.651	.34321	.559	6.12542	.015*	.02824	.867	.65245	.421
Q-6. Having 5+ drinks once or twice each weekend	.28787	.592	3.35567	.052*	8.82747	.003*	.04495	.832	1.02315	.314
Think friends age 17-20 risk harm if they:										
Q-7. Try 1-2 drinks/ alcoholic beverage	.02987	.863	4.02740	.047*	2.69548	.103	.79818	.373	.90728	.342
Q-8. Take 1-2 drinks nearly every day	.30727	.580	.59806	.441	3.97031	.048*	.02280	.880	.56619	.453
Q-9. Take 4-5 drinks nearly every day	1.76697	.156	.59091	.443	8.58306	.004*	.08037	.777	.08231	.775
Q-10. Have 5+ drinks once or twice each weekend	.14950	.700	.03511	.852	5.79298	.017*	2.58256	.110	.47502	.492
Other attitudes:										
Q-11. Estimated how many friends drank	4.08320	.045*	.02466	.875	2.01426	.158	.08544	.770	.09705	.756
Q-12. Friends approve alcohol use	.83536	.362	.06586	.798	1.11214	.293	.00008	.993	8.27062	.005*
Q-13. Approve alcohol use/ self	4.52673	.035*	.17370	.677	3.89112	.050*	4.37872	.038*	2.21003	.139
Q-25. Should reduce personal use of alcohol	7.19991	.008*	13.42151	.000*	4.97020	.027*	9.46700	.003*	7.43495	.007*
Q-26. Alcohol negatively affected academics	14.65080	.000*	5.92143	.016*	17.66815	.000*	25.28420	.000*	10.40429	.002*

*Significant at $p < .10$.

after drinking, having difficulties with friends, and missing a class are marked with an asterisk. Individual probability levels (ANOVA) for attitudinal variables contributing to the MANOVA significance for earning less than a "C" on a quiz or examination and earning less than a "C" in a class are also marked with an asterisk. Using individual t-tests revealed no significance for Q-7 (Having difficulty with friends after drinking) or Q-8 (Missing a class due to alcohol use).

As seen in Table 4.13, returning students who had an argument after drinking (probability level of .006) differed in estimating how many of their friends drank alcoholic beverages (Q-11). Returning students who had an argument had a mean of 4.30, and returning students who had not had an argument after drinking had a mean of 4.00. Returning students who had an argument after drinking estimated most to all of their friends drank alcoholic beverages, whereas returning students who had not had an argument after drinking estimated most of their friends drank alcoholic beverages.

With a probability level of .007, returning students who had an argument after drinking differed in their personal feelings about the use of alcohol (see Table 4.13, Q-13). Returning students who had an argument had a mean of 2.98, and returning students who had not had an argument had a mean of 3.33. Therefore, returning students who had an argument after drinking were close to having no feelings one way or another regarding the use of alcohol, and

Table 4.13.--T-tests of means of attitudes according to argument, difficulties with friends, missed a class, and less than a "C" on a quiz or exam: returners.

Variable		Argument After Drinking				Difficulty With Friends After Drinking			
		Mean	SD	t	Prob. Level	Mean	SD	t	Prob. Level
Approve of 17-20 year olds:									
Q-4. Taking 1-2 drinks nearly every day	Yes	--	--	--	--	--	--	--	--
	No								
Q-5. Having 4-5 drinks nearly every day	Yes	--	--	--	--	--	--	--	--
	No								
Q-6. Having 5+ drinks once or twice each weekend	Yes	--	--	--	--	2.12	.60	3.08	.003*
	No					2.56	.91		
Think friends age 17-20 risk harm if they:									
Q-7. Try 1-2 drinks/alcoholic beverage	Yes	--	--	--	--	1.68	.69	-1.37	.173
	No					1.47	.69		
Q-8. Take 1-2 drinks nearly every day	Yes	--	--	--	--	--	--	--	--
	No								
Q-9. Take 4-5 drinks nearly every day	Yes	--	--	--	--	--	--	--	--
	No								
Q-10. Have 5+ drinks once or twice each weekend	Yes	--	--	--	--	--	--	--	--
	No								
Other attitudes:									
Q-11. Estimated how many friends drink	Yes	4.30	.59	-2.80	.006*	--	--	--	--
	No	4.00	.73						
Q-12. Friends approve alcohol use	Yes	--	--	--	--	--	--	--	--
	No	--	--						
Q-13. Approve alcohol use/self	Yes	2.98	.68	2.72	.007*	--	--	--	--
	No	3.33	.82						
Q-25. Should reduce personal use of alcohol	Yes	2.62	1.02	2.67	.008*	2.28	.89	3.36	.001*
	No	3.07	.99			3.01	1.00		
Q-26. Alcohol negatively affected academics	Yes	2.90	.81	4.01	.000*	2.88	.88	2.24	.027*
	No	3.41	.72			3.27	.77		

Table 4.13.--Continued.

Variable		Missed a Class				Less than "C" on a Quiz/Exam				Less than "C" in a Class			
		Mean	SD	t	Prob. Level	Mean	SD	t	Prob. Level	Mean	SD	t	Prob. Level
Approve of 17-20 year olds:													
Q-4. Taking 1-2 drinks nearly every day	Yes	2.95	.65	2.62	.010*	--	--	--	--	--	--	--	--
	No	3.21	.61										
Q-5. Having 4-5 drinks nearly every day	Yes	3.42	.70	2.70	.008*	--	--	--	--	--	--	--	--
	No	3.68	.47										
Q-6. Having 5+ drinks once or twice each weekend	Yes	2.22	.77	3.94	.000*	--	--	--	--	--	--	--	--
	No	2.75	.92										
Think friends age 17-20 risk harm if they:													
Q-7. Try 1-2 drinks/alcoholic beverage	Yes	--	--	--	--	--	--	--	--	--	--	--	--
	No												
Q-8. Take 1-2 drinks nearly every day	Yes	2.63	.88	1.58	.117	--	--	--	--	--	--	--	--
	No	2.85	.86										
Q-9. Take 4-5 drinks nearly every day	Yes	3.56	.71	2.00	.047*	--	--	--	--	--	--	--	--
	No	3.77	.56										
Q-10. Have 5+ drinks once or twice each weekend	Yes	2.55	.92	2.46	.015*	--	--	--	--	--	--	--	--
	No	2.93	1.00										
Other attitudes:													
Q-11. Estimated how many friends drink	Yes	--	--	--	--	--	--	--	--	--	--	--	--
	No												
Q-12. Friends approve alcohol use	Yes	--	--	--	--	--	--	--	--	1.89	.93	2.90	.004*
	No									2.65	.76		
Q-13. Approve alcohol use/self	Yes	3.01	.62	2.95	.004*	2.83	.58	3.13	.003*	--	--	--	--
	No	3.37	.89			2.26	.80						
Q-25. Should reduce personal use of alcohol	Yes	2.72	.97	2.13	.035*	2.35	.98	2.81	.006*	2.00	1.00	2.74	.007*
	No	3.07	1.05			2.98	1.00			2.94	1.00		
Q-26. Alcohol negatively affected academics	Yes	2.95	.87	4.34	.000*	2.52	.79	4.76	.000*	2.44	1.01	3.02	.003*
	No	3.48	.65			3.33	.74			3.25	.76		

*Significant at $p < .10$.

returning students who had not had an argument were more inclined to look down somewhat on the use of alcohol.

For Q-25, with a probability level of .008, returning students who had an argument after drinking differed in how often they thought they should reduce or stop their use of alcohol (see Table 4.13). Returning students who had an argument after drinking had a mean of 2.62, and returning students who had not had an argument had a mean of 3.07. Returning students who had an argument after drinking thought they should reduce or stop their use of alcohol more often than those who had not had an argument after drinking.

See Table 4.13 for a comparison of the means between having an argument after drinking with Q-26. With a probability level of .000, returning students who had an argument after drinking differed in the belief that their use of alcohol had negatively affected their academic performance. Returning students who had an argument after drinking had a mean of 2.90, and returning students who had not had an argument had a mean of 3.41. Therefore, returning students who had an argument after drinking tended to disagree that their use of alcohol had negatively affected their academic performance, whereas returning students who had not had an argument were inclined to strongly disagree that alcohol had a negative effect.

With a probability level of .003 for Q-6, .001 for Q-25, and .027 for Q-26, as seen in Table 4.13, returning students who had difficulties with friends after drinking differed in their attitudes

from those who did not have difficulties with friends after drinking. For example, in Q-25, returning students who had difficulties with friends after drinking had a mean of 2.28, and returning students who had no such difficulties had a mean of 3.01. Returning students who had difficulties with friends after drinking sometimes thought they should reduce or stop their use of alcohol, whereas returning students who had not had difficulties with friends after drinking seldom thought they should reduce or stop their alcohol consumption. Returning students who had difficulties with friends after drinking approved of having 5 or more drinks once or twice each weekend (Q-6) and agreed more than those returning students who had not had difficulties with friends after drinking that their use of alcohol had negatively affected their academic performance (Q-26).

Returning students who missed a class as a result of their use of alcohol differed from those who had not missed a class (see Table 4.13). Returning students who missed a class as a result of their use of alcohol tended to approve more of 17-, 18-, 19-, or 20-year-old friends/peers taking 1 or 2 drinks nearly every day (Q-4), taking 4-5 drinks nearly every day (Q-5), and having 5 or more drinks once or twice each weekend (Q-6) than those who did not miss class. For example, in Q-6, the mean for returning students who missed a class as a result of their use of alcohol was 2.22, and the mean for returning students who had not was 2.75. Returning students who had missed a class as a result of their use of alcohol were more likely to approve of taking 4 or 5 drinks nearly every

day, whereas returning students who had not missed a class were more likely to disapprove.

With probability levels of .003, .006, and .000 for Q-13, Q-25, and Q-26, respectively, returning students who earned a "C" or less on a quiz or an examination as a result of their use of alcohol differed in their attitudes toward alcohol use from those who had not (see Q-26 in Table 4.13). For example, the mean for returning students who had earned a "C" or less on a quiz or an exam as a result of their use of alcohol was 2.52, and the mean for returning students who had not was 3.33. Therefore, returning students who earned less than a "C" on a quiz or an exam tended to disagree that their use of alcohol had negatively affected their academic performance. Conversely, those who did not earn a "C" or less on a quiz or an exam disagreed even more that alcohol had negatively affected their academic performance.

See Table 4.13 for a comparison of the means between earning less than a "C" in a class and friends approving of alcohol use, reducing the personal use of alcohol, or alcohol having a negative effect on academic performance. With probability levels of .004, .007, and .003 for Q-12, Q-25, and Q-26, respectively, returning students who had earned less than a "C" in a class as a result of their use of alcohol differed in their attitudes toward alcohol use from those who had not. For example, the mean of the responses to Q-26 for returning students who had earned less than a "C" in a class as a result of their use of alcohol was 2.44, and the mean for the returning students who had not was 3.25. Therefore, returning

students who had earned less than a "C" in a class were closer to agreeing than disagreeing that their use of alcohol had negatively affected their academic performance. Returning students who had not earned less than a "C" in a class were closer to disagreeing that alcohol had negatively affected their academic performance.

Therefore, Hypothesis 2, as previously stated, was rejected. That is, there was no statistically significant difference in the self-reported attitudes of returning Ferris State University freshman students toward alcohol use with respect to the following demographic variables:

1. School/college of enrollment
2. Parents' educational level
3. Ferris State University honor point average
4. High school grade point average
5. Ethnicity
6. Age

However, there was a statistically significant difference in the self-reported attitudes of returning Ferris State University freshman students toward alcohol use with respect to the following demographic variables:

1. ACT composite score
2. Gender

Second, there was no statistically significant difference in the self-reported attitudes of returning Ferris State University freshman students toward alcohol use with respect to the following life events:

1. Having a physical fight after drinking
2. Experiencing acquaintance/date rape after drinking
3. Being criticized by a family member after drinking
4. Having trouble with the police

However, there was a statistically significant difference in the self-reported attitudes of returning Ferris State University freshman students toward alcohol use with respect to the following life events:

1. Having an argument after drinking
2. Having difficulties with friends after drinking
3. Missing a class due to use of alcohol
4. Earning less than a "C" on a quiz or an examination
5. Earning less than a "C" in a class

In addition, each of the following life event variables, as linked to attitudes toward alcohol use, yielded a response of five or less and were not tested: having trouble with boss or fellow workers, having an automobile accident, having an accident in the home or residence hall, and withdrawing from a class.

In summary, within the group of returning Ferris freshman students, there was a significant difference in attitudes toward alcohol use with respect to ACT composite score, gender, and whether any of the returning freshman students had had an argument after drinking, had experienced difficulties with friends after drinking, had missed a class after drinking, or had earned less than a "C" on a quiz or an exam or had earned less than a "C" in a class due to alcohol use.

Hypothesis 3

The third hypothesis, in its null form, was stated as follows:

Ho 3: There is no statistically significant difference in the self-reported attitudes of nonreturning Ferris State University freshman students toward alcohol use with respect to:

a. selected demographic variables
b. selected life event variables

The purpose of the third hypothesis (Research Question 3) was to examine the attitudes toward alcohol use of nonreturners according to selected demographic and life event variables. As seen in Table 4.14, there were no differences in attitudes of nonreturning students toward alcohol use with respect to the following six demographic variables: parents' educational level, Ferris State University honor point average, ACT composite score, ethnicity, age, and gender.

Table 4.14.--One-way MANOVA of attitudinal variables according to six nonsignificant demographic variables: nonreturners.

Variable	Wilks' Lambda	F-Value	Prob. Level
Q-37. Parents' educational level	.21254	1.31729	.153
Q-40. Ferris State Univ. HPA	.30027	.88492	.656
Q-42. ACT composite score	.44057	.93523	.563
Q-43. Ethnicity	.64515	1.14234	.369
Q-44. Age	.46696	.99809	.486
Q-45. Gender	.70403	.93782	.529

The MANOVA of attitudes of nonreturners toward alcohol use according to high school grade point average was significant at a probability level of .011 (see Table 4.15). The primary contributors to the MANOVA significance for high school grade point

average are marked with an asterisk. Using individual t-tests with high school grade point average revealed no significance for Q-12.

Table 4.15.--One-way MANOVA of significant attitudinal variables according to high school GPA: Nonreturners.

MANOVA:	Wilks' Lambda	F-Value	Prob. Level
High School GPA	.14411	1.84102	.011

Variable	High School GPA	
	F	p
Approve of 17-20 year olds:		
Q-3. Trying 1-2 drinks/alcoholic beverage	.54417	.655
Q-4. Taking 1-2 drinks nearly every day	.69349	.562
Q-5. Having 4-5 drinks nearly every day	.45129	.718
Q-6. Having 5+ drinks once or twice each weekend	.67165	.575
Think friends age 17-20 risk harm if they:		
Q-7. Try 1-2 drinks/alcoholic beverage	.92463	.438
Q-8. Take 1-2 drinks nearly every day	.68307	.568
Q-9. Take 4-5 drinks nearly every day	.75173	.528
Q-10. Have 5+ drinks once or twice each weekend	2.99397	.043*
Other attitudes:		
Q-11. Estimated how many friends drink	2.00105	.130
Q-12. Friends approve alcohol use	3.55841	.023*
Q-13. Approve alcohol use/self	.19648	.898
Q-25. Should reduce personal use of alcohol	2.58176	.068*
Q-26. Alcohol negatively affected academics	3.53292	.024*

*Significant at $p < .10$.

As seen in Table 4.16, four groups of high school grade point averages (HSGPA) were used when comparing differences in means using individual t-tests: Groups 2, 3, 4, and 5. Because none of the nonreturning respondents indicated they had a HSGPA of 1.99 or below, that response choice was collapsed into Group 2 for purposes of data analysis and discussion. Therefore, Group 2 represents the lowest grade point averages--2.49 or below. Group 3 includes grade point averages between 2.5 and 2.99. Group 4 includes the grade point averages between 3.00 and 3.49, and Group 5 consists of the highest grade point averages--3.50 to 4.00.

An examination of Table 4.16 with respect to each possible set of pairs of HSGPA groupings revealed Groups 3 + 4 and 4 + 5 to be significant when compared to Q-10 (see Table 4.16). With a probability level of .015, nonreturning students with a HSGPA of 2.50-2.99 differed from nonreturning students with a HSGPA of 3.00-3.49. The 2.50-2.99 HSGPA group had a mean of 3.02, and the nonreturning students with a 3.00-3.49 HSGPA had a mean of 4.00. Nonreturning students with a HSGPA of 2.50-2.99 thought friends/peers took a moderate risk of harming themselves physically or in other ways if they had 5 or more drinks once or twice each weekend, whereas nonreturning students with a HSGPA of 3.00-3.49 thought there was great risk for harm.

As seen in Table 4.16, nonreturning students with a HSGPA of 3.00-3.49 (probability level of .001) differed from nonreturning students with a HSGPA of 3.50-4.00. The 3.00-3.49 HSGPA group had a mean of 4.00, and the students with a 3.50-4.00 HSGPA had a mean of

Table 4.16.--T-tests of means of high school GPA according to have 5+ drinks once or twice each weekend, should reduce personal use of alcohol, and alcohol negatively affected academics: nonreturners.

Variable	High School GPA: Group 2 (2.49/below) Mean	SD	Group 3 (2.50-2.99) Mean	SD	Group 4 (3.00-3.49) Mean	SD	Group 5 (3.50-4.00) Mean	SD	Sig. Groups	t	Prob. Level
Q-10. Think friends age 17-20 risk harm if they have 5+ drinks once or twice each weekend	3.14	1.21	3.02	.94	4.00	.00	2.50	.71	(3+4)	-2.53	.015*
									(4+5)	6.36	.001*
Other attitudes:											
Q-25. Should reduce personal use of alcohol	4.00	.00	2.81	1.09	2.40	1.14	4.00	.00	(2+3)	2.17	.037*
									(2+4)	2.77	.028*
Q-26. Alcohol negatively affected academics	3.80	.45	3.15	.83	2.40	1.14	4.00	.00	(2+3)	1.70	.096*
									(2+4)	2.56	.049*
									(3+4)	1.02	.075*

*Significant at $p < .10$.

2.50. Nonreturning students with a HSGPA of 3.00-3.49 thought friends age 17 to 20 were at great risk for harm if they had 5 or more drinks once or twice each weekend, whereas nonreturning students with a HSGPA of 3.50-4.00 thought there was only slight to moderate risk for harm (Q-10).

The individual t-tests performed on each possible set of pairs of HSGPA, as seen in Table 4.16, indicated that Groups 2 + 3 and 2 + 4 were significant when compared on Q-25: "How often have you thought you should reduce or stop your use of alcohol?" With a probability level of .037, nonreturning students with a HSGPA of 2.49 or below (Group 2) differed from nonreturning students with a HSGPA of 2.50-2.99 (Group 3). The 2.49 or below HSGPA group had a mean of 4.00, and the nonreturning students with a 2.50-2.99 HSGPA had a mean of 2.81. Nonreturning students with a HSGPA of 2.49 or below never thought they should reduce or stop their personal use of alcohol, whereas nonreturning students with a HSGPA of 2.50-2.99 were close to seldom in thinking they should do so.

Also, for Q-25, as seen in Table 4.16, nonreturning students with a HSGPA of 2.49 or below (Group 2), with a probability level of .028, differed from nonreturning students with a HSGPA of 3.00-3.49 (Group 4). The 2.49 or below HSGPA group had a mean of 4.00, and the students with a HSGPA of 3.00-3.49 had a mean of 2.40. Nonreturning students with a HSGPA of 2.49 or below never thought they should reduce or stop their personal use of alcohol, whereas nonreturning students with a HSGPA of 3.00-3.49 tended sometimes to think they should.

For Q-26, as seen in Table 4.16, an examination of each possible set of pairs of HSGPA indicated Groups 2 + 3, 2 + 4, and 3 + 4 to be significant. The highest probability level among the pairs of groups was for Groups 2 + 4. With a probability level of .049, nonreturning students with a HSGPA of 2.49 or below differed from nonreturning students with a HSGPA of 3.00-3.49. The 2.49 or below HSGPA group had a mean of 3.80, and the nonreturning students with a 3.00-3.49 HSGPA had a mean of 2.40. Nonreturning students with a HSGPA of 2.49 or below tended to strongly disagree that their personal use of alcohol had negatively affected their academic performance, whereas nonreturning students with a HSGPA of 3.00-3.49 were closer to agreeing than disagreeing that alcohol had negatively affected their academic performance. For students with a HSGPA of 3.49 or below, the higher the students' HSGPA, the more likely they were to agree that alcohol had negatively affected their academic performance.

All of the t-tests in Table 4.16 were statistically significant with the small number (n = 63) in the nonreturning sample. In performing multivariate analysis, using all respondents who answered every attitudinal question and then breaking those responses into subgroups of four categories of HSGPA, some subgroups had an n count of anywhere from two to six, making the results susceptible to statistical error.

As seen in Table 4.17, attitudes of nonreturners toward alcohol use did not differ with respect to the following three life events:

having an argument after drinking, missing a class, or earning less than a "C" on a quiz or examination.

Table 4.17.--One-way MANOVA of attitudinal variables according to three nonsignificant selected life events: non-returners.

Variable	Wilks' Lambda	F-Value	Prob. Level
Q-22/2. Experienced argument after drinking	.56985	1.68392	.119
Q-24/1. Alcohol use--missed a class	.62088	1.36215	.236
Q-24/2. Alcohol use--less than "C" on a quiz/exam	.64536	1.22586	.312

An examination of Table 4.18 with respect to the attitudes of nonreturners according to one life event variable, being criticized by a family member, reveals significance at a probability level of .084. The primary contributor to the MANOVA significance for criticism by a family member is marked with an asterisk. Using an individual t-test affirmed the significance of Q-26, "I believe my use of alcohol has negatively affected my academic performance," with Q-23, "My use of alcohol *during my enrollment at Ferris* has caused me to be criticized by a family member."

Table 4.18.--One-way MANOVA of attitudinal variables according to criticism by a family member: Nonreturners.

MANOVA:	Wilks' Lambda	F-Value	Prob. Level
Criticism by a family member	.54806	1.83952	.084

Variable	Criticism by a Family Member	
	F	p
Approve of 17-20 year olds:		
Q-3. Trying 1-2 drinks/alcoholic beverage	.40864	.526
Q-4. Taking 1-2 drinks nearly every day	.17336	.679
Q-5. Having 4-5 drinks nearly every day	.02041	.887
Q-6. Having 5+ drinks once or twice each weekend	.15275	.698
Think friends age 17-20 risk harm if they:		
Q-7. Try 1-2 drinks/alcoholic beverage	.33510	.566
Q-8. Take 1-2 drinks nearly every day	.70575	.406
Q-9. Take 4-5 drinks nearly every day	1.97002	.168
Q-10. Have 5+ drinks once or twice each weekend	.10722	.745
Other attitudes:		
Q-11. Estimated how many friends drink	.59825	.444
Q-12. Friends approve alcohol use	2.10050	.155
Q-13. Approve alcohol use/self	.10491	.748
Q-25. Should reduce personal use of alcohol	.75600	.390
Q-26. Alcohol negatively affected academics	8.35027	.006*

*Significant at $p < .10$.

As seen in Table 4.19, with a probability level of .042, nonreturning students who attributed their use of alcohol during their enrollment at Ferris to causing criticism by a family member differed from those who did not. Nonreturning students who were criticized by a family member had a mean of 2.14, and nonreturning students who were not criticized had a mean of 3.33. Therefore, nonreturning students who were criticized by a family member because of their use of alcohol while enrolled at Ferris agreed that their use of alcohol had negatively affected their academic performance, whereas nonreturning students who were not criticized disagreed that their use of alcohol had negatively affected their academic performance.

Therefore, Hypothesis 3, as previously stated, was rejected. That is, there was no statistically significant difference in the self-reported attitudes of nonreturning Ferris State University freshman students toward alcohol use with respect to the following demographic variables:

1. Parents' educational level
2. Ferris State University honor point average
3. ACT composite score
4. Ethnicity
5. Age
6. Gender

However, there was a statistically significant difference in the self-reported attitudes of nonreturning Ferris State University freshman students toward alcohol use with respect to the following demographic variable:

1. High school grade point average

Table 4.19.--T-tests of means of attitudinal variables according to criticism by a family member: nonreturners.

Variable	Yes		No		t	Prob. Level
	Mean	SD	Mean	SD		
Q-3 to Q-25	--	--	--	--	--	--
Criticism by a family member by Q-26	2.14	1.22	3.33	.70	2.51	.042*

Note. Q-3 = Approve of 17-20 year olds trying 1-2 drinks/alcoholic beverage.
Q-4 = Approve of 17-20 year olds taking 1-2 drinks nearly every day.
Q-5 = Approve of 17-20 year olds having 4-5 drinks nearly every day.
Q-6 = Approve of 17-20 year olds having 5+ drinks once or twice each weekend.
Q-7 = Think friends age 17-20 risk harm if they try 1-2 drinks/alcoholic beverage.
Q-8 = Think friends age 17-20 risk harm if they take 1-2 drinks nearly every day.
Q-9 = Think friends age 17-20 risk harm if they take 4-5 drinks nearly every day.
Q-10 = Think friends age 17-20 risk harm if they have 5+ drinks once or twice each weekend.
Q-11 = Estimated how many friends drink.
Q-12 = Friends approve alcohol use.
Q-13 = Approve alcohol use/self.
Q-25 = Should reduce personal use of alcohol.

*Significant at $p < .10$.

Second, there was no statistically significant difference in the self-reported attitudes of nonreturning Ferris State University freshman students toward alcohol use with respect to the following life events:

1. Getting into an argument after drinking
2. Missing a class
3. Earning less than a "C" on a quiz or examination

However, there was a statistically significant difference in the self-reported attitudes of nonreturning Ferris State University freshman students toward alcohol use with respect to the following life event:

1. Criticism by a family member

In addition, each of the following life event variables, as linked to attitudes toward alcohol use, yielded a response of five or less and therefore could not be tested: having a physical fight after drinking, experiencing acquaintance/date rape after drinking, having trouble with boss or fellow workers, having difficulties with friends, having an automobile accident, having trouble with the police, having an accident in the home or residence hall, earning less than a "C" for a class, and withdrawing from a class.

In summary, within the group of nonreturning Ferris Freshman students, there was a significant difference in the attitudes toward alcohol use with respect to high school grade point average and whether any of the nonreturning freshman students had experienced criticism by a family member after drinking.

Hypothesis 4

The fourth hypothesis, in its null form, was stated as follows:

Ho 4: There is no statistically significant difference in the self-reported alcohol-consumption patterns of returning Ferris State University freshman students with respect to:

a. selected demographic variables
b. selected life event variables

The purpose of the fourth hypothesis (Research Question 4) was to examine the alcohol-consumption patterns of returners according to selected demographic and life event variables. As seen in Table 4.20, there were no significant differences in consumption patterns of returners with respect to the following four demographic variables: school/college of enrollment, parents' educational level, ethnicity, and age.

Table 4.20.--One-way MANOVA of consumption variables according to four nonsignificant demographic variables: returners.

Variable	Wilks' Lambda	F-Value	Prob. Level
Q-2. School/college of enrollment	.79729	.90852	.614
Q-37. Parents' educational level	.82584	1.04020	.413
Q-43. Ethnicity	.91560	1.47495	.173
Q-44. Age	.86665	1.17762	.286

An examination of the data in Table 4.21 indicates that the MANOVAs of consumption variables of returners according to Ferris State University honor point average (FSUHPA), high school grade point average (HSGPA), ACT composite score, and gender were significant at probability levels of .053, .053, .020, and 000, respectively. The primary contributors to the MANOVA significance for FSUHPA, HSGPA, ACT composite score, and gender are marked with

Table 4.21.--One-way MANOVA of significant consumption variables according to Ferris State University HPA, high school GPA, ACT composite score, and gender: returners.

MANOVA:	Wilks' Lambda	F-Value	Prob. Level
Ferris State University HPA	.75723	1.53475	.053
High school GPA	.75733	1.53402	.053
ACT composite score	.79406	1.90952	.020
Gender	.79095	4.22882	.000

Variable	FSU HPA		High School GPA		ACT Composite Score		Gender	
	F	p	F	p	F	p	F	p
Q-17. When enrolled, average no. of beers at one time	4.02471	.009*	2.85486	.040*	2.54224	.083*	8.02985	.005*
Q-18. When enrolled, average no. of wines at one time	2.52129	.061*	.34089	.796	3.09548	.049*	5.85387	.000*
Q-19. When enrolled, average no. of shots at one time	2.77921	.044*	1.72592	.165	1.31580	.272	3.10977	.080*
Q-20. How often felt high after drinking alcohol	.51053	.676	1.46166	.228	1.12857	.327	4.30572	.040*
Q-21. No. of times last FSU term--5+ drinks	2.88752	.038*	4.11744	.008*	.66652	.515	4.98799	.027*
Q-33. Drinks per month at FSU--Fall 1989-90	1.29634	.278	4.84257	.003*	2.25833	.109	7.42252	.027*
Q-34. Drinks per month at FSU--Winter 1989-90	1.80058	.150	3.65143	.014*	.88078	.417	6.59733	.011*
Q-35. Drinks per month at FSU--Spring 1989-90	2.66178	.051*	3.99365	.009*	.63268	.533	5.83536	.017*

*Significant at $p < .10$.

an asterisk. Using individual t-tests with gender revealed no significance for Q-19.

As seen in Table 4.22, four groups of FSUHPAs were used to compare differences in means using individual t-tests. The lowest group (Group 2) included FSUHPAs of 2.49 or below, Group 3 included FSUHPAs of 2.50-2.99, Group 4 included FSUHPAs of 3.00-3.49, and Group 5 included FSUHPAs of 3.50-4.00. Because only eight of the returning respondents indicated an FSUHPA of 1.99 or below, that response choice was collapsed into Group 2 for purposes of data analysis and discussion.

A minimum of two sets of FSUHPA groups were significant for Q-17 through Q-19, Q-21, and Q-35, as seen in Table 4.22. By observing the groups that contained the extremes, it became obvious that the further apart the honor point averages were, the more likely the consumption patterns would differ. For example, with a probability level of .002, Groups 2 + 5 differed in the average amount of beer consumed at any one time during their Ferris enrollment (Q-17). Group 2 (FSUHPA = 2.49 or below) had a mean of 4.62, and Group 5 (FSUHPA = 3.50-4.00) had a mean of 2.93. Returning students with an FSUHPA of 2.49 or below would have, on the average, close to 5 beers at any one time, whereas returning students with an FSUHPA of 3.50-4.00 would have, on the average, between 1 and 2 beers at any one time.

As seen in Table 4.22, with a probability level of .004, Groups 2 + 4 differed in the average amount of wine or wine coolers consumed at any one time during their Ferris enrollment (Q-18).

Table 4.22.--T-tests of consumption variables according to Ferris State University HPA, high school GPA, ACT composite score, and gender: returners.

Ferris State University HPA

Variable	Group 2 (2.49/below)		Group 3 (2.50-2.99)		Group 4 (3.00-3.49)		Group 5 (3.50-4.00)		Sig. Groups	t	Prob. Level
	Mean	SD	Mean	SD	Mean	SD	Mean	SD			
Q-17. When enrolled, average no. of beers at one time	4.62	1.65	4.60	1.58	4.19	1.71	2.93	1.91	(2+5)	3.31	.002*
									(3+5)	3.40	.001*
									(4+5)	2.37	.021*
Q-18. When enrolled, average no. of wines at one time	3.24	1.51	2.87	1.73	2.29	1.45	2.93	1.44	(2+4)	2.49	.004*
									(3+4)	1.72	.089*
Q-19. When enrolled, average no. of shots at one time	3.85	1.58	3.27	1.53	2.80	1.68	2.73	1.16	(2+3)	1.80	.075*
									(2+4)	2.98	.004*
									(2+5)	2.52	.015*
Q-21. No. of times last FSU term--5+ drinks	4.11	1.58	3.69	1.65	3.45	1.81	2.60	1.72	(2+4)	1.83	.070*
									(2+5)	3.15	.003*
									(3+5)	2.23	.030*
Q-35. Drinks per month at FSU--Spring 1989-90	5.40	1.83	4.89	2.16	4.70	2.22	3.57	2.03	(2+5)	3.22	.002*
									(3+5)	2.03	.047*
									(4+5)	1.68	.098*

High School GPA

Variable	Group 2 (2.49/below)		Group 3 (2.50-2.99)		Group 4 (3.00-3.49)		Group 5 (3.50-4.00)		Sig. Groups	t	Prob. Level
	Mean	SD	Mean	SD	Mean	SD	Mean	SD			
Q-17. When enrolled, average no. of beers at one time	4.57	1.61	4.58	1.53	4.35	1.85	3.36	1.84	(2+5)	2.50	.016*
									(3+5)	2.94	.004*
									(4+5)	2.08	.041*

Table 4.22.--Continued.

Variable	Group 2 (2.49/below) Mean	Group 2 SD	Group 3 (2.50-2.99) Mean	Group 3 SD	Group 4 (3.00-3.49) Mean	Group 4 SD	Group 5 (3.50-4.00) Mean	Group 5 SD	Sig. Groups	t	Prob. Level
High School GPA											
Q-21. No. of times last FSU term--5+ drinks	4.60	1.50	3.55	1.72	3.49	1.69	2.96	1.67	(2+3)	2.81	.006*
									(2+4)	2.96	.004*
									(2+5)	3.77	.000*
Q-33. Drinks per month at FSU--Fall 1989-90	5.87	1.89	4.69	2.08	4.40	2.19	2.57	1.83	(2+3)	2.55	.013*
									(2+4)	3.04	.003*
									(2+5)	4.46	.000*
									(3+5)	2.22	.029*
Q-34. Drinks per month at FSU--Winter 1989-90	5.83	1.90	4.69	1.93	4.54	2.16	3.91	1.63	(2+3)	2.60	.011*
									(2+4)	2.69	.009*
									(2+5)	3.83	.000*
Q-35. Drinks per month at FSU--Spring 1989-90	6.00	1.86	4.80	2.01	4.68	2.29	3.91	1.69	(2+3)	2.66	.009*
									(2+4)	2.65	.010*
									(2+5)	4.17	.000*
									(3+5)	1.83	.072*

Variable	Group 3 (6-15) Mean	Group 3 SD	Group 4 (16-20) Mean	Group 4 SD	Group 5 (21-36) Mean	Group 5 SD	Sig. Groups	t	Prob. Level
ACT Composite Score									
Q-17. When enrolled, average no. of beers at one time	4.41	1.85	4.66	1.50	3.83	1.81	(4+5)	2.66	.009*

Table 4.22.--Continued.

Variable	Gender				t	Prob. Level
	Males		Females			
	Mean	SD	Mean	SD		
Q-17. When enrolled, average no. of beers at one time	4.67	1.60	3.93	1.80	2.69	.008*
Q-18. When enrolled, average no. of wines at one time	2.33	1.56	3.32	1.46	-3.95	.000*
Q-19. When enrolled, average no. of shots at one time	3.47	1.70	3.04	1.47	1.63	.106
Q-20. How often felt high after drinking alcohol	3.07	1.24	2.68	1.13	2.03	.044*
Q-21. Number of times last FSU term--5+ drinks	3.94	1.64	3.32	1.76	2.29	.024*
Q-33. Drinks per month at FSU--Fall 1989-90	5.16	2.11	4.11	2.06	3.12	.002*
Q-34. Drinks per month at FSU--Winter 1989-90	5.24	2.11	4.22	1.81	3.17	.002*
Q-35. Drinks per month at FSU--Spring 1989-90	5.36	2.08	4.35	2.02	3.01	.003*

*Significant at $p < .10$.

Group 2 (FSUHPA = 2.49 or below) had a mean of 3.24, and Group 4 (FSUHPA = 3.00-3.49) had a mean of 2.29. During their Ferris enrollment, returning students with an FSUHPA of 2.49 or below would have, on the average, in excess of two wines or wine coolers at any one time, whereas returning students with an FSUHPA of 3.00-3.49 would have, on the average, one or less wine or wine cooler. The trend of higher consumption levels being significant with lower FSUHPA continued for Q-19, Q-21, and Q-35. Returning students with lower FSUHPAs consumed significantly more than did returning students with higher FSUHPAs. In Q-21, returning students with an FSUHPA of 2.49 or below had 5 or more drinks in a row from 3-5 times, whereas returning students with an FSUHPA of 3.50-4.00 had 5 or more drinks in a row once or less during their last term at Ferris. For Q-35, returning students with an FSUHPA of 2.49 or below indicated they had consumed at least 11-19 drinks per month, whereas returning students with an FSUHPA of 3.50-4.00 indicated they had consumed more than 3-5 but fewer than 6-10 drinks per month.

As seen in Table 4.22, four groups of HSGPAs were used when comparing differences in means using individual t-tests: Groups 2, 3, 4, and 5. Because only one of the returning respondents indicated having a HSGPA of 1.99 or below, that response choice was collapsed into Group 2 for purposes of data analysis and discussion. Therefore, Group 2 represents the lowest grade point averages of 2.49 or below, Group 3 includes grade point averages of 2.50-2.99,

Group 4 includes grade point averages from 3.00-3.49, and Group 5 consists of the highest grade point averages, 3.50-4.00.

Following performance of individual t-tests on each possible set of pairs of HSGPA groupings, a minimum of three sets of pairs were revealed to be significant for Q-17, Q-21, and Q-33 through Q-35 (see Table 4.22). By observing the groups that contained the extremes, it became obvious that the further apart the HSGPAs were, the more likely consumption patterns would differ, with the exception of Groups 2 + 5 for Q-17 (with a probability level of .016 as opposed to a probability level of .000 for Q-21 and Q-33 through Q-35).

Refer to Table 4.22 regarding the findings for Q-17, Q-21, and Q-33 through Q-35 concerning HSGPA. With a probability level of .016, Groups 2 + 5 differed in the average number of beers consumed, on the average, at any one time (Q-17). Returning students with a HSGPA of 2.49 or below drank 4-5 beers, on the average, at any one time, whereas returning students with a HSGPA of 3.50-4.00 drank 2-3 beers, on the average, at any one time.

With respective probability levels of .000, as seen in Table 4.22, returning students in Groups 2 + 5 differed in the number of times they had consumed 5 or more drinks in a row (Q-21), and in the approximate number of drinks they consumed per month during Fall Term 1989-90 (Q-33), Winter Term 1989-90 (Q-34), and Spring Term 1989-90 (Q-35). Returning students in Group 2 (HSGPA = 2.49 or below) had consumed 5 or more drinks in a row close to 6-9 times during their last term at Ferris and had consumed close to 20-39

drinks per month during both Fall and Winter Terms 1989-90. During Spring Term 1989-90, returning students consumed 20-39 drinks per month. In comparison, returning students in Group 5 (HSGPA = 3.50-4.00) had consumed 5 or more drinks in a row close to twice during their last term at Ferris and had consumed between 2 and 3 drinks per month during Fall Term 1989-90 and close to 6-10 drinks during Winter and Spring Terms 1989-90.

As seen in Table 4.22, three groups of ACT scores were used to compare differences in means using individual t-tests. Because none of the returning respondents indicated they had an ACT composite score of 0-5 and only four indicated they had an ACT composite score of 6-10, those response choices were collapsed into Group 3 for purposes of data analysis and discussion. The lowest group (Group 3) included ACT composite scores of 6-15, the middle group (Group 4) included ACT composite scores of 16-20, and the high group (Group 5) included scores of 21 or above.

In Table 4.22, only one pair of ACT groupings was significant when compared to the amount of beer consumed at any one time (Q-17), following performance of individual t-tests. With a probability level of .009, Group 4 (ACT = 16-20) and Group 5 (ACT = 21 or above) differed. Group 4 had a mean of 4.66 and Group 5 had a mean of 3.83. Returning students with an ACT of 16-20 had, on the average, close to 5 beers at any one time, whereas returning students with an ACT of 21 or above had, on the average, close to 3-4 beers at any one time.

As seen in Table 4.22, male and female returners differed in consumption patterns in Q-17, Q-18, Q-20, Q-21, and Q-33 through Q-35. For example, returning males had a mean of 4.67 and returning females had a mean of 3.93 when comparing the average number of beers consumed at one time (Q-17). Returning males had close to 5 beers, on the average, at any one time, whereas returning females had approximately 3-4 beers, on the average, at any one time. Returning males consumed greater amounts of beer (Q-17), felt high more often after drinking alcohol (Q-20), had 5 or more drinks in a row more often (Q-21), and had more drinks per month during Fall, Winter, and Spring Terms 1989-90 (Q-33 through Q-35) than returning females. Both returning males and returning females increased their alcohol consumption during each succeeding term.

The exception to the higher alcohol consumption patterns of males was found with regard to wine or wine coolers (see Table 4.22, Q-18). Returning males had a mean of 2.33, and returning females had a mean of 3.32. Therefore, returning males consumed, on the average, one or fewer wine or wine cooler at any one time, whereas returning females consumed, on the average two or more wines or wine coolers at any one time.

As seen in Table 4.23, there were no statistically significant life event differences in consumption patterns of returners with respect to experiencing acquaintance/date rape after drinking, having difficulties with friends after drinking, being criticized by a family member, having trouble with the police, earning less than a "C" on a quiz or examination, and earning less than a "C" in a class

as a result of alcohol use. The results show that consumption patterns of returners did not differ among the six life events listed.

Table 4.23.--One-way MANOVA of consumption variables according to six nonsignificant life events: returners.

Variable	Wilks' Lambda	F-Value	Prob. Level
Q-22/3. Experienced date rape after drinking	.96568	.56858	.802
Q-23/2. Alcohol--difficulties with friends	.94578	.91733	.504
Q-23/4. Alcohol--criticism by family member	.93332	1.14310	.339
Q-23/5. Alcohol--trouble with police	.95342	.78167	.620
Q-23/2. Alcohol use--less than "C" on a quiz/exam	.95154	.81478	.591
Q-23/4. Alcohol use--earning less than a "C" in a class	.94805	.87680	.538

The MANOVA of consumption variables of returners according to having a physical fight after drinking, having an argument after drinking, and missing a class were significant at probability levels of .000, .009, and .056, respectively (see Table 4.24). The primary contributors to the MANOVA significance for having a physical fight after drinking were Q-17, Q-19 through Q-21, and Q-33 through Q-35.

Table 4.24.--One-way MANOVA of consumption variables according to physical fight after drinking, argument, and missed a class: returners.

MANOVA:	Wilks' Lambda	F-Value	Prob. Level
Physical fight after drinking	.75518	5.18700	.000
Argument after drinking	.85592	2.69340	.009
Missed a class	.89066	1.96426	.056

Variable	Physical Fight After Drinking		Argument After Drinking		Missed a Class	
	F	p	F	p	F	p
Q-17. When enrolled, average no. of beers at one time	3.25982	.073*	9.13572	.003*	12.82031	.000*
Q-18. When enrolled, average no. wines at one time	.01348	.908	5.05820	.026*	.94600	.332
Q-19. When enrolled, average no. of shots at one time	7.04843	.009*	5.89632	.016*	9.87669	.002*
Q-20. How often felt high after drinking alcohol	7.08622	.009*	4.74866	.031*	8.18566	.005*
Q-21. Number of times last FSU term--5+ drinks	7.29023	.008*	16.44638	.000*	27.15504	.000*
Q-33. Drinks per month at FSU--Fall 1989-90	3.19209	.076*	13.94378	.000*	35.10416	.000*
Q-34. Drinks per month at FSU--Winter 1989-90	8.98023	.003*	11.05127	.001*	31.10142	.000*
Q-35. Drinks per month at FSU--Spring 1989-90	7.41329	.007*	12.35439	.001*	19.36318	.000*

*Significant at $p < .10$.

The primary contributors to the MANOVA significance for having an argument after drinking included Q-17 through Q-21, and Q-33 through Q-35. The primary contributors to the MANOVA significance for missing a class were Q-17, Q-19 through Q-21, and Q-33 through Q-35. Using individual t-tests with the consumption variables affirmed significance for three life event variables: having a physical fight after drinking, having an argument after drinking, and missing a class as a result of alcohol use.

Returning students who had a physical fight after drinking differed from those who did not, as noted in Table 4.25. Returning students who had a physical fight after drinking consumed close to 5 beers, on the average, at any one time (Q-17), consumed in excess of 3-4 shots or mixed drinks, on the average, at any one time (Q-19), drank enough alcoholic beverages to feel pretty high on between half and most of the occasions they drank alcoholic beverages (Q-20), drank 5 or more drinks in a row close to 6-9 times during their last term at Ferris (Q-21), and drank between 11-19 and 20-39 drinks per month during Fall Term 1989-90 (Q-33), 20-39 drinks per month during Winter Term 1989-90 (Q-34), and more than 20-39 drinks per month during Spring Term 1989-90 (Q-35). In comparison, those who did not have a physical fight after drinking drank less. For example, in Q-35, returning students who had a physical fight after drinking had a mean of 6.30, and returning students who did not have a physical fight after drinking had a mean of 4.65 (probability level of .001). As previously noted, returning students who had a physical fight after drinking had more than 20-39 drinks per month during Spring

Table 4.25.--T-tests of consumption variables according to physical fight after drinking, argument, and missed a class: returners.

Variable		Physical Fight After Drinking				Argument After Drinking				Missed a Class			
		Mean	SD	t	Prob. Level	Mean	SD	t	Prob. Level	Mean	SD	t	Prob. Level
Q-17	Yes	4.91	1.51	1.65	.100*	4.87	1.42	-3.41	.001*	4.87	1.40	-4.15	.000*
	No	4.24	1.75			3.97	1.83			3.76	1.86		
Q-18	Yes	--	--	--	--	3.22	1.72	-2.42	.017*	--	--	--	--
	No					2.57	1.46						
Q-19	Yes	4.20	1.82	-2.86	.005*	3.69	1.72	-2.61	.010*	3.72	1.62	-3.52	.001*
	No	3.12	1.52			3.00	1.47			2.83	1.47		
Q-20	Yes	3.52	1.25	-2.66	.009*	3.15	1.11	-2.18	.031*	3.21	1.11	-3.40	.001*
	No	2.79	1.16			2.72	1.23			2.57	1.21		
Q-21	Yes	4.62	1.60	-2.86	.005*	4.30	1.37	-4.20	.000*	4.37	1.39	-5.83	.000*
	No	3.49	1.69			3.22	1.80			2.91	1.72		
Q-33	Yes	5.52	2.04	-2.10	.046*	5.47	1.97	-3.93	.000*	5.64	1.75	-6.41	.000*
	No	4.52	2.14			4.13	2.10			3.65	2.06		
Q-34	Yes	6.00	2.00	-3.11	.002*	5.41	1.93	-3.37	.001*	5.62	1.72	-5.96	.000*
	No	4.55	1.97			4.31	1.99			3.84	1.95		
Q-35	Yes	6.30	1.87	-3.36	.001*	5.68	1.83	-4.03	.000*	5.64	1.83	-5.00	.000*
	No	4.65	2.06			4.33	2.12			4.04	2.09		

Note. Q-17 = When enrolled, average no. of beers at one time.
Q-18 = When enrolled, average no. of wines at one time.
Q-19 = When enrolled, average no. of shots at one time.
Q-20 = How often felt high after drinking alcohol.
Q-21 = Number of times last FSU term--5+ drinks.
Q-33 = Drinks per month at FSU--Fall 1989-90.
Q-34 = Drinks per month at FSU--Winter 1989-90.
Q-35 = Drinks per month at FSU--Spring 1989-90.

*Significant at $p < .10$.

Term 1989-90. In comparison, returning students who did not have a physical fight after drinking had more than 6-10 but less than 11-19 drinks per month during Spring Term 1989-90.

As seen in Table 4.25, returning students who had an argument after drinking differed from those who did not. Returning students who had an argument after drinking consumed close to 5 beers, on the average, at any one time (Q-17), consumed in excess of 1-2 wines or wine coolers, on the average, at any one time (Q-18), consumed close to 3-4 shots or mixed drinks, on the average, at any one time (Q-19), drank enough alcoholic beverages to feel pretty high on more than half of the occasions they drank alcoholic beverages (Q-20), drank 5 or more drinks in a row more than 3-5 times during their last term at Ferris (Q-21), drank between 11-19 and 20-39 drinks per month during both Fall Term 1989-90 (Q-33) and Winter Term 1989-90 (Q-34), and drank close to 20-39 drinks during Spring Term 1989-90 (Q-35). For example, in Q-21, returning students who had an argument after drinking had a mean of 4.30, and students who did not have an argument after drinking had a mean of 3.22 (probability level of .000). As previously noted, returning students who had an argument after drinking drank 5 or more drinks in a row more than 3-5 times during their last term at Ferris. This is in comparison to the returning students who did not have an argument after drinking but who drank 5 or more drinks in a row close to 2 times during their last term at Ferris.

Returning students who missed a class as a result of their use of alcohol differed from those who did not. Returning students who missed a class as a result of their use of alcohol consumed close to 5 beers, on the average, at any one time (Q-17), consumed close to 3-4 shots or mixed drinks, on the average, at any one time (Q-19), drank enough alcoholic beverages to feel pretty high on more than half of the occasions they drank alcoholic beverages (Q-20), drank 5 or more drinks in a row more than 3-5 times during their last term at Ferris (Q-21), and drank close to 20-39 drinks per month during Fall Term 1989-90 (Q-33), Winter Term 1989-90 (Q-34), and Spring Term 1989-90 (Q-35). For example, in Q-34, returning students who missed a class as a result of their use of alcohol had a mean of 5.62, and students who had not missed a class had a mean of 3.84 (probability level of .000). As previously noted, returning students who had missed a class as a result of their use of alcohol drank close to 20-39 drinks per month, whereas students who had not missed a class as a result of their use of alcohol drank more than 3-5 drinks but less than 6-10 drinks per month.

Therefore, Hypothesis 4 as previously stated was rejected. That is, there was no statistically significant difference in the self-reported alcohol-consumption patterns of returning Ferris State University freshman students with respect to the following demographic variables:

1. School/college of enrollment
2. Parents' educational level
3. Ethnicity
4. Age

However, there was a statistically significant difference in the self-reported alcohol-consumption patterns of returning Ferris State University freshman students with respect to the following demographic variables:

1. Ferris State University honor point average
2. High school grade point average
3. ACT composite score
4. Gender

Second, there was no statistically significant difference in the self-reported alcohol-consumption patterns of returning Ferris State University freshman students with respect to the following life events:

1. Experiencing acquaintance/date rape after drinking
2. Having difficulties with friends after drinking
3. Being criticized by a family member after drinking
4. Having trouble with the police
5. Earning less than a "C" on a quiz or examination
6. Earning less than a "C" in a class

However, there was a statistically significant difference in the self-reported alcohol-consumption patterns of returning Ferris State University freshman students with respect to the following life events:

1. Having a physical fight after drinking
2. Having an argument after drinking
3. Missing a class

In addition, each of the following life event variables, as linked to alcohol consumption, yielded a response of five or less and were not tested: having trouble with boss or fellow workers, having an automobile accident, having an accident in the home or residence hall, and withdrawing from a class.

In summary, within the group of returning Ferris freshman students, there was a significant difference in the alcohol-consumption patterns with respect to Ferris State University honor point average, high school grade point average, ACT composite score, and gender. There was also a significant difference among the returning freshman students with respect to having a fight after drinking, having an argument after drinking, and missing a class due to alcohol use.

Hypothesis 5

The fifth hypothesis, in its null form, was stated as follows:

Ho 5: There is no statistically significant difference in the self-reported alcohol-consumption patterns of nonreturning Ferris State University freshman students with respect to:

a. selected demographic variables
b. selected life event variables

The purpose of Hypothesis 5 (Research Question 5) was to examine the alcohol-consumption patterns of nonreturners according to selected demographic and life event variables. As seen in Table 4.26, there were no significant differences in consumption patterns of nonreturners with respect to the following five demographic variables: parents' educational level, Ferris State University honor point average, high school grade point average, ethnicity, and age.

Table 4.26.--One-way MANOVA of consumption variables according to five nonsignificant demographic variables: nonreturners.

Variable	Wilks' Lambda	F-Value	Prob. Level
Q-37. Parents' educational level	.41967	1.16794	.306
Q-40. Ferris State University HPA	.58576	.62125	.888
Q-41. High school GPA	.59502	.65553	.860
Q-43. Ethnicity	.70865	1.35089	.272
Q-44. Age	.58920	1.08134	.396

The MANOVA of consumption patterns of nonreturners according to two demographic variables, ACT composite score and gender, were significant at probability levels of .048 and .053, respectively, as seen in Table 4.27. The primary contributors to the MANOVA significance for ACT composite score and gender are marked with an asterisk. Using individual t-tests affirmed significance for the two demographic variables, ACT composite score and gender.

As seen in Table 4.28, three groups of ACT composite scores were used to compare differences in means of nonreturners using individual t-tests. Because none of the nonreturning respondents indicated they had an ACT composite score of 0-5, only 5 nonreturning respondents indicated they had an ACT composite score of 6-10, and 24 nonreturning respondents indicated they had an ACT composite score of 11-15, those response choices were collapsed into Group 3 for purposes of data analysis and discussion. The lowest

Table 4.27.--One-way MANOVA of significant consumption variables according to ACT composite score and gender: nonreturners.

MANOVA:	Wilks' Lambda	F-Value	Prob. Level
ACT composite score	.36716	1.95098	.048
Gender	.61250	2.34986	.053

Variable	ACT Composite Score		Gender	
	F-Value	Prob. Level	F-Value	Prob. Level
Q-17. When enrolled, average no. of beers at one time	.21431	.808	7.92391	.008*
Q-18. When enrolled, average no. of wines at one time	3.04998	.064*	5.17799	.030*
Q-19. When enrolled, average no. of shots at one time	.24922	.781	.37175	.546
Q-20. How often felt high after drinking alcohol	.22789	.798	.02105	.886
Q-21. Number of times last FSU term--5+ drinks	.55716	.579	.92700	.343
Q-33. Drinks per month at FSU--Fall 1989-90	.58768	.563	.85081	.363
Q-34. Drinks per month at FSU--Winter 1989-90	.06322	.939	1.43426	.240

*Significant at $p < .10$.

Table 4.28.--T-tests of consumption variables according to ACT composite score and gender: nonreturners.

Variable	ACT Composite Score								
	Group 3 (5-15)		Group 4 (16-20)		Group 5 (21+)		Sig. Groups	t	Prob. Level
	Mean	SD	Mean	SD	Mean	SD			
Q-18. When enrolled, average no. of wines at one time	2.72	1.67	1.60	.88	3.40	.87	(2+4)	2.77	.009*

Variable	Gender				t	Prob. Level
	Males		Females			
	Mean	SD	Mean	SD		
Q-17. When enrolled, average no. of beers at one time	4.18	1.72	2.93	1.59	2.83	.007*
Q-18. When enrolled, average no. of wines at one time	1.68	1.41	2.96	1.40	-3.26	.002*

*Significant at the $p < .10$ level.

group (Group 3) included ACT composite scores of 6-15, the middle group (Group 4) included ACT composite scores of 16-20, and the high group (Group 5) was for scores of 21-36. According to individual t-tests performed on each possible set of pairs of ACT groupings, only one pair (Groups 3 + 4) was significant when compared to the number of wines or wine coolers, on the average, nonreturning students drank at any one time.

With a probability level of .009, the lowest ACT group and the middle ACT group differed in the number of wines or wine coolers, on the average, nonreturning students drank at any one time (Q-18) (see Table 4.28). The lowest ACT group had a mean of 2.72, and the middle ACT group had a mean of 1.60. Nonreturning students with lower ACT scores (6-15) were inclined to drink close to 1-2 wines or wine coolers, on the average, at any one time, whereas nonreturning students with ACT scores of 16-20 drank less than 1 wine or wine cooler, on the average, at any one time.

As seen in Table 4.28, nonreturning males and nonreturning females differed in alcohol-consumption patterns for Q-17 and Q-18. For Q-17, the t-tests showed that nonreturning males had a mean of 4.18 and nonreturning females had a mean of 2.93 (probability level of .007). Nonreturning males drank, on the average, 3-4 beers at any one time, whereas nonreturning females drank, on the average, approximately 1-2 beers at any one time. With a probability level of .002, the t-tests showed that nonreturning males had a mean of 1.68 and nonreturning females had a mean of 2.96. Nonreturning males drank, on the average, less than 1 wine or wine cooler, at any

one time, whereas nonreturning females drank, on the average, approximately 1-2 wines or wine coolers at any one time.

As noted in Table 4.29, there were no significant differences in alcohol-consumption patterns of nonreturners with respect to the following two life events: having an argument after drinking or experiencing criticism by a family member caused by the use of alcohol.

Table 4.29.--One-way MANOVA of consumption variables according to two nonsignificant life event variables: nonreturners.

Variable	Wilks' Lambda	F-Value	Prob. Level
Q-22/2. Experienced argument after drinking	.74894	1.24512	.315
Q-23/4. Alcohol--criticism by family member	.82357	.79572	.598

As seen in Table 4.30, the MANOVAs of consumption patterns of nonreturners according to two life event variables missed a class and earned less than a "C" on a quiz or an exam, were significant at probability levels of .025 and .000, respectively. The primary contributors to the MANOVA significance for both missed a class and earned less than a "C" on a quiz or an exam are marked with an asterisk. Using individual t-tests with earned less than a "C" on a quiz or an exam revealed no significance for Q-19 and Q-33.

Table 4.30.--One-way MANOVA of significant consumption variables according to missed a class and earned less than a "C" on a quiz or exam: nonreturners.

MANOVA:	Wilks' Lambda	F-Value	Prob. Level
Missed a class	.56763	2.82921	.025
Earned less than a "C" on a quiz/exam	.34430	7.07354	.000

Variable	Missed a Class		Less Than "C" on a Quiz/Exam	
	F-Value	p	F-Value	p
Q-17. When enrolled, average no. of beers at one time	7.78689	.009*	8.74980	.006*
Q-18. When enrolled, average no. of wines at one time	6.76931	.014*	10.55988	.003*
Q-19. When enrolled, average no. of shots at one time	4.58824	.040*	5.30192	.028*
Q-20. How often felt high after drinking alcohol	6.63261	.015*	21.85064	.000*
Q-21. Number of times last FSU term--5+ drinks	11.48047	.002*	10.21542	.003*
Q-33. Drinks per month at FSU-- Fall 1989-90	9.77661	.004*	4.22308	.048*
Q-34. Drinks per month at FSU-- Winter 1989-90	5.92583	.021*	3.69455	.064*

*Significant at the $p < .10$ level.

As seen in Table 4.31, nonreturning students who missed a class as a result of their use of alcohol differed from those who did not. Nonreturning students who missed a class as a result of their use of alcohol consumed in excess of 3-4 beers, on the average, at any one time (Q-17); consumed 1-2 wines or wine coolers, on the average, at any one time (Q-18); consumed 1-2 shots or mixed drinks, on the average, at any one time (Q-19); drank enough alcoholic beverages to feel pretty high on close to half of the occasions they drank alcoholic beverages (Q-20); drank 5 or more drinks in a row approximately 3 times during their last term at Ferris (Q-21); drank slightly in excess of 11-19 drinks per month during Fall Term 1989-90 (Q-33); and drank close to 11-19 drinks per month during Winter Term 1989-90 (Q-34). For example, in Q-33, nonreturning students who missed a class as a result of their use of alcohol had a mean of 5.19, and nonreturning students who had not missed a class had a mean of 3.03 (probability level of .000). As previously noted, nonreturning students who missed a class as a result of their use of alcohol drank close to 11-19 drinks per month during Fall and Winter Terms 1989-90. Nonreturning students who did not miss a class as a result of their use of alcohol drank approximately 3-5 drinks per month during Fall and Winter Terms 1989-90.

As seen in Table 4.31, nonreturning students who earned less than a "C" on a quiz or an exam as a result of alcohol use differed from those who did not. Nonreturning students who earned less than a "C" on a quiz or an exam consumed close to 5 beers, on the average, at any one time (Q-17); consumed 3-4 wines or wine coolers,

Table 4.31.--T-tests of significant consumption variables according to missed a class and earned less than a "C" on a quiz or exam: nonreturners.

Variable		Missed a Class				Less than "C" on a Quiz/Exam			
		Mean	SD	t	Prob. Level	Mean	SD	t	Prob. Level
Q-17. When enrolled, average no. of beers at one time	Yes	4.45	1.26	-3.62	.001*	4.78	1.39	-2.38	.021*
	No	2.97	1.80			3.32	1.73		
Q-18. When enrolled, average no. of wines at one time	Yes	3.05	1.85	-2.58	.016*	4.00	2.14	-2.54	.035*
	No	1.87	1.09			2.02	1.19		
Q-19. When enrolled, average no. of shots at one time	Yes	3.00	1.34	-2.98	.005*	3.00	1.51	-1.50	.141
	No	1.90	1.24			2.21	1.34		
Q-20. How often felt high after drinking alcohol	Yes	2.95	1.43	-3.73	.001*	3.78	1.30	-5.04	.000*
	No	1.71	.79			1.90	.97		
Q-21. Number of times last FSU term--5+ drinks	Yes	3.50	1.92	-3.40	.002*	3.89	1.37	-2.69	.009*
	No	1.91	1.31			2.27	1.70		
Q-33. Drinks per month at FSU--Fall 1989-90	Yes	5.19	2.04	-4.07	.000*	4.78	2.22	-1.37	.176
	No	3.03	1.78			3.70	2.12		
Q-34. Drinks per month at FSU--Winter 1989-90	Yes	4.86	1.99	-2.54	.015*	5.14	1.77	-1.95	.059*
	No	3.21	1.89			3.52	2.03		

*Significant at the $p < .10$ level.

on the average, at any one time (Q-18); drank enough alcoholic beverages to feel pretty high on close to most of the occasions they drank alcoholic beverages (Q-20); drank 5 or more drinks in a row close to 3-5 times during their last term at Ferris (Q-21); and drank close to 11-19 drinks per month during Fall Term 1989-90 (Q-33) and in excess of 11-19 drinks during Winter Term 1989-90 (Q-34). By comparison, those who did not earn less than a "C" on a quiz or an exam as a result of alcohol use drank less. For example, in Q-20, nonreturning students who earned less than a "C" on a quiz or an exam had a mean of 3.78, and nonreturning students who did not earn a "C" or less on a quiz or an exam as a result of alcohol use had a mean of 1.90 (probability level of .000). As previously noted, nonreturning students who earned less than a "C" on a quiz or an exam as a result of alcohol use drank enough alcoholic beverages to feel pretty high on close to most of the occasions they drank alcoholic beverages. Nonreturning students who did not earn a "C" or less on a quiz or an exam as a result of alcohol use drank enough alcoholic beverages to feel pretty high on very few occasions.

All of the t-tests shown in Table 4.31 were statistically significant with the small number (n = 63) in the nonreturning sample. In performing multivariate analysis, using all respondents who answered every attitudinal question and then breaking those responses into subgroups of four categories of ACT composite scores, some subgroups had an n count of anywhere from two to six, making the results susceptible to statistical error.

Therefore, Hypothesis 5, as previously stated, was rejected. That is, there was no statistically significant difference in the self-reported alcohol-consumption patterns of nonreturning Ferris State University freshman students with respect to the following demographic variables:

1. Parents' educational level
2. Ferris State University honor point average
3. High school grade point average
4. Ethnicity
5. Age

However, there was a statistically significant difference in the self-reported alcohol-consumption patterns of nonreturning Ferris State University freshman students with respect to the following demographic variables:

1. ACT composite score
2. Gender

Second, there was no statistically significant difference in the self-reported alcohol-consumption patterns of nonreturning Ferris State University freshman students with respect to the following life events:

1. Having an argument after drinking
2. Being criticized by a family member after drinking

However, there was a statistically significant difference in the self-reported alcohol-consumption patterns of nonreturning Ferris State University freshman students with respect to the following life events:

1. Missing a class
2. Earning less than a "C" on a quiz or examination

In addition, each of the following life event variables, as linked to alcohol consumption, yielded a response of five or less and therefore could not be tested: having a physical fight after drinking, experiencing acquaintance/date rape after drinking, having trouble with boss or fellow workers; having difficulties with friends after drinking; having an automobile accident, having trouble with the police, having an accident in the home or residence hall, earning less than a "C" for a class, and withdrawing from a class.

In summary, within the group of nonreturning freshman students, there was a significant difference in the alcohol-consumption patterns with respect to ACT composite score and gender. There was also a significant difference among the nonreturning students with respect to earning less than a "C" on a quiz or an examination and missing a class due to alcohol use.

Hypothesis 6

The sixth hypothesis, in its null form, was stated as follows:

> Ho 6: There is no statistically significant difference in the Ferris State University Fall Term 1989-90 freshman students' self-reported perception about the drinking behavior of their parents between the returning and nonreturning freshmen.

The purpose of the sixth hypothesis (Research Question 6) was to examine the self-reported perception about the drinking behavior of their parents between the returning and nonreturning freshmen. As seen in Table 4.32, returning and nonreturning students were equally likely to have said "yes," they had ever wished that either one or both of their parents would drink less. Approximately 15% of

both the returning and nonreturning freshman students responded affirmatively to having wished their parents would drink less. In an inference to the Fall Term 1989-90 freshman population of 2,689 (2,228 returners and 461 nonreturners) at Ferris State University, it is possible that approximately 403 of the freshmen could be identified as children of alcoholics.

Table 4.32.--Comparison of returners and nonreturners and whether they ever wished their parents would drink less.

Response	Returners		Nonreturners	
	No.	%	No.	%
"No" and "Parents don't drink"	133	84	51	85
"Yes"	26	16	9	15
Total	159	100	60	100

Chi-square = .05932 Probability level = .8076

Hypothesis 6 was not rejected. There was no statistically significant difference in the Ferris State University freshman students' self-reported perception about the drinking behavior of their parents between the returning and nonreturning freshmen.

Hypothesis 7

The seventh hypothesis, in its null form, was stated as follows:

> Ho 7: There is no statistically significant relationship between the Ferris State University Fall Term 1989-90 nonreturning freshman students' self-reported perception about the drinking behavior of their parents and the following reasons influencing the decision either to drop or not return:
>
> a. transferring to another college/university
> b. having financial difficulties
> c. being academically denied
> d. feeling peer pressure to drink alcohol
> e. personally using or abusing alcohol
> f. other
> (1) academic dissatisfaction
> (2) residence hall life
> (3) personal

The purpose of the seventh hypothesis (Research Question 7) was to examine the relationship between nonreturning students' perception about their parents' drinking behavior and several reasons influencing the decision of nonreturners either to drop or not return to Ferris State University. The response choices of peer pressure to drink alcohol, personal use or abuse of alcohol, academic dissatisfaction, residence hall life, and personal each yielded a response rate of five or less. Consequently, the chi-square analyses were limited to the three reasons listed in Table 4.33: transferred to another college/university, having financial difficulties, and academic denial.

As seen in Table 4.33, the transferred-to-another-college/university and academic-denial reasons were not statistically significant. Therefore, students who transferred to another college/university or were academically denied were equally likely

Table 4.33.--Chi-square of perceptions about parental drinking as compared to reasons freshman students left Ferris State University.

Response	Yes		No	
	No.	%	No.	%
Transferred to Another College/University (n = 60)				
"No" and "Parents don't drink"	17	89.5	34	82.9
"Yes"	2	10.5	7	17.1
Total	19	100.0	41	100.0
Chi-square = .43646				
Probability level = .5088				
Financial Difficulties (n = 60)				
"No" and "Parents don't drink"	14	73.7	37	90.2
"Yes"	5	26.3	4	9.8
Total	19	100.0	41	100.0
Chi-square = 2.79242				
Probability level = .0947*				
Academic Denial (n = 60)				
"No" and "Parents don't drink"	11	100.0	40	81.6
"Yes"	0	0.0	9	18.4
Total	11	100.0	49	100.0
Chi-square = 2.37695				
Probability level = .1231				

*Significant at $p < .10$.

to say "yes," they wished their parents would drink less. As noted previously, approximately 15% of the nonreturning students wished their parents would drink less.

As seen in Table 4.33, regarding the financial-difficulties reason for leaving, five out of nine students who said "yes," they wished their parents would drink less, left for financial reasons. Even though there was a possibility for statistical error because of the low cell count, a probability of .0947 indicated that students who left for financial difficulties were more likely to say "yes." Those who left because of financial difficulties were also more likely to wish their parents would drink less.

Although Hypothesis 7, as previously stated, was rejected, there was a statistically significant relationship between the self-reported perception of the drinking behavior of parents and having financial difficulties. As noted, the peer-pressure-to-drink-alcohol reason, the personal-use-or-abuse-of-alcohol reason, the academic-dissatisfaction reason, the residence-hall-life reason, and the personal reason for dropping or not returning could not be tested because of the low cell count.

Hypothesis 8

The eighth hypothesis, in its null form, was stated as follows:

Ho 8: There is no statistically significant relationship between the peer-pressure-to-drink-alcohol reason Fall Term 1989-90 freshman students left Ferris State University and the following reasons influencing the decision either to drop or not return:

a. transferring to another college/university
b. having financial difficulties
c. being academically denied
d. other
   (1) academic dissatisfaction
   (2) residence hall life
   (3) personal

The purpose of the eighth hypothesis (Research Question 8) was to examine the relationship between peer pressure to drink alcohol and several other reasons that might have influenced Fall Term 1989-90 nonreturning students either to drop or not return to Ferris State University. Chi-square analysis could not be performed on any of the reasons for leaving because only four respondents indicated they had left because of peer pressure to drink alcohol. Therefore, Hypothesis 8 was neither rejected nor not rejected. However, performing the analysis with a larger sample would be useful in a discussion of the relationship of alcohol and freshman student attrition.

Even though only 4 out of 63 respondents admitted they left because of peer pressure to drink alcohol, the fact that 6.3% did give that reason deserves attention. For example, if the percentage of respondents who identified peer pressure to drink alcohol as a reason for not returning was generalized to the nonreturning freshman student population, it would mean that approximately 28 freshman students would have left Ferris during the academic year because of peer pressure to drink alcohol.

Hypothesis 9

The ninth hypothesis, stated in its null form, was as follows:

Ho 9: There is no significant relationship between the personal-use-or-abuse-of-alcohol reason Fall Term 1989-90 freshman students left Ferris State University and the following reasons influencing the decision either to drop or not return:

a. transferring to another college/university
b. having financial difficulties
c. being academically denied
d. other
   (1) academic dissatisfaction
   (2) residence hall life
   (3) personal

The purpose of the ninth hypothesis (Research Question 9) was to examine the relationship between the personal use or abuse of alcohol and several reasons influencing Fall Term 1989-90 nonreturning students either to drop or not return to Ferris State University.

For reasons similar to those stated for Hypothesis 8 (Research Question 8), chi-square analysis could not be performed for the personal-use reason because only 1 respondent out of 63 nonreturners identified the personal use or abuse of alcohol as a reason for leaving or not returning to Ferris State University.

Therefore, Hypothesis 9 was neither rejected nor not rejected. However, performing the analysis with a larger sample would be useful in a discussion of the relationship of alcohol and freshman student attrition.

The summary, conclusions, implications for further study, recommendations, and reflections are presented in Chapter V.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS FOR FURTHER STUDY, RECOMMENDATIONS, AND REFLECTIONS

Summary

Purpose

The researcher's primary purpose in this study was to examine the attitudes toward alcohol use and the self-reported alcohol-consumption patterns of returning and nonreturning freshman students who were 17, 18, 19, or 20 years of age and who were enrolled at Ferris State University, a four-year public university, for a minimum of 12 credits during Fall Term 1989-90. By comparing the attitudes toward alcohol use and the alcohol-consumption patterns of the returning and nonreturning freshman students, the relationship between attitudes and consumption patterns and attrition was examined.

A second purpose was to examine the differences in perceptions about parental drinking between the returning and nonreturning freshman students. By identifying the percentage of returners and nonreturners who were children of alcoholics, the institution could use the information during development of student services and, possibly, academic programming. Several reasons students left Ferris State University were also compared with perceptions of the

nonreturning students about parental drinking to identify whether there could be a link between parental drinking and the persistence of Ferris State University Fall Term 1989-90 freshmen.

Finally, the peer-pressure-to-drink-alcohol and the personal-use-or-abuse-of-alcohol reasons the Fall Term 1989-90 freshman students left Ferris State University were to be compared to traditional reasons that might have influenced freshman students either to drop out or not return. If there was a relationship between the attitudes toward alcohol use and alcohol-consumption patterns and the attrition of freshman students, this study could add a new dimension to the conventional research literature on attrition.

Hypotheses

The assumption underlying the purpose of this study was that alcohol has a negative effect on the retention of freshman students. To examine the relationship between alcohol and the attrition of Fall Term 1989-90 Ferris State University freshmen, nine hypotheses were developed. Stated in their null form, the hypotheses were as follows:

> Hypothesis 1: There is no statistically significant difference in the self-reported attitudes toward alcohol use and the self-reported alcohol-consumption patterns between returning and nonreturning Ferris State University Fall Term 1989-90 freshmen.
>
> Hypothesis 2: There is no statistically significant difference in the self-reported attitudes of returning Ferris State University freshman students toward alcohol use with respect to:
>
> a. selected demographic variables
> b. selected life event variables

Hypothesis 3: There is no statistically significant difference in the self-reported attitudes of nonreturning Ferris State University freshman students toward alcohol use with respect to:

a. selected demographic variables
b. selected life event variables

Hypothesis 4: There is no statistically significant difference in the self-reported alcohol-consumption patterns of returning Ferris State University freshman students with respect to:

a. selected demographic variables
b. selected life event variables

Hypothesis 5: There is no statistically significant difference in the self-reported alcohol-consumption patterns of nonreturning Ferris State University freshman students with respect to:

a. selected demographic variables
b. selected life event variables

Hypothesis 6: There is no statistically significant difference in the Ferris State University Fall Term 1989-90 freshman students' self-reported perception about the drinking behavior of their parents between the returning and nonreturning freshmen.

Hypothesis 7: There is no statistically significant relationship between the Ferris State University Fall Term 1989-90 nonreturning freshman students' self-reported perception about the drinking behavior of their parents and the following reasons influencing the decision either to drop or not return:

a. transferring to another college/university
b. having financial difficulties
c. being academically denied
d. feeling peer pressure to drink alcohol
e. personally using or abusing alcohol
f. other
    (1) academic dissatisfaction
    (2) residence hall life
    (3) personal

Hypothesis 8: There is no statistically significant relationship between the peer-pressure-to-drink-alcohol reason Fall Term 1989-90 freshman students left Ferris State University and the following reasons influencing the decision either to drop or not return:

a. transferring to another college/university
b. having financial difficulties
c. being academically denied
d. other
    (1) academic dissatisfaction
    (2) residence hall life
    (3) personal

Hypothesis 9: There is no significant relationship between the personal-use-or-abuse-of-alcohol reason Fall Term 1989-90 freshman students left Ferris State University and the following reasons influencing the decision either to drop or not return:

a. transferring to another college/university
b. having financial difficulties
c. being academically denied
d. other
    (1) academic dissatisfaction
    (2) residence hall life
    (3) personal

Review of the Literature

Alcohol use and abuse among college students have grown in magnitude and have become major concerns in the college community. Attrition continues to be studied as a multidimensional problem, with the highest percentage of college attrition occurring during the freshman year. Studies of attitudes toward alcohol use and the alcohol-consumption patterns of students have not been linked with studies investigating the attrition milieu. Thus, the need for this study was reinforced both by the dearth of published articles on alcohol as a problem on the nation's campuses and by the lack of publications relating alcohol to attrition.

Method

The researcher developed two questionnaires. Data were collected from 45% (n = 63) of the 141 nonreturning freshman students in the sample during summer 1990, using a mail survey. Data from the returning freshman students were collected from 78% (n = 159) of the 203 returning students in the sample during Fall Term 1990 through administration of an on-campus survey. Distribution and return of the instruments were designed to protect respondents' anonymity.

The study was quantitative and descriptive. One-way multivariate analysis of variance (MANOVA) and t-tests were performed for Hypothesis 1. Data analyses were accomplished by performing one-way MANOVA, ANOVA, and t-tests for Hypotheses 2 through 5. Chi-square was used to examine Hypotheses 6 and 7. Due to a low cell count, Hypotheses 8 and 9 could not be tested using chi-square; however, frequencies and percentages were reported.

Findings According to the Means

Demographics. Approximately three-quarters of both the returning and nonreturning students were age 18 upon matriculation. Ethnic groups represented by the returners were limited to African Americans (6.3%) and Caucasians (93.7%), whereas the nonreturning group consisted of Caucasians (79.4%), African Americans (11.1%), Native Americans (3.2%), an Asian American (1.6%), and others (4.8%).

Life events. Returners missed a class as a result of alcohol use (49.1% vs. 34.9%), had an argument after drinking (38.4% vs. 23.8%), and had difficulties with friends after drinking (15.7% vs. 4.8%) more frequently than nonreturners. Approximately 14% of both the returners and nonreturners earned less than a "C" on a quiz or an examination due to alcohol use. Between 10% and 11% of both the returners and nonreturners experienced criticism by a family member after drinking.

Attitudes. The attitudes of returning and nonreturning students toward the use of alcohol by their friends/peers were similar. Both returners and nonreturners tended to approve of 17 to 20 year olds drinking five or more drinks once or twice each weekend and believed there was a moderate risk involved with that type of binge drinking. Consuming alcohol was acceptable, and most of their friends drank. Neither returners nor nonreturners had intentions of stopping or reducing their consumption of alcohol, nor did they believe alcohol negatively affected their academic performance.

Consumption patterns. The consumption patterns of returning and nonreturning students differed significantly. Returners drank more than nonreturners, drank greater amounts more often than nonreturners, and increased the amount they drank each term.

Attrition Factors According to Frequencies

Nonreturning students cited transferring to another college/university (30%) and having financial difficulties (30%) as the most frequent reasons for leaving Ferris State University. The

percentage of alcohol-related reasons (6.3% + 1.6%) for leaving or not returning was close to equal to leaving due to academic dissatisfaction (8%), disliking residence hall life (8%), and personal (8%). Six and three-tenths percent (n = 4) of the nonreturners indicated they did not return because of peer pressure to drink alcohol. Only one (1.6%) of the nonreturning respondents identified the personal use or abuse of alcohol as a reason for leaving or not returning to Ferris State University.

Approximately 15% of both the returners and nonreturners were identified as children of alcoholics (COAs). Students who left Ferris State University for financial reasons were more likely to be identified as children of alcoholics than those who transferred to another college/university or who were academically denied.

Conclusions and Discussion

A number of conclusions were drawn from the findings, based on the statistical analysis of the data using MANOVA, ANOVA, t-tests, and chi-square at the < .10 level of significance.

Hypothesis 1

Attitudes toward alcohol use and alcohol-consumption patterns between returners and nonreturners. Although there was no statistically significant difference in attitudes toward alcohol use between the returning and nonreturning Ferris State University freshman students, there was a difference in alcohol-consumption patterns between the Ferris freshmen who returned and those who did not return.

Discussion. The returning Ferris freshmen as a group consumed greater quantities of alcohol than those freshmen who did not return. Ferris freshmen who returned also drank alcohol more often than the nonreturners and increased the amount they drank each term of their enrollment. Because the underlying assumption of this study was that alcohol consumption has a negative influence on the retention of freshman students, this finding was extraordinary.

The attitudes toward alcohol use did not differ significantly between returning and nonreturning students when reviewing the results of the MANOVA, ANOVA, and t-tests. Returners with an ACT of 16 or above, returning males and returning females, returners who had an argument after drinking, returners who had difficulties with friends after drinking, and returners who earned less than a "C" on a quiz or an examination all disagreed that alcohol might have had a negative effect on their academic performance, even though 30.2% (n = 48) indicated they had an FSUHPA of 2.49 or below. Of the nonreturners, 63.2% (n = 36) had an FSUHPA of 2.49 or below, yet they tended to strongly disagree that alcohol might have had a negative effect on their academic performance.

Approximately 55% (n = 87) of the returners could be described as moderate to heavy drinkers throughout the 1989-90 academic year. However, of the nonreturners, 31.6% (n = 17) could be described as moderate to heavy drinkers during Fall Term 1989-90; 24.4% (n = 11) of the 45 nonreturners could be described as moderate to heavy drinkers during Winter Term 1989-90; and only 5.8% (n = 2) of the 35 nonreturners who were enrolled during Spring Term 1989-90 could be

described as moderate to heavy drinkers. Is it possible that, as the academic year progressed, more and more of the heavy drinkers dropped out? Is it possible that the students who drank more had left? Findings of the Cancelosa et al. study (1991) raised the same questions.

Seventeen percent (n = 11) of the nonreturning respondents reported that they left Ferris because they had been academically denied. If one considers missing class and having a HSGPA of 2.49 or below as characteristics that could predispose one to academic denial, examining those factors according to the influence of alcohol seems appropriate. However, the self-reported attitudes of nonreturners who missed class due to alcohol use were not significant according to thinking alcohol might have had a negative effect on academic performance. In fact, nonreturners with a HSGPA of 2.49 or below tended to strongly disagree that alcohol might have had a negative effect on their academic performance. The only students who agreed that alcohol had negatively affected their academic performance were the 11.1% nonreturners who had been criticized by a family member regarding their use of alcohol. It is quite possible that most students would deny, or refuse to see, a relationship between academic achievement and alcohol use, especially at age 18 or 19. In a study by Lyon, Miner, Sand, and Zellinger (1991), 250 nontraditional Ferris students (age 25 and above) were surveyed; 28% (n = 70) had left college following their first semester as a freshman. When asked whether alcohol had

negatively affected their performance as freshmen, of the 202 who responded to the question, 22% (n = 44) said yes. It appears that, as the years pass, students might reflect more realistically regarding influences they experienced at an earlier time.

Hypothesis 2

Attitudes toward alcohol use (returners). Within the group of returning Ferris freshman students, there was a significant difference in the attitudes toward alcohol use with respect to ACT composite score, gender, and whether any of the returning freshman students had had an argument after drinking, had experienced difficulties with friends after drinking, had missed a class after drinking, had earned less than a "C" on a quiz or an examination, or had earned less than a "C" in a class due to alcohol use.

Discussion. Returning freshmen with a higher ACT composite score (21+) were inclined to think friends age 17 to 20 took "no risk" if they tried 1-2 drinks of an alcoholic beverage and were midway between disagreeing and strongly disagreeing that alcohol had a negative effect on their academic performance. Returning students with an ACT composite score of 16-20 disagreed that alcohol negatively affected their academic performance. It appears that, the higher the ACT composite score, the less likely the returning students were to be concerned about trying alcohol and the less likely they were to think alcohol might have negatively affected their academic performance. It is possible that returning students with a higher ACT can manage more distractions, such as drinking

alcohol, without experiencing a negative effect on their academic performance. Also, returners with higher ACT scores did not drink excessively and therefore were more likely to strongly disagree that alcohol had a negative effect on their academic performance.

Returning female freshmen differed from returning male freshmen as they tended to be less approving of their friends/peers who were 17 to 20 years old taking 1-2 drinks nearly every day, having 4-5 drinks nearly every day, and having 5 or more drinks once or twice each weekend. Returning females differed from returning males in thinking friends/peers age 17 to 20 risked greater harm physically or in other ways if they would take 1-2 drinks of an alcoholic beverage, would take 1-2 drinks nearly every day, or would take 4-5 drinks nearly ever day. However, returning females did not differ significantly from males regarding their attitude that there was less than a moderate risk for friends/peers if they would have 5 or more drinks once or twice each weekend. In addition, returning females disagreed more than returning males that alcohol negatively affected their academic performance. The more conservative attitudes of returning females versus returning males regarding attitudes toward alcohol use are reflective of the lower consumption patterns of females (Barnes & Welte, 1988; Blane & Hewitt, 1977; Engs, 1977; Engs & Hanson, 1985; Glassco, 1975; Hanson, 1977; Hockhauser, 1977). With the exception of sharing the less-than-a-moderate-risk attitude regarding binge drinking on the weekend, females were less approving of alcohol use. The fact that males disagreed less than females that alcohol might have negatively

affected their academic performance suggests that males failed to recognize that academic achievement might be affected by heavy levels of alcohol consumption, as noted by Berkowitz and Perkins (1987).

Returning freshmen who had had an argument after drinking estimated that most to all of their friends drank alcoholic beverages, were close to having no feelings one way or another regarding the use of alcohol, thought they should reduce or stop their use of alcohol more often than those who had not had an argument after drinking, and tended to disagree that their use of alcohol had negatively affected their academic performance. Returning students who had not had an argument after drinking estimated that most of their friends drank alcoholic beverages, were more inclined to look down somewhat on their personal use of alcohol, seldom thought they should reduce or stop their use of alcohol, and tended to strongly disagree that alcohol had a negative effect on their academic performance. According to the returning students, most to all of their peers drank. Returning students who had had an argument after drinking appeared hesitant to make any judgment about the respect alcohol use bestows. Apparently the returners who had argued after drinking thought about reducing their alcohol use but did not recognize that there was a relationship between alcohol use and academic achievement (Demone, 1972). The returning students who had avoided having an argument after drinking might have been disillusioned with alcohol use. Apparently, they

believed they had their alcohol use more under control because they seldom thought they should quit. It is not surprising that they strongly disagreed that alcohol had a negative effect on their academic performance because they would not allow alcohol use to interfere.

Returning freshmen who had experienced difficulties with friends after drinking approved of having 5 or more drinks once or twice each weekend, tended to disagree that their use of alcohol had negatively affected their academic performance, but sometimes thought they should reduce or stop their use of alcohol. Perhaps the returning students who approved of heavy drinking, as defined by Bonkowski (1991), Brown (1984), and the NIAA (1977), had experienced problems with friends following a drinking episode and had had second thoughts regarding the advisability of drinking more than an acceptable level of alcohol (Zero, One, Three, 1989). It is possible that these students were more concerned about upsetting a friendship due to their personal attitudes toward alcohol use than being concerned about their academic achievement.

Returning freshmen who missed a class due to use of alcohol tended to approve more of 17- to 20-year-old peers taking 1-2 drinks nearly every day, taking 4-5 drinks nearly every day, and having 5 or more drinks once or twice each weekend than returning students who had not missed a class. Returning students who are more liberal in their attitudes toward alcohol use than the acceptable level suggested in the Zero, One, Three (1989) pamphlet would be likely to miss class due to alcohol use. Because these returning students

approved of heavy consumption as previously defined in the literature, there might have been a greater chance they would abuse alcohol. Thus, the consequences of missing a class due to oversleeping or experiencing a hangover after drinking could follow.

Returning freshmen who earned less than a "C" on a quiz or an examination due to alcohol use seemed less sure that alcohol had negatively affected their academic performance than were the returning students who had not earned less than a "C" due to alcohol use. It is possible that the students who had earned less than a "C" on a quiz or an examination and/or in a class might have remembered a time or two when their ability to perform academically had been negatively influenced by their use of alcohol.

The attitudes reported by the Ferris State University returning freshmen toward alcohol use appeared to be congruent with the findings of a number of previous studies (Berkowitz & Perkins, 1987; Brown, 1984; Demone, 1972; Engs & Hanson, 1985; Hanson, 1977).

Hypothesis 3

Attitudes toward alcohol use (nonreturners). Within the group of nonreturning Ferris freshman students, there was a significant difference in attitudes toward alcohol use with respect to high school grade point average (HSGPA) and whether any of the nonreturning freshman students had experienced criticism by a family member after drinking.

Discussion. Nonreturning freshmen with a HSGPA of 2.49 or below never thought they should reduce or stop their personal use of

alcohol and tended to strongly disagree that their personal use of alcohol had negatively affected their academic performance. Nonreturning students with a HSGPA of 2.5-2.99 close to seldom thought they should reduce or stop their personal use of alcohol, whereas nonreturning students with a HSGPA of 3.00-3.49 tended to sometimes think they should reduce or stop their personal use of alcohol. It appears that, the lower the HSGPA, the less likely nonreturning students were to think there might be a need to reduce or stop their personal use of alcohol. This is discouraging because the average HSGPA of the Fall Term 1989-90 Ferris freshmen was 2.57 (Swartz, 1991). Apparently, a great number of the nonreturning students would not think they should reduce or stop their personal use of alcohol. In addition, nonreturning students with a HSGPA of 2.49 or below would be more likely to deny there might be a negative relationship between their use of alcohol and their academic performance.

Nonreturning freshmen with a HSGPA of 3.50-4.00 thought there was only a slight to moderate risk for harm if friends/peers had 5 or more drinks once or twice each weekend, whereas nonreturning students with a HSGPA of 3.00-3.49 thought there was great risk for harm. It is difficult to speculate as to the differences in attitudes between these two groups. One possibility could be that nonreturning students with HSGPAs of 3.50-4.00 considered themselves not only smart but also invulnerable to the effects of binge drinking.

Nonreturning freshmen who experienced criticism by a family member due to their use of alcohol agreed that their use of alcohol had negatively affected their academic performance. At the time a family member had expressed concern about their alcohol use, the nonreturning students might have been unable to continue to deny the negative effect on their academic performance. There is a possibility that the nonreturning students could have been using alcohol consumption as an excuse for a number of problems, including poor academic performance, but this is not likely because drinking and getting drunk at college are considered a "rite of passage" (Hirshorn, 1987) by students and possibly even parents.

Hypothesis 4

Alcohol-consumption patterns (returners). Within the group of returning Ferris freshman students, there was a significant difference in alcohol-consumption patterns with respect to FSUHPA, HSGPA, ACT composite score, and gender. There was also a significant difference among the returning freshman students with respect to having a fight after drinking, having an argument after drinking, and missing a class due to alcohol use.

When reviewing the findings regarding the alcohol-consumption patterns of returning Ferris State University freshman students, it is appropriate to keep in mind that several researchers have confirmed that there is a strong drinking culture among the students at Ferris State University (Anderson & McCoy, 1987; Bonkowski & Shible, 1990; Cancelosa et al., 1990; Kowalkoski & Swartz, 1989).

For example, in the Ferris State University Alcohol Use Survey Report prepared by Anderson and McCoy (1987), 89.6% of the on-campus students and 91.5% of the off-campus students reported drinking alcohol. Because, with few exceptions, freshman students at Ferris live on campus, the high percentage of on-campus students who reported they drank alcohol could be indicative of the high number of freshmen who drink. In this study, 98.7% (n = 153) of the returning freshman respondents reported that they had had beer, wine, wine coolers, or liquor to drink within the last year. Therefore, there is no reason to believe that the percentage of Ferris students who drink might have decreased since 1987 because a review of the literature (Gadaleto & Anderson, 1988, cited in Magner, 1988; Engs & Hanson, 1985; Hirschorn, 1987; Rivinus, 1988a) indicated that alcohol use on college campuses across the nation is continuing to increase, despite the establishment of a number of educational and prevention programs.

Discussion. Returning freshmen with an FSUHPA of 2.49 or below drank, on the average, close to 5 beers at any one time, drank in excess of 2 wines or wine coolers at any one time, drank 5 or more drinks in a row 3-5 times during their previous term at Ferris, and indicated they had consumed at least 11-19 drinks per month during Spring Term 1989-90. On the average, returning students with lower FSUHPAs consumed enough to be considered moderate to heavy drinkers (Bonkowski, 1991) and consumed significantly more than did returning students with higher FSUHPAs. In the sample of 159 returning

students, 30.2% (n = 48) of the respondents had an FSUHPA of 2.49 or below and could probably be considered moderate to heavy drinkers.

Returning freshmen with a HSGPA of 2.49 or below drank, on the average, 4-5 beers at any one time, had consumed 5 or more drinks in a row close to 6-9 times during their previous term at Ferris, and had consumed 20-39 drinks per month during both Fall and Winter Terms 1989-90. Apparently, the returning students with a HSGPA of 2.49 or below could be classified as moderate to heavy drinkers (Bonkowski, 1991). In the sample of 159 returning students, 18.9% (n = 30) of the respondents had a HSGPA of 2.49 or below. Because the average HSGPA of Fall Term 1989-90 freshmen at Ferris State University was 2.57 (Swartz, 1991), a considerable number of the returning freshman students had the potential to be classified as moderate to heavy drinkers. Whether the larger number of moderate to heavy drinkers with an FSUHPA of 2.49 or below included the same students who had a HSGPA of 2.49 or below is difficult to know.

Returning freshmen with an ACT composite score of 16-20 had, on the average, close to 5 beers at any one time, whereas returning students with an ACT composite score of 21 or above had, on the average, close to 3-4 beers at any one time. The average ACT score for the Fall Term 1989-90 freshmen at Ferris was 16.0, and the national average for incoming freshmen during that year was 18.6 (Swartz, 1991). It appears that returning students with higher ACT scores drank less than students who had average or slightly above average ACT composite scores. Based on data that indicate students are more likely to persist at Ferris if they have higher ACT scores

(Swartz, 1991), the fact that some students have higher ACT scores could also suggest that those students might be more likely to persist, in part, because they drink less alcohol.

Returning freshman males consumed more beer, felt high more often after drinking alcohol, had 5 or more drinks in a row more often, and had more drinks per month during Fall, Winter, and Spring Terms 1989-90 than did returning freshman females. Returning males consumed, on the average, 1 or less wine or wine cooler at any one time, whereas returning females consumed, on the average, 2 or more wines or wine coolers at any one time. However, both returning males and returning females increased their alcohol-consumption patterns during each succeeding term. The exception to the higher alcohol-consumption patterns of males was found with regard to wines or wine coolers. Females drank more wine or wine coolers than did males. According to Engs and Hanson (1985), 10.7% of students with a 4.0 average drink wine on a monthly, weekly, or daily basis, whereas 7.25% of those with an honor point average below 2.0 drink wine on a weekly basis. If Ferris females drink more wine or wine coolers and have higher FSUHPAs than males, another finding by Engs and Hanson might be applicable to the Ferris freshmen: "Among beer drinkers the lower the grade point average the more the individual was likely to drink beer on a monthly or weekly basis" (p. 71).

Returning freshmen who had a physical fight after drinking consumed close to 5 beers and consumed in excess of 3-4 shots or mixed drinks, on the average, at any one time. They also drank

enough alcoholic beverages to feel pretty high on between half and most of the occasions they drank, drank 5 or more drinks in a row close to 6-9 times during their previous term at Ferris, and drank between 11-19 and 20-39 drinks per month during Fall Term 1989-90, 20-39 drinks per month during Winter Term 1989-90, and in excess of 20-39 drinks during Spring Term 1989-90. It is obvious that returning students who had a physical fight after drinking could be described as moderate to heavy drinkers (Bonkowski, 1991). By comparison, returning students who drank but did not have a physical fight drank lesser quantities of alcohol. Because wine consumption did not appear to be significant, one could speculate that females (who consume proportionately more wine than males) are less likely to get into a physical fight if they drink wine and not the other alcoholic beverages.

Returning freshmen who had an argument after drinking consumed close to 5 beers, in excess of 1-2 wines or wine coolers, and close to 3-4 shots or mixed drinks, on the average, at any one time. They also drank enough alcoholic beverages to feel pretty high on more than half of the occasions they drank alcoholic beverages, drank 5 or more drinks in a row more than 3-5 times during their previous term at Ferris, drank between 11-19 and 20-39 drinks per month during both Fall and Winter Terms 1989-90, and drank close to 20-39 drinks during Spring Term 1989-90. Returning students who had an argument after drinking could be described as heavy drinkers (Bonkowski, 1991). Even though beer appeared to be the drink of choice, apparently the returning students, males and females, who

had an argument after drinking did not necessarily discriminate between the kinds of alcoholic beverages they drank.

Returning students who missed a class as a result of alcohol use consumed close to 5 beers and 3-4 shots or mixed drinks, on the average, at any one time and drank enough alcoholic beverages to feel pretty high on more than half of the occasions they drank alcoholic beverages. They also drank 5 or more drinks in a row 3-5 times during their last term at Ferris, and drank close to 20-39 drinks per month during Fall, Winter, and Spring Terms 1989-90. It appears that students who exceeded the acceptable level of alcohol consumption (Zero, One, Three, 1990) were more likely to miss class as a result of their use of alcohol. Missing class could be one of several reasons a student might be faced with academic denial, especially if course grades are dependent on consistent attendance. Academic denial of students is an integral part of the attrition picture; therefore, reasons leading to academic denial should also be scrutinized.

Hypothesis 5

Alcohol-consumption patterns (nonreturners). Within the group of nonreturning Ferris freshmen, there was a significant difference in alcohol-consumption patterns with respect to ACT composite score and gender. There was also a significant difference among the nonreturning students with respect to earning less than a "C" on a quiz or an examination and missing a class due to alcohol use.

Discussion. Nonreturning freshmen with lower ACT composite scores (6-15) were inclined to drink close to 1-2 wines or wine coolers, on the average, at any one time, whereas nonreturning students with ACT composite scores of 16-20 drank less than 1 wine or wine cooler, on the average, at any one time. If ACT composite scores could be related to the FSUHPAs, this finding would be contrary to the study by Engs and Hanson (1985), in which students with higher honor point averages were described as drinking wine more frequently.

Nonreturning freshman males and nonreturning freshman females differed in their alcohol-consumption patterns. Nonreturning males drank, on the average, 3-4 beers at any one time, whereas nonreturning females drank, on the average, approximately 1-2 beers at any one time. Nonreturning males drank, on the average, less than 1 wine or wine cooler at any one time, whereas nonreturning females drank, on the average, approximately 1-2 wines or wine coolers at any one time. It appears that the findings of this study are congruent with those of other studies, which have indicated that college males drink greater amounts of alcohol than college females and that college males consume more beer than college females (Barnes & Welte, 1988; Claydon, 1987). In this case, it appears that nonreturning males drank twice as much beer as nonreturning females. Apparently, wine or wine coolers were less favored as a drink than beer among Ferris nonreturning male students.

Nonreturning students who missed a class as a result of alcohol use consumed on the average, at any one time, in excess of 3-4

beers, approximately 1-2 wines or wine coolers, approximately 1-2 shots or mixed drinks, and enough alcoholic beverages to feel pretty high on close to half of the occasions they drank alcoholic beverages. Nonreturning students who missed a class as a result of alcohol use also drank 5 or more drinks in a row approximately 3 times during their last term at Ferris, drank slightly in excess of 11-19 drinks per month during Fall Term 1989-90, and drank close to 11-19 drinks per month during Winter Term 1989-90. In comparison, nonreturning students who did not miss a class as a result of their use of alcohol drank only 3-5 drinks per month during both Fall and Winter Terms 1989-90. Nonreturning students who missed a class as a result of alcohol use can be described as moderate to heavy drinkers; nonreturning students who did not miss a class as a result of alcohol use can be described as light drinkers (Bonkowski, 1991).

Nonreturning students who earned less than a "C" on a quiz or an examination consumed on the average, at any one time, close to 5 beers, 3-4 wines or wine coolers, enough alcoholic beverages to feel pretty high on close to most of the occasions they drank alcoholic beverages, 5 or more drinks in a row close to 3-5 times during their last term at Ferris, and close to 11-19 drinks per month during Fall Term 1989-90 and in excess of 11-19 drinks during Winter Term 1989-90. Nonreturning students who earned less than a "C" on a quiz or an examination can be classified as heavy drinkers (Bonkowski, 1991). Although the amount of self-reported consumption did not meet the criteria Hilton (1987) outlined for determining whether one

is a problem drinker, the negative effect of alcohol on academic achievement had created a problem for the nonreturning students who earned less than a "C" on a quiz or an examination. It appears that missing a class might be a less severe consequence of abusive drinking than earning less than a "C" on a quiz or an examination. Nonetheless, both events can be defined as problems for college students. Demone (1972) stated that the adolescent problem drinker is more frequently absent from school and is more likely to receive grades of D or below than is the abstainer. Apparently, students who earned less than a "C" on a quiz or an exam were more abusive drinkers than those who merely missed a class. Nonreturning students who did not earn less than a "C" on a quiz or an exam due to alcohol use drank less. The latter group would not be labeled problem drinkers with regard to academic achievement.

Hypothesis 6

Differences between returning and nonreturning students' perceptions about the drinking behavior of their parents. No statistically significant difference was found between the returning and nonreturning Ferris freshmen in their perceptions about the drinking behavior of their parents.

Discussion. Sixteen percent (n = 26) of the returners and 15% (n = 9) of the nonreturners responded affirmatively to having wished their parents would drink less. In an inference to the Fall Term 1989-90 freshman population of 2,689 (2,228 returners and 461 nonreturners) at Ferris, it is possible that approximately 403 of

the freshmen could be identified as children of alcoholics. Expanding the inference to the total freshman population of 2,838 students (that would include those who took fewer than 12 credits or were age 21 or over), the number of children of alcoholics could be as high as 426. According to Perkins and Berkowitz (1991), collegiate children of alcoholics (parents and grandparents) reported "heavier consumption, more frequent intoxication and a greater incidence of self-concern" than other students (p. 240).

Hypothesis 7

Nonreturning students' perceptions about the drinking behavior of their parents, as compared to reasons influencing the decision either to drop out or not return. A relationship was found between the nonreturning students' perceptions of the drinking behavior of their parents and having financial difficulties that influenced the decision either to drop out or not return to Ferris State University.

Discussion. Ferris freshman students who left because of financial reasons (30%) were likely also to have wished their parents would drink less. Because students who answered "yes" they wished their parents would drink less identified themselves as children of an alcoholic (COA), it appears that financial difficulties might be a problem for this group of students. In the study by Perkins and Berkowitz (1991), collegiate children of a diagnosed alcoholic parent (and grandparent) reported "heavier consumption, more frequent intoxication and a greater incidence of

self-concern" (p. 240). Although the collegiate COAs in the Perkins and Berkowitz study had been successful in controlling their personal drinking in order to minimize the negative consequences of drinking, the fact that financial resources were beyond the Ferris nonreturning students' control might have predisposed these students to having to leave college due to a lack of financial support.

Transferring to another college/university and being academically denied were also compared as reasons freshman students left Ferris with the "wish their parents would drink less" reason. No statistically significant relationship was found. The response choices of experiencing peer pressure to drink alcohol, personally using or abusing alcohol, being academically dissatisfied, disliking residence hall life, and personal reasons each yielded five or fewer responses. As previously noted, due to the low cell count, the chi-square analyses had to be limited to financial reasons, transferring to another college/university, and being academically denied.

Hypothesis 8

The relationship between the peer-pressure-to-drink-alcohol reason students dropped out and other reasons influencing the decision either to drop out or not return. Because only four nonreturning freshman respondents indicated they left Ferris due to peer pressure to drink alcohol, a chi-square analysis could not be performed to test the hypothesis. However, performing the analysis with a larger sample could be useful in a discussion of the relationship of alcohol and freshman student attrition.

Discussion. Results of a recent telephone survey of 1,200 American college students conducted by the National Institute on Drug Abuse (NIDA) (1991) showed that nearly 7% of freshmen drop out because of drinking. U.S. Surgeon General Antonia Novello reported that "Binge drinking--five drinks in a row--is the real villain"; 41 percent of college students consumed five or more drinks in a row in the last two weeks vs. 34 percent of noncollege students" (p. 3A). In this study, 6.3% (n = 4) admitted leaving Ferris because of peer pressure to drink alcohol, and 1.6% (n = 1) admitted leaving Ferris due to the personal use or abuse of alcohol. Even though results of the multivariate analysis may be susceptible to statistical error due to the small sample size (n = 63/141) in this study, the percentage of alcohol-related reasons (6.3% + 1.6% = 7.9%) for dropping out of Ferris State University was amazingly similar to the large (n = 1,200) NIDA sample. It is hoped that the 7% to 8% who might have withdrawn in the past for alcohol-related reasons can be reduced in the future. When the alcohol-related reasons are considered along with the traditional reasons for dropping out, retention efforts should be enhanced as appropriate policies and comprehensive programs are implemented.

Hypothesis 9

The relationship between the personal-use-or-abuse-of-alcohol reason students dropped out and other reasons influencing the decision either to drop out or not return. Because only one nonreturning freshman respondent indicated the reason for leaving

Ferris was the personal use or abuse of alcohol, a chi-square analysis could not be performed to test the hypothesis. However, performing the analysis with a larger sample would be useful in a discussion of the relationship of alcohol and freshman student attrition.

Discussion. In the study by Lyon et al. (1991), of the 250 students surveyed, 11% (n = 8) of the 70 respondents reported they had interrupted their schooling during their freshman year as a direct result of the use of alcohol. When asked how many drinks, on the average, per month they had, 63 of the 70 students who withdrew responded as follows: 9.5% (n = 6) did not drink; 26.9% (n = 17) had 10 or fewer drinks, 22.2% (n = 14) indicated they had 11-19 drinks, (14.3% (n = 9) said 20-39 drinks, 12.7% (n = 8) indicated 40-55 drinks, and 14.3% (n = 9) said they drank in excess of 56 drinks per month. Almost half (49.2%) of the dropouts could be described as moderate drinkers, and 14.3% could be described as heavy drinkers, for a total of 63.5%. In comparison, only 31% of the 1989-90 nonreturning freshmen indicated they were moderate to heavy drinkers. According to Smart and Jarvis (1981), "under-reporting rather than over-reporting seemed to be more common" in drug-use surveys (p. 83). In addition, Pernanen (1974) found that underreporting of alcohol consumption, especially among heavy drinkers, was more of a problem than overreporting. It is hoped that the inference drawn by surveying the nontraditional students will prompt researchers to use more innovative study designs when undertaking future research regarding alcohol consumption and attrition.

Implications for Further Study

Continuing to learn more about the students who transfer from one institution to another college or university or who drop out of college altogether is germane to enhancing retention. Historically, attrition has been viewed as multifactorial. Attrition needs to be continually reexamined in conjunction with the traditionally accepted characteristics common to dropouts, as well as with any reasons for dropping out that might be related to alcohol use.

Further research should be conducted with culturally diverse groups of nonreturners to allow a more precise investigation of the relationship of alcohol consumption to freshman attrition, regardless of the fact that, as a group, returning students in this study consumed more alcohol, more frequently than nonreturners. Approaches to minimize underreporting of alcohol-consumption patterns of nonreturning students are to be encouraged. Using a mail survey might be the best way to protect the anonymity of the respondents; however, obtaining a high response rate will continue to be a challenge.

Should the relationship between alcohol consumption, missing class, and earning less than a "C" on a quiz or an examination be studied to determine whether those factors might affect attrition through the academic-denial process? Even though the statistical analysis for this study did not indicate that students who missed class earned a low course grade, is it possible that missing class periodically due to alcohol use could affect grades to the point that academic dismissal could be the result?

Recommendations

The typical Ferris State University Fall Term 1989-90 freshman had an average HSGPA of 2.47 and an average ACT composite score of 16.0 (Swartz, 1991) and therefore was not strong academically. Emphasis needs to be placed on the development of programs and policies that enhance the quality of students' academic and social experiences at Ferris. The role of alcohol as a deterrent to students' academic achievement needs to be addressed.

The facts that financial difficulties continue to plague students and that students appear repeatedly to be frustrated with residence hall life need to be acknowledged and acted upon by policy makers at Ferris State University. In the "Statement on College Alcohol and Drug Abuse" (1986), the American College Health Association urged a multidimensional approach to coping with alcohol (and drug) abuse on college campuses. The philosophy underlying the association's statement is that responsibility for action must involve the entire campus community--students, staff, and faculty--working at both the individual and institutional levels.

Both returning and nonreturning students with a HSGPA of 2.49 and an ACT composite score of 16 or below are likely to be moderate to heavy drinkers when they initially come to Ferris State University. If the institution continues recruiting under the auspices of an "open door" philosophy, students with the previously mentioned characteristics who are recruited might be more likely than others to experience academic difficulties. In the future,

allocation of resources and academic support programming should be geared toward the academic development of the moderate to heavy underage drinker. As in many special approaches used for a target group, it is likely that the benefits would permeate the entire campus community.

Reflections

The problems associated with surveying nonreturning students presented many challenges to the researcher. Although the response rate was less than desired, it was respectable at 47% because most mail surveys have about a 30% return. One concern of the researcher's was the length of time between the initial mailing to the nonreturners and the final receipt of their completed questionnaires. Therefore, an analysis was performed that focused on the consistency of responses between the early respondents and the late respondents. The analysis confirmed that there was no statistically significant difference in the data obtained between the initial respondents and the final respondents, according to time of return of the questionnaires.

It is interesting that the returners consisted only of African American and Caucasian students, whereas the nonreturners, in spite of a response rate of only 47%, included a representation of diverse cultural groups. The higher ratio of females to males in the nonreturning group also came as a surprise. One might speculate that, with respect to private and/or confidential information, females are more apt than males to respond.

Alcohol consumption by 17 to 20 year olds is illegal in Michigan, yet not only do Ferris students drink, but anywhere from 5.8% (Spring Term 1989-90) to 31.6% (Fall Term 1989-90) of the nonreturners could be described as moderate to heavy drinkers, and approximately 55% of the returners could be described as moderate to heavy drinkers. This means that 55% of the students who continue to their sophomore year at Ferris consume, on the average, 20-39 alcoholic drinks per month, which equals 5-10 drinks per week. On March 5, 1991, the U.S. Surgeon General, Dr. Antonia Novello, addressed the issue of drinking by college students on "Good Morning America." She stated that there are six million underage students in college and that 41% of them drink five or more alcoholic drinks one right after another. Dr. Novello believes this type of binge drinking has a serious long-term effect on the students. She indicated that students spend more on booze than on books and urged parents to pick colleges carefully. It appears that even recruitment of college students, which could be considered the initial step in retention, might be influenced by students' and parents' attitudes toward alcohol use.

The importance of a study of this kind underscores the kind of concern college and university administrators, faculty, and staff should have for alcohol use and abuse among their students. Perhaps the periodic review of alcohol-abuse prevention programs continues to be a necessary step for many institutions of higher education.

APPENDICES

APPENDIX A

LIST OF RANDOM NUMBERS

JULIE 141

17	391	251	402	440	352	434	422	323	441	377	445	56	456	113	64	427	257	86	60
450	364	257	113	459	152	146	377	434	30	402	89	257	437	184	17	302	117	97	
280	189	8	23	325	71	264	330	382	83	218	18	172	160	78	211	121	47	26	349
82	14	457	306	333	258	318	209	140	448	414	459	209	345	415	297	330	142	164	
166	252	416	401	121	71	262	388	140	196	108	115	425	198	295	408	447	216	354	
170	2	42	216	248	177	256	202	152	72	191	284	275	86	27	195	88	86	244	11
452	178	368	258	264	147	10	288	29	355	415	303	178	176	347	282	223	216	415	
292	10	376	75	102	153	399	381	269	437	332	172	74	174	11	170	446	389	457	
343	386	216	268	111	85	56	16	450	389	289	131	237	354	91	164	281	261	18	161
344	165	79	78	353															

NUMBER OF VALUES = 180

JULIE 141

2	1	8	1	10	2	11	2	14	1	16	1	17	2	18	2
23	1	26	1	27	1	29	1	30	1	42	1	47	1	56	2
60	1	64	1	71	2	72	1	74	1	75	1	78	2	79	1
82	1	83	1	85	1	86	3	88	1	89	1	91	1	97	1
102	1	108	1	111	1	113	2	115	1	117	1	121	2	131	1
140	2	142	1	146	1	147	1	152	2	153	1	160	1	161	1
164	2	165	1	166	1	170	2	172	2	174	1	176	1	177	1
178	2	184	1	189	1	191	1	195	1	196	1	198	1	202	1
209	2	211	1	216	4	218	1	223	1	237	1	244	1	248	1
251	1	252	1	256	1	257	3	258	2	261	1	262	1	264	2
268	1	269	1	275	1	280	1	281	1	282	1	284	1	288	1
289	1	292	1	295	1	297	1	302	1	303	1	306	1	318	1
323	1	325	1	330	2	332	1	333	1	343	1	344	1	345	1
347	1	349	1	352	1	353	1	354	2	355	1	364	1	368	1
376	1	377	2	381	1	382	1	386	1	388	1	389	2	391	1
399	1	401	1	402	2	408	1	414	1	415	3	416	1	422	1
425	1	427	1	434	2	437	2	440	1	441	1	445	1	446	1
447	1	448	1	450	2	452	1	456	1	457	2	459	2		

UNIQUE RANDOM NUMBERS = 143

APPENDIX B

TABLE OF RANDOM NUMBERS

Eighth Thousand

	1–4	5–8	9–12	13–16	17–20	21–24	25–28	29–32	33–36	37–40
1	37 52	49 55	40 65	27 61	08 59	91 23	26 18	95 04	98 20	99 52
2	48 16	69 65	69 02	08 83	08 83	68 37	00 96	13 59	12 16	17 93
3	50 43	06 59	56 53	30 61	40 21	29 06	49 60	90 38	21 43	19 25
4	89 31	62 79	45 73	71 72	77 11	28 80	72 35	75 77	24 72	98 43
5	63 29	90 61	86 39	07 38	38 85	77 06	10 23	30 84	07 95	30 76
6	71 68	93 94	08 72	36 27	85 89	40 59	83 37	93 85	73 97	84 05
7	05 06	96 63	58 24	05 95	56 64	77 53	85 64	15 95	93 91	59 03
8	03 35	58 95	46 44	25 70	31 66	01 05	44 44	62 91	36 31	45 04
9	13 04	57 67	74 77	53 35	93 51	82 83	27 38	63 16	04 48	75 23
10	49 96	43 94	56 04	02 79	55 78	01 44	75 26	85 54	01 81	32 82
11	24 36	24 08	44 77	57 07	54 41	04 56	09 44	30 58	25 45	37 56
12	55 19	97 20	01 11	47 45	79 79	06 72	12 81	86 97	54 09	06 53
13	02 28	54 60	28 35	32 94	36 74	51 63	96 90	04 13	30 43	10 14
14	90 50	13 78	22 20	37 56	97 95	49 95	91 15	52 73	12 93	78 94
15	33 71	32 43	29 58	47 38	39 96	67 51	64 47	49 91	64 58	93 07
16	70 58	28 49	54 32	97 70	27 81	64 69	71 52	02 56	61 37	04 58
17	09 68	96 10	57 78	85 00	89 81	98 30	19 40	76 28	62 99	99 83
18	19 36	60 85	35 04	12 87	83 88	66 54	32 00	30 20	05 30	42 63
19	04 75	44 49	64 26	51 46	80 50	53 91	00 55	67 36	68 66	08 29
20	79 83	32 39	46 77	56 83	42 21	60 03	14 47	07 01	66 85	49 22
21	80 99	42 43	08 58	54 41	98 03	54 39	34 42	97 47	38 35	59 40
22	48 83	64 99	86 94	48 78	79 20	62 23	56 45	92 65	56 36	83 02
23	28 45	35 85	22 20	13 01	73 96	70 05	84 50	68 59	96 58	16 63
24	52 07	63 15	82 30	66 23	14 26	66 61	17 80	41 97	40 27	24 80
25	39 14	52 18	35 87	48 55	48 81	03 11	26 99	03 80	08 86	50 42

Source: Reproduced from M. G. Kendall and B. B. Smith, *Tables of Random Sampling Numbers*, Tracts for Computers XXIV (London: Cambridge University Press, 1939), pp. 2–5. By permission of the Biometrika Trustees and the Department of Statistics, University College, London.

APPENDIX C

STUDENT INFORMATION FORM

COOPERATIVE INSTITUTIONAL RESEARCH PROGRAM (CIRP)

PLEASE PRINT (one letter or number per box)

NAME: FIRST M I LAST

When were you born? Month (01–12) Day (01–31) Year

ADDRESS:

CITY: STATE: ZIP: PHONE: – –

1988 STUDENT INFORMATION FORM

DIRECTIONS

Your responses will be read by an optical mark reader. Your careful observance of these few simple rules will be most appreciated.

- Use only black lead pencil (No. 2 is ideal).
- Make heavy black marks that fill the circle.
- Erase cleanly any answer you wish to change.
- Make no stray marks of any kind.

EXAMPLE:

Will marks made with ballpoint or felt-tip marker be properly read? Yes… ○ No… ●

PLEASE USE #2 PENCIL

FORM NO: 66428

PLEASE PROVIDE YOUR SOCIAL SECURITY NO.

Mark here if directed by your test center

1. Your sex: Male… ○ Female… ○

2. How old will you be on December 31 of this year? (Mark one)

16 or younger… ○ 21–24… ○
17… ○ 25–29… ○
18… ○ 30–39… ○
19… ○ 40–54… ○
20… ○ 55 or older… ○

3. Are you a twin? (Mark one)

No… ○ Yes, identical… ○
Yes, fraternal… ○

4. In what year did you graduate from high school? (Mark one)

1988… ○ Did not graduate but passed G.E.D. test… ○
1987… ○
1986… ○ Never completed high school… ○
1985 or earlier… ○

5. Are you enrolled (or enrolling) as a: (Mark one) Full-time student?… ○ Part-time student?… ○

6. How many miles is this college from your permanent home? (Mark one)

5 or less ○ 11–50 ○ 101–500 ○
6–10 ○ 51–100 ○ More than 500 ○

(NOTE: Please check that your pencil markings are completely darkening the circles. DO NOT USE PEN OR MAKE √'s OR x's. Thank you.)

7. What were your scores on the SAT and/or ACT?

SAT VERBAL…
MATH…
ACT Composite…

8. How many of the following did you take in high school? (Mark one in each row)

	None	1	2 or more
Honors courses…	○	○	○
A.P. (Advanced Placement) courses…	○	○	○

9. What was your average grade in high school? (Mark one)

A or A+ ○ B ○ C ○
A– ○ B– ○ D ○
B+ ○ C+ ○

10. During high school (grades 9–12) how many years did you study each of the following subjects? (Mark one for each item)

	None	1	2	3	4 or more
English…	○	○	○	○	○
Mathematics…	○	○	○	○	○
Foreign Language…	○	○	○	○	○
Physical Science…	○	○	○	○	○
Biological Science…	○	○	○	○	○
History/Am. Govt.…	○	○	○	○	○
Computer Science…	○	○	○	○	○
Art and/or Music…	○	○	○	○	○

11. Prior to this term, have you ever taken courses for credit at this institution?

Yes… ○ No… ○

12. Since leaving high school, have you ever taken courses at any other institution? (Mark all that apply in each column)

	For Credit	Not for Credit
No…	○	○
Yes, at a junior or comty. college…	○	○
Yes, at a four-year college or university…	○	○
Yes, at some other postsecondary school (For ex., technical, vocational, business)…	○	○

13. What is the highest academic degree that you intend to obtain?

(Mark one in each column)	Planning	Preferring
None…	○	○
Vocational certificate…	○	○
Associate (A.A. or equivalent)…	○	○
Bachelor's degree (BA, BS, etc.)…	○	○
Master's degree (MA, MS, etc.)…	○	○
Ph.D. or Ed.D. …	○	○
M.D., D.O., D.D.S., or D.V.M.…	○	○
LL.B., or J.D. (Law)…	○	○
B.D. or M.DIV. (Divinity)…	○	○
Other…	○	○

14. Where do you plan to live during the fall term? If you had a choice, where would you prefer to live?

(Mark one in each column)	Plan To Live	Prefer To Live
With parents or relatives…	○	○
Other private home, apt. or rm…	○	○
College dormitory…	○	○
Fraternity or sorority house…	○	○
Other campus student housing…	○	○
Other…	○	○

15. Is this college your: (Mark one)

First choice?… ○ Less than third choice?… ○
Second choice?… ○
Third choice?… ○

16. To how many colleges other than this one did you apply for admission this year?

No other 1 ○ 3 ○ 5 … ○
2 ○ 4 ○ 6 or more… ○

Note: If you applied to no other college, skip to item 18.

17. How many other acceptances did you receive this year? (Mark one)

None ○ 1 ○ 3 ○ 5 … ○
2 ○ 4 ○ 6 or more… ○

18. Is English your native language?

Yes ○ No ○

19. How much of your first year's educational expenses (room, board, tuition, and fees) do you expect to cover from each of the sources listed below? (Mark one answer for each possible source)

	None	$1-$499	$500-$999	$1,000-$1,999	$2,000-$2,999	$3,000-$3,999	$4,000-$4,999	Over $5,000
a. My Own or Family Resources								
Parents, other relatives or friends	○	○	○	○	○	○	○	○
Spouse	○	○	○	○	○	○	○	○
Savings from summer work	○	○	○	○	○	○	○	○
Other savings	○	○	○	○	○	○	○	○
Part-time on campus job	○	○	○	○	○	○	○	○
Other part-time job while in college	○	○	○	○	○	○	○	○
Full-time job while in college	○	○	○	○	○	○	○	○
b. Aid Which Need Not Be Repaid								
Pell Grant	○	○	○	○	○	○	○	○
Supplemental Educational Opportunity Grant	○	○	○	○	○	○	○	○
State Scholarship or Grant	○	○	○	○	○	○	○	○
College Work-Study Grant	○	○	○	○	○	○	○	○
College Grant/Scholarship (other than above)	○	○	○	○	○	○	○	○
Other private grant	○	○	○	○	○	○	○	○
Other Government Aid (ROTC, BIA, GI/military benefits, etc.)	○	○	○	○	○	○	○	○
c. Aid Which Must Be Repaid								
Federal Guaranteed Student Loan	○	○	○	○	○	○	○	○
National Direct Student Loan	○	○	○	○	○	○	○	○
Other College Loan	○	○	○	○	○	○	○	○
Other Loan	○	○	○	○	○	○	○	○
d. Other Than Above	○	○	○	○	○	○	○	○

20. Are you a U.S. citizen? Yes ○ No ○
Permanent Resident (Green Card) ○

21. Are you: (Mark all that apply)
- White/Caucasian ○
- Black/Negro/Afro-American ○
- American Indian ○
- Asian-American/Oriental ○
- Mexican-American/Chicano ○
- Puerto Rican-American ○
- Other ○

22. How would you describe the racial composition of the high school you last attended and the neighborhood where you grew up?

	Completely non-White	Mostly non-White	Mostly but not completely White	Completely White
High school I last attended	○	○	○	○
Neighborhood where I grew up	○	○	○	○

23a. Are your parents: (Mark one)
- Both alive and living with each other? ○
- Both alive, divorced or separated? ○
- One or both deceased? ○

23b. How many brothers and sisters now living do you have?

	None	1	2	3 or more
Number of older brothers	○	○	○	○
Number of older sisters	○	○	○	○
Number of younger brothers	○	○	○	○
Number of younger sisters	○	○	○	○

24. For the activities below, indicate which ones you did during the past year. If you engaged in an activity frequently, mark (F). If you engaged in an activity one or more times, but not frequently, mark (O) (occasionally). Mark (N) (Not at all) if you have not performed the activity during the past year.

(Mark one for each item)	Frequently (F)	Occasionally (O)	Not at all (N)
Used a personal computer	F	O	N
Attended a religious service	F	O	N
Was bored in class	F	O	N
Participated in organized demonstrations	F	O	N
Won a varsity letter for sports	F	O	N
Failed to complete a homework assignment on time	F	O	N
Tutored another student	F	O	N
Discussed religion	F	O	N
Did extra (unassigned) work/ reading for a course	F	O	N
Copied homework from another student	F	O	N
Studied with other students	F	O	N
Was a guest in a teacher's home	F	O	N
Smoked cigarettes	F	O	N
Discussed sex	F	O	N
Cheated on a test in school	F	O	N
Drank beer	F	O	N
Drank wine or liquor	F	O	N
Discussed politics	F	O	N
Stayed up all night	F	O	N
Spoke a language other than English at home	F	O	N
Felt overwhelmed by all I had to do	F	O	N
Felt depressed	F	O	N
Discussed sports	F	O	N
Worked in a local, state, or national political campaign	F	O	N

25. Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself.

(Mark one in each row)	Highest 10%	Above Average	Average	Below Average	Lowest 10%
Academic ability	○	○	○	○	○
Artistic ability	○	○	○	○	○
Competitiveness	○	○	○	○	○
Drive to achieve	○	○	○	○	○
Emotional health	○	○	○	○	○
Ability to learn a foreign language	○	○	○	○	○
Leadership ability	○	○	○	○	○
Mathematical ability	○	○	○	○	○
Physical health	○	○	○	○	○
Popularity	○	○	○	○	○
Popularity with the opposite sex	○	○	○	○	○
Public speaking ability	○	○	○	○	○
Self-confidence (intellectual)	○	○	○	○	○
Self-confidence (social)	○	○	○	○	○
Writing ability	○	○	○	○	○

26. In deciding to go to college, how important to you was each of the following reasons?

(Mark one answer for each possible reason)	Very Important (V)	Somewhat Important (S)	Not Important (N)
To be able to get a better job	V	S	N
To gain a general education and appreciation of ideas	V	S	N
To improve my reading and study skills	V	S	N
There was nothing better to do	V	S	N
To make me a more cultured person	V	S	N
To be able to make more money	V	S	N
To learn more about things that interest me	V	S	N
To prepare myself for graduate or professional school	V	S	N
My parents wanted me to go	V	S	N
I could not find a job	V	S	N
Wanted to get away from home	V	S	N

27. Do you have any concern about your ability to finance your college education? (Mark one)
- None (I am confident that I will have sufficient funds) ○
- Some concern (but I will probably have enough funds) ○
- Major concern (not sure I will have enough funds to complete college) ○

28. How would you characterize your political views? (Mark one)
- Far left ○
- Liberal ○
- Middle-of-the-road ○
- Conservative ○
- Far right ○

29. What is your best estimate of your parents' total income last year? Consider income from all sources before taxes. (Mark one)
- ○ Less than $6,000
- ○ $6,000–9,999
- ○ $10,000–14,999
- ○ $15,000–19,999
- ○ $20,000–24,999
- ○ $25,000–29,999
- ○ $30,000–34,999
- ○ $35,000–39,999
- ○ $40,000–49,999
- ○ $50,000–59,999
- ○ $60,000–74,999
- ○ $75,000–99,999
- ○ $100,000–149,999
- ○ $150,000 or more

30. What is the highest level of formal education obtained by your parents?

(Mark one in each column)	Father	Mother
Grammar school or less	○	○
Some high school	○	○
High school graduate	○	○
Postsecondary school other than college	○	○
Some college	○	○
College degree	○	○
Some graduate school	○	○
Graduate degree	○	○

31. Mark only three responses, one in each column.

(M) Your mother's occupation
(F) Your father's occupation
(Y) Your probable career occupation

NOTE: If your father or mother is deceased, please indicate his or her last occupation.

	Y	F	M
Accountant or actuary	Y	F	M
Actor or entertainer	Y	F	M
Architect or urban planner	Y	F	M
Artist	Y	F	M
Business (clerical)	Y	F	M
Business executive (management, administrator)	Y	F	M
Business owner or proprietor	Y	F	M
Business salesperson or buyer	Y	F	M
Clergy (minister, priest)	Y	F	M
Clergy (other religious)	Y	F	M
Clinical psychologist	Y	F	M
College teacher	Y	F	M
Computer programmer or analyst	Y	F	M
Conservationist or forester	Y	F	M
Dentist (including orthodontist)	Y	F	M
Dietician or home economist	Y	F	M
Engineer	Y	F	M
Farmer or rancher	Y	F	M
Foreign service worker (including diplomat)	Y	F	M
Homemaker (full-time)	Y	F	M
Interior decorator (including designer)	Y	F	M
Interpreter (translator)	Y	F	M
Lab technician or hygienist	Y	F	M
Law enforcement officer	Y	F	M
Lawyer (attorney) or judge	Y	F	M
Military service (career)	Y	F	M
Musician (performer, composer)	Y	F	M
Nurse	Y	F	M
Optometrist	Y	F	M
Pharmacist	Y	F	M
Physician	Y	F	M
School counselor	Y	F	M
School principal or superintendent	Y	F	M
Scientific researcher	Y	F	M
Social, welfare or recreation worker	Y	F	M
Statistician	Y	F	M
Therapist (physical, occupational, speech)	Y	F	M
Teacher or administrator (elementary)	Y	F	M
Teacher or administrator (secondary)	Y	F	M
Veterinarian	Y	F	M
Writer or journalist	Y	F	M
Skilled trades	Y	F	M
Other	Y		
Undecided	Y		
Laborer (unskilled)		F	M
Semi-skilled worker		F	M
Other occupation		F	M
Unemployed		F	M

32. Mark one in each row:

(1) Disagree Strongly
(2) Disagree Somewhat
(3) Agree Somewhat
(4) Agree Strongly

The Federal government is not doing enough to protect the consumer from faulty goods and services	4 3 2 1
The Federal government is not doing enough to promote disarmament	4 3 2 1
The Federal government is not doing enough to control environmental pollution	4 3 2 1
The Federal government should raise taxes to help reduce the deficit	4 3 2 1
There is too much concern in the courts for the right of criminals	4 3 2 1
Federal military spending should be increased	4 3 2 1
Nuclear disarmament is attainable	4 3 2 1
Abortion should be legalized	4 3 2 1
The death penalty should be abolished	4 3 2 1
If two people really like each other, it's all right for them to have sex even if they've known each other for only a very short time	4 3 2 1
The activities of married women are best confined to the home and family	4 3 2 1
A couple should live together for some time before deciding to get married	4 3 2 1
Students might appreciate the value of college more if they had to pay a greater share of the costs	4 3 2 1
Marijuana should be legalized	4 3 2 1
Busing is O.K. if it helps to achieve racial balance in the schools	4 3 2 1
It is important to have laws prohibiting homosexual relationships	4 3 2 1
Colleges should not invest funds in companies that do business with South Africa	4 3 2 1
The chief benefit of a college education is that it increases one's earning power	4 3 2 1
Employers should be allowed to require drug testing of employees or job applicants	4 3 2 1
The best way to control AIDS is through widespread, mandatory testing	4 3 2 1
Just because a man thinks that a woman has "led him on" does not entitle him to have sex with her	4 3 2 1
Only volunteers should serve in the armed forces	4 3 2 1

33. During your last year in high school, how much time did you spend during a typical week doing the following activities?

Hours per week:	None	Less than 1	1-2	3-5	6-10	11-15	16-20	Over 20
Studying/homework	O	O	O	O	O	O	O	O
Socializing with friends	O	O	O	O	O	O	O	O
Talking with teachers outside of class	O	O	O	O	O	O	O	O
Exercising/sports	O	O	O	O	O	O	O	O
Partying	O	O	O	O	O	O	O	O
Working (for pay)	O	O	O	O	O	O	O	O
Volunteer work	O	O	O	O	O	O	O	O
Student clubs/groups	O	O	O	O	O	O	O	O
Watching TV	O	O	O	O	O	O	O	O
Hobbies	O	O	O	O	O	O	O	O

34. Current religious preference: (Mark one in each column)

	Your	Father's	Mother's
Baptist	Y	F	M
Buddhist	Y	F	M
Congregational	Y	F	M
Eastern Orthodox	Y	F	M
Episcopal	Y	F	M
Islamic	Y	F	M
Jewish	Y	F	M
LDS (Mormon)	Y	F	M
Lutheran	Y	F	M
Methodist	Y	F	M
Presbyterian	Y	F	M
Quaker	Y	F	M
Roman Catholic	Y	F	M
Seventh Day Adventist	Y	F	M
Other Protestant	Y	F	M
Other Religion	Y	F	M
None	Y	F	M

35. Do you consider yourself a born-again Christian?

Yes O No O

36. Below are some reasons that might have influenced your decision to attend this particular college. How important was each reason in your decision to come here? (Mark one answer for each possible reason)

	Very Important	Somewhat Important	Not Important
My relatives wanted me to come here	V	S	N
My teacher advised me	V	S	N
This college has a very good academic reputation	V	S	N
This college has a good reputation for its social activities	V	S	N
I was offered financial assistance	V	S	N
This college offers special educational programs	V	S	N
This college has low tuition	V	S	N
My guidance counselor advised me	V	S	N
I wanted to live near home	V	S	N
A friend suggested attending	V	S	N
A college rep. recruited me	V	S	N
The athletic dept. recruited me	V	S	N
This college's graduates get good jobs	V	S	N
Not offered financial aid by first choice college	V	S	N

37. Do you have a disability? (Mark all that apply)

None	O	Learning disability	O
Hearing	O	Health-related	O
Speech	O	Partially sighted or blind	O
Orthopedic	O	Other	O

38. Below is a list of different undergraduate major fields grouped into general categories. Mark only one circle to indicate your probable field of study.

ARTS AND HUMANITIES
- Art, fine and applied
- English (language and literature)
- History
- Journalism
- Language and Literature (except English)
- Music
- Philosophy
- Speech
- Theater or Drama
- Theology or Religion
- Other Arts and Humanities

BIOLOGICAL SCIENCE
- Biology (general)
- Biochemistry or Biophysics
- Botany
- Marine (Life) Science
- Microbiology or Bacteriology
- Zoology
- Other Biological Science

BUSINESS
- Accounting
- Business Admin. (general)
- Finance
- Marketing
- Management
- Secretarial Studies
- Other Business

EDUCATION
- Business Education
- Elementary Education
- Music or Art Education
- Physical Education or Recreation
- Secondary Education
- Special Education
- Other Education

ENGINEERING
- Aeronautical or Astronautical Eng.
- Civil Engineering
- Chemical Engineering
- Electrical or Electronic Engineering
- Industrial Engineering
- Mechanical Engineering
- Other Engineering

PHYSICAL SCIENCE
- Astronomy
- Atmospheric Science (incl. Meteorology)
- Chemistry
- Earth Science
- Marine Science (incl. Oceanography)
- Mathematics
- Physics
- Statistics
- Other Physical Science

PROFESSIONAL
- Architecture or Urban Planning
- Home Economics
- Health Technology (medical, dental, laboratory)
- Library or Archival Science
- Nursing
- Pharmacy
- Predental, Premedicine, Preveterinary
- Therapy (occupational, physical, speech)
- Other Professional

SOCIAL SCIENCE
- Anthropology
- Economics
- Ethnic Studies
- Geography
- Political Science (gov't, international relations)
- Psychology
- Social Work
- Sociology
- Women's Studies
- Other Social Science

TECHNICAL
- Building Trades
- Data Processing or Computer Programming
- Drafting or Design
- Electronics
- Mechanics
- Other Technical

OTHER FIELDS
- Agriculture
- Communications (radio, TV, etc.)
- Computer Science
- Forestry
- Law Enforcement
- Military Science
- Other Field
- Undecided

39. Indicate the importance to you personally of each of the following: (Mark one for each item)

(E) Essential (V) Very Important (S) Somewhat Important (N) Not Important

- Becoming accomplished in one of the performing arts (acting, dancing, etc.)
- Becoming an authority in my field
- Obtaining recognition from my colleagues for contributions to my special field
- Influencing the political structure
- Influencing social values
- Raising a family
- Becoming an expert on finance and commerce
- Having administrative responsibility for the work of others
- Being very well off financially
- Helping others who are in difficulty
- Participating in an organization like the Peace Corps or Vista
- Making a theoretical contribution to science
- Writing original works (poems, novels, short stories, etc.)
- Creating artistic work (painting, sculpture, decorating, etc.)
- Keeping up to date with political affairs
- Being successful in a business of my own
- Developing a meaningful philosophy of life
- Participating in a community action program
- Helping to promote racial understanding
- Getting married

40. What is your best guess as to the chances that you will: (Mark one for each item)

(V) Very Good Chance (S) Some Chance (L) Very Little Chance (N) No Chance

- Change major field?
- Change career choice?
- Fail one or more courses?
- Graduate with honors?
- Be elected to a student office?
- Get a job to help pay for college expenses?
- Work full time while attending college?
- Join a social fraternity, sorority, or club?
- Play varsity/intercollegiate athletics?
- Be elected to an academic honor society?
- Make at least a "B" average?
- Need extra time to complete your degree requirements?
- Get tutoring help in specific courses?
- Have to work at an outside job during college?
- Seek vocational counseling?
- Seek individual counseling on personal problems?
- Get a bachelor's degree (B.A., B.S., etc.)?
- Participate in student protests or demonstrations?
- Drop out of this college temporarily (exclude transferring)?
- Drop out permanently (exclude transferring)?
- Transfer to another college before graduating?
- Be satisfied with your college?
- Find a job after college in the field for which you were trained?
- Get married while in college? (skip if married)
- Get married within a year after college? (skip if married)

The Higher Education Research Institute at UCLA actively encourages the colleges that participate in this survey to conduct local studies of their students. If these studies involve collecting follow-up data, it is necessary for the institution to know the students' ID numbers so that follow-up data can be linked with the data from this survey. If your college asks for a tape copy of the data and signs an agreement to use it only for research purposes, do we have your permission to include your ID number in such a tape?

Yes ○ No ○

The remaining circles are provided for items specifically designed by your college, rather than by the Higher Education Research Institute. If your college has chosen to use the circles, observe carefully the supplemental directions given you.

41. A B C D E
42. A B C D E
43. A B C D E
44. A B C D E
45. A B C D E
46. A B C D E
47. A B C D E
48. A B C D E
49. A B C D E
50. A B C D E

THANK YOU!

APPENDIX D

FERRIS STATE UNIVERSITY ALCOHOL AND OTHER SUBSTANCES--USE SURVEY, ACADEMIC YEAR 1988-89

FERRIS STATE UNIVERSITY
ALCOHOL AND OTHER SUBSTANCES - USE SURVEY
ACADEMIC YEAR 1988-89

SURVEY DIRECTIONS: We ask that you complete this anonymous survey as part of a study being conducted by the Ferris State University - Personal Counseling Center's Substance Abuse Educator/Counselor. One major goal of this research is to determine what behaviors students already have when they enter Ferris. This study is being designed to help improve the quality of college education and thus may benefit future generations of college students. We may contact you later for a follow-up study. The only reference we will use for the follow-up contact is that you participated in the Summer Orientation Registration Program at Ferris State University during the summer of 1988. Your responses will be used only for research and will be kept in strictest confidence.

We want to emphasize that YOUR PARTICIPATION IS ENTIRELY VOLUNTARY. However, we hope that you will complete the five questions. If you have any questions about this survey, please ask.

You may use pen or pencil to circle THE ONE RESPONSE THAT BEST DESCRIBES YOUR ANSWER. Please fold the completed answer sheet in half and place it in the box as instructed by the parson reading this instruction sheet.

TODAY'S DATE IS _____

1. I am: a. a male b. a female

2. I am: a. 17 years old or younger b. 18 to 20 years old
b. 21 to 23 years old d. 24 to 28 years old
e. 29 years old or older

3. During the past year I have used alcohol:

a. daily b. weekly c. monthly

d. seldom(less than 3 times a year) e. not at all

4. During the past year I have used marijuana:

a. daily b. weekly c. monthly

b. seldom(less than 3 times a year) e. not at all

5. During the past year I have used cocaine(crack):

a. daily b. weekly c. monthly

d. seldom(less than 3 times a year) e. not at all

Thank you for taking the time to assist us by completing this survey.

APPENDIX E

QUALITY OF STUDENT LIFE FOLLOW-UP SURVEY

SUMMER/FALL 1989

Ferris State University

September 1989

Thanks for letting us know you wish to participate in our Quality of Student Life Survey. We still need your help! All we are asking for is approximately 10 minutes of your valuable time to complete this survey.

Even if you withdrew from FSU sometime during this past year

OR

If you are not currently enrolled, your participation is critical. The accuracy of the conclusions drawn increases with the number of individuals responding.

When completing the survey, indicate your responses by marking an "X" through the appropriate circles. Once you complete the survey, fill out the enclosed post card. Place the completed survey in the postage paid envelope. Mail the envelope and post card separately to assure your anonymity.

The $50.00 JC Penney's gift certificate winner will be chosen at random from the postcards returned. If you return your survey and postcard by:

September 22, 1989, your name will be entered 10 times
September 29, 1989, your name will be entered 5 times
October 6, 1989, your name will be entered 3 times

The winner will be notified via certified mail by November 1, 1989.

Thank you for your time and attention.

Sincerely,

Julie Bonkowski
Academic Affairs

Lenny Shible
Student Services

P.S. Please note we have enclosed a voucher for your 2 free FSU Football tickets.

Ferris State University Questionnaire
Summer 1988 Orientation/Registration
Quality of Student Life
Follow up Survey

I. PERSONAL INFORMATION

1. Sex
   - 1. Male
   - 2. Female

2. Age
   - 1. 17 or under
   - 2. 18 - 20
   - 3. 21 - 23
   - 4. 24 - 28
   - 5. 29 or older

3. I entered FSU as a student in the School/College of
   - 1. Allied Health
   - 2. Arts and Sciences
   - 3. Business
   - 4. Education
   - 5. Optometry
   - 6. Pharmacy
   - 7. Technology

4. Which of the following best describes your racial/ethnic group?
   - 1. Black (Non-Hispanic)
   - 2. White (Non-Hispanic)
   - 3. American Indian, Alaskan Native
   - 4. Hispanic
   - 5. Asian or Pacific Islander
   - 6. Other

5. Have any of your relatives previously attended FSU?
   - 1. Yes
   - 2. No

Please indicate whether you were enrolled in any of the following classes during the 1988-89 academic year.

	Y	N			Y	N	
6.	○	○	ENG 074	9.	○	○	RED 065
7.	○	○	ENG 075	10.	○	○	RED 068
8.	○	○	ENG 076	11.	○	○	MTH 090

II. STUDENT CHARACTERISTICS

For questions 12 - 31 please indicate Yes or No for your answer.

During 1988-89, I was a student at FSU:

	Y	N	
12.	○	○	Fall
13.	○	○	Winter
14.	○	○	Spring
15.	○	○	Summer

I was enrolled for less than 12 credit hours during the following term(s):

	Y	N	
16.	○	○	Fall
17.	○	○	Winter
18.	○	○	Spring
19.	○	○	Summer

I dropped one course during each of the following term(s):

	Y	N	
20.	○	○	Fall
21.	○	○	Winter
22.	○	○	Spring
23.	○	○	Summer

I dropped two or more courses during each of the following term(s):

	Y	N	
24.	○	○	Fall
25.	○	○	Winter
26.	○	○	Spring
27.	○	○	Summer

I withdrew from all of my 88-89 courses at FSU before completing the following term(s):

	Y	N	
28.	○	○	Fall
29.	○	○	Winter
30.	○	○	Spring
31.	○	○	Summer

NOTE: If you were enrolled for Fall, Winter and Spring terms of the 1988 - 89 academic year, and you are currently enrolled for Fall of 1989, skip to Section IV.

III - a. REASONS FOR ACADEMIC WITHDRAWAL

IF I withdrew from all my courses before completion of a full term during 1988-89 it was because:

	Y	N
32. I decided college was not for me	○	○
33. I was no longer eligible for financial aid	○	○
34. I was denied due to disciplinary reasons	○	○
35. I was denied due to academic reasons	○	○
36. I was unsure of my career choice	○	○
37. I was uncomfortable socially	○	○
38. I wanted to be closer to home	○	○
39. I had decided to attend another institution	○	○

	Y	N
40. I had not had satisfactory access to academic advising	○	○
41. I had problems that were caused by my use or abuse of alcohol and/or other drugs	○	○
42. I was getting married/divorced	○	○
43. I could not afford tuition/ room & board fees	○	○
44. I was unable to get the courses I needed	○	○
45. I joined the military	○	○

Other _____

See next page

III - b. REASONS FOR NOT RETURNING TO FSU

I am currently not enrolled for Fall 1989 - 90 because;

	Y	N
46. I have decided college is not for me	O	O
47. I am no longer eligible for financial aid	O	O
48. I have been denied due to disciplinary reasons	O	O
49. I have been denied due to academic reasons	O	O
50. I am unsure of my career choice	O	O
51. I have not become comfortable socially	O	O
52. I want to be closer to home	O	O
53. I have decided to attend another institution	O	O
54. I have not had satisfactory access to academic advising	O	O
55. I had problems that were caused by my use or abuse of alcohol and/or other drugs	O	O
56. I am getting married/divorced	O	O
57. I cannot afford the tuition/room & board fees	O	O
58. I have been unable to get the courses I needed	O	O
59. I am joining the military	O	O

Other _____

IV. ATTITUDES

60. If you thought you had a problem with alcohol or other drugs, the person you would most likely go to <u>first</u> for assistance would be: (check only one)

- O 1. Parent
- O 2. Professor/instructor
- O 3. Friend/peer
- O 4. Residence hall staff person
- O 5. Counselor

61. Who do you think was the most influential person during your first term at FSU? (check only one)

- O 1. Friend or roommate
- O 2. Faculty advisor
- O 3. Counselor
- O 4. Parent
- O 5. Instructor/professor

62. I believe my use of alcohol and/or other drugs has negatively affected my performance as a student:

- O 1. Yes
- O 2. No
- O 3. Uncertain
- O 4. I am a non-user

63. How certain are you of your career choice? (check only one)

- O 1. Very certain
- O 2. Fairly certain
- O 3. Not certain

During the 1988-89 academic year, <u>at least once</u>, I experienced the following as a result of my use of alcohol:

Y	N	
O	O	64. Trouble with campus law enforcement officials
O	O	65. Trouble with community law enforcement officials
O	O	66. Campus disciplinary action
O	O	67. Community disciplinary action
O	O	68. Hangover
O	O	69. Oversleeping
O	O	70. Missed a class
O	O	71. Was late for work
O	O	72. Missed work
O	O	73. Loss of appetite
O	O	74. Blacked out
O	O	75. Earned less than a "C" on a quiz or exam
O	O	76. Roommate problems
O	O	77. Family problems
O	O	78. Insomnia
O	O	79. Offended Friends
O	O	80. Physical problems

Other _____

For questions 81 - 83, please indicate the response that <u>most honestly</u> reflects your answer:

	(1) Daily	(2) Weekly	(3) Monthly	(4)Seldom	(5) Never
81. How frequently is it OK to use alcohol before it becomes too much?	O	O	O	O	O
82. How frequently is it OK to use marijuana before it becomes too much?	O	O	O	O	O
83. How frequently is it OK to use cocaine/crack before it becomes too much?	O	O	O	O	O

See next page

V. BEHAVIOR

For questions 84 - 86, please indicate the response that most honestly reflects your answer:

	(1) Daily	(2) Weekly	(3) Monthly	(4) Seldom	(5) Never
84. During the past year I have used alcohol:	O	O	O	O	O
85. During the past year I have used marijuana:	O	O	O	O	O
86. During the past year I have used cocaine/crack:	O	O	O	O	O

For questions 87 - 94, indicate the amount of time (in hours) you spent per week on the following activities. Check only one for each question.

	0	1 - 5	6 - 10	11 - 15	16+
87. Attending classes and labs	O	O	O	O	O
88. Studying and doing homework	O	O	O	O	O
89. Socializing with friends	O	O	O	O	O
90. Talking with faculty outside of class	O	O	O	O	O
91. Exercising or playing sports	O	O	O	O	O
92. Partying	O	O	O	O	O
93. Working	O	O	O	O	O
94. Participating in student organizations	O	O	O	O	O

	(1) Y	(2) N	(3) Uncertain	(4) Non-user
95. I believe my use of alcohol has negatively affected my performance as a student at Ferris.	O	O	O	O

96. What things do you believe have enhanced the quality of student life at FSU?

_____

_____

_____

_____

97. What things do you believe FSU can do to improve the quality of student life at FSU?

_____

_____

_____

_____

THANK YOU FOR TAKING THE TIME TO HELP US BY COMPLETING THIS SURVEY.

PLEASE RETURN THE COMPLETED QUESTIONNAIRE TO RANKIN CENTER 221, FERRIS STATE UNIVERSITY, BIG RAPIDS, MI 49307, BY USING THE ENCLOSED PRE-ADDRESSED/STAMPED ENVELOPE.
REMEMBER TO RETURN THE POST CARD; SEND SEPARATELY FROM QUESTIONNAIRE

IF YOU ARE A CURRENTLY ENROLLED FSU STUDENT, PLEASE USE CAMPUS MAIL.

APPENDIX F

SPRING 1990 FERRIS STATE UNIVERSITY SURVEY

This survey is being conducted for an MSU graduate student. Please fill out the following survey if you are a freshman and do not fill it out if you have already answered it. Your answers will remain anonymous. We appreciate your honesty. Check only ONE answer for every question.

1. Age 17___ 18___ 19___ 2. I had at least 12 credits every term yes___ no___

3. At the end of this term, I will have completed between 24 & 60 credits at FSU yes___ no___

4. Using the LETTER GRADES below, my high school GPA was _____
5. Using the LETTER GRADES below, my FSU GPA is currently _____

3.85 to 4.00	A	3.00 to 3.24	B-	2.25 to 2.49	C-
3.75 to 3.84	A-	2.75 to 2.99	C+	2.00 to 2.24	D+
3.50 to 3.74	B+	2.50 to 2.74	C	1.99 or below	D
3.25 to 3.49	B				

6. Gender
   Male___
   Female___

7. I am: Black or Afro-American___ American Indian___
   Mexican American or Chicano___ White or Caucasian___
   Puerto Rican or Latin American___ Other___
   Oriental or Asian American___

8. I will be returning to FSU during the Fall 1990 term (check only one choice):
   Definitely returning to FSU___
   Definitely going to another institution ___
   Definitely not returning to FSU in the Fall___
   Probably returning to FSU in the Fall___
   Undecided right now___

If NOT returning to FSU in the Fall, check any reasons below that apply:

9. Financial problems yes___ no___ 10. Academic denial yes___ no___
11. Disciplinary problems yes___ no___ 12. Social environment yes___ no___
13. Problems with alcohol yes___ no___ 14. Transferring yes___ no___
15. Other (list) _____

We'd like your opinion regarding the use of alcohol. An alcoholic "drink" is a glass of wine, wine cooler, shot of liquor, bottle of beer, or mixed drink. Do YOU approve of people age 18, 19, or 20 doing each of the following?

	Strongly Approve	Approve	Disapprove
16. Trying 1 or 2 drinks of an alcoholic beverage	____	____	____
17. Taking 1 or 2 drinks nearly every day	____	____	____
18. Taking 4 or 5 drinks nearly every day	____	____	____
19. Having 5 or more drinks once or twice each weekend	____	____	____

How much do YOU think people ages 18, 19 or 20 risk harming themselves physically or in other ways if they . . . . . .

	no risk	slight risk	moderate risk	great risk
20. Try 1 or 2 drinks of an alcoholic beverage	____	____	____	____
21. Take 1 or 2 drinks nearly every day	____	____	____	____
22. Take 4 or 5 drinks nearly every day	____	____	____	____
23. Have 5 or more drinks once or twice each weekend	____	____	____	____

24. How many of your friends would you estimate drink alcoholic beverages?
    none____ a few____ some____ most____ all____

25. Among your group of friends, use of alcohol is: looked down on a lot____
    looked down on some____ looked up to some____
    looked up to a lot____ neither up or down____

.....PLEASE TURN OVER & COMPLETE THE BACK PAGE.....

26. My own feeling about the use of alcohol is that: I look down on it a lot____
I look down on it some____ I look up to it some_____
I look up to it a lot _____ neither up or down____

Regarding drinking alcoholic beverages (beer, wine, coolers, liquor, or mixed drinks):
27. Have you ever had an alcoholic drink? yes___ no___

On how many occasions have you had alcoholic beverages to drink?

	0	1-2	3-5	6-9	10-19	20-39	40+
28. In your lifetime:	___	___	___	___	___	___	___
29. During the last 8 mos. (Sept-May):	___	___	___	___	___	___	___
30. During the last 30 days:	___	___	___	___	___	___	___

31. On occasions you drink alcoholic beverages, how often do you drink enough to feel "pretty" high? on no occasion _____ a few occasions _____ about 1/2 the occasions___
most of the occasions _____ nearly all of the occasions_____

32. Over the LAST TWO WEEKS, how many times have you had five or more drinks in a row?
none___ once___ twice___ 3-5 times___ 6-9 times___ 10 or more___

33. At any time during the LAST 8 MONTHS have you felt in your own mind that you should REDUCE or STOP your use of alcohol? yes___ no___ haven't drank in last 8 mo.___

Has your use of alcohol during the LAST 8 MONTHS caused any of these problems?
34. Trouble with your boss or fellow workers yes___ no___
35. Difficulties of any kind with friends yes___ no___
36. Automobile accident yes___ no___
37. Criticism by a family member yes___ no___
38. Trouble with the police yes___ no___
39. Having an accident in my home/residence hall yes___ no___

During the 1989-90 year, at least once, I experienced the following as a result of use of alcohol:
40. Hangover yes___ no___ 41. Earned less than a "C" on a quiz or exam yes___ no___
42. Missed a class yes___ no___ 43. Earned less than a "C" for a class yes___ no___

44. I believe my use of alcohol has negatively affected my academic performance:
yes____ no____ uncertain____

45. If I am not returning to FSU in the Fall 1990, it is because of my personal problems due to my use of alcohol: yes____ yes, alcohol could be part of the reason ____
uncertain____ not because of alcohol____ don't use alcohol____ I am returning____

46. If I am not returning to FSU in the Fall 1990, it is because of problems I have encountered due to my friends' use of alcohol: yes____ no____ uncertain___

47. My latest ACT score was_____.

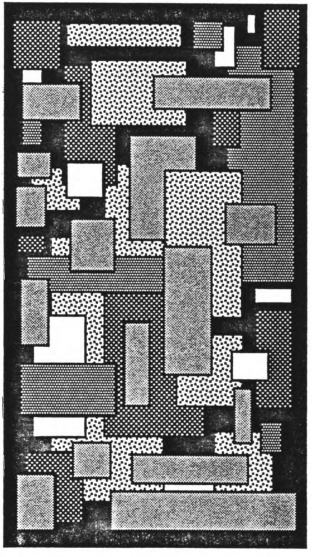
Thank you! If you would be willing to be interviewed by an MSU graduate student, please put your name and phone number (FSU & home) on the card provided by student researcher.

APPENDIX G

FERRIS STATE UNIVERSITY 1989-90 FRESHMAN STUDENT SURVEY

(NONRETURNING STUDENTS)

Ferris State University
1989-90 Freshman Student Survey



Summer, 1990

Ferris State University 1989-90 Freshman Student Survey/Summer 1990

Directions:
Participation in this study is voluntary. You indicate your voluntary agreement to participate by completing and returning this questionnaire. You may be assured of complete anonymity and there will be no penalty for not responding.

Using either a pen or pencil, indicate your responses by placing a check (✔) on the blank for the response that best describes you.

Once you complete the survey, fill out the enclosed postage-paid post card.

Place the *completed survey* in the pre-addressed and postage-paid envelope.

Mail the sealed envelope and post card *separately* to assure your anonymity.

Please complete the survey and mail it by Friday, August 10, 1990. It should take you approximately six minutes to complete.

Thank you for your participation.

1. What is your pattern of term enrollment at Ferris State University? (Check ALL answers that apply.)

___ 1. I attended Fall, Winter and Spring 1989-90
___ 2. I attended Fall and Winter 1989-90 only
___ 3. I attended Fall and Spring 1989-90 only
___ 4. I attended Fall 1989-90 only
___ 5. I am returning next Fall (September, 1990)

2. What reasons influenced your decision to either drop during the year or not return for next Fall (September, 1990)? (Check ALL answers that apply.)

___ 1. Transferring to another college/university
___ 2. Financial difficulties
___ 3. Academic denial
___ 4. Peer pressure to drink alcohol
___ 5. Personal use or abuse of alcohol
___ 6. Other (Specify: _____)

* * * NEXT, WE WOULD LIKE TO ASK YOUR OPINIONS REGARDING THE USE OF ALCOHOL * * *

An alcoholic "drink" is defined as a bottle of beer, glass of wine, wine cooler, shot of liquor or mixed drink.

Do YOU approve of your friends/peers age 17, 18, 19 or 20 doing each of the following? (Check one blank for each question.)

	Strongly Approve	Approve	Disapprove	Strongly Disapprove
3. Trying 1 or 2 drinks of an alcoholic beverage?	_____	_____	_____	_____
4. Taking 1 or 2 drinks nearly everyday?	_____	_____	_____	_____
5. Taking 4 or 5 drinks nearly everyday?	_____	_____	_____	_____
6. Having 5 or more drinks once or twice each weekend?	_____	_____	_____	_____

Please continue to the next page ---->

How much do YOU think your friends/peers age 17, 18, 19 or 20 risk harming themselves physically or in other ways if they . . . (Check one blank for each question.)

	No Risk	Slight Risk	Moderate Risk	Great Risk
7. Try 1 or 2 drinks of an alcoholic beverage?	____	____	____	____
8. Take 1 or 2 drinks nearly everyday?	____	____	____	____
9. Take 4 or 5 drinks nearly everyday?	____	____	____	____
10. Have 5 or more drinks once or twice each weekend?	____	____	____	____

11. How many of your friends/peers would you estimate drink alcoholic beverages? (Check one number.)

___ 1. None
___ 2. A few
___ 3. Some
___ 4. Most
___ 5. All

12. Among your group of friends/peers, alcohol use is . . . (Check one number.)

___ 1. Looked up to a lot.
___ 2. Looked up to some.
___ 3. Neither up or down.
___ 4. Looked down on some.
___ 5. Looked down on a lot.

13. My own feeling about the use of alcohol is that . . . (Check one number.)

___ 1. I look up to it a lot.
___ 2. I look up to it some.
___ 3. Neither up or down.
___ 4. I look down on it some.
___ 5. I look down on it a lot.

14. Have you ever wished that either one or both of your parents would drink less? (Check one number.)

___ 1. Parents don't drink at all
___ 2. No
___ 3. Yes

15. Have you ever had any beer, wine, wine coolers or liquor to drink? (Check one number.)

___ 1. Yes
___ 2. No

If you have never had an alcoholic drink, go to Question 37.

* * * NOW WE WOULD LIKE TO ASK YOU ABOUT YOUR PERSONAL USE OF ALCOHOL * * *

Please continue to the next page ---->>

16. Have you had any beer, wine, wine coolers, or liquor to drink within the last year? (Check one number.)

___ 1. Yes
___ 2. No

When you were enrolled at Ferris, on the average, how much did you *usually* drink at any one time? (Check one blank for each question.)

	NUMBER OF DRINKS					
	None	Less than 1	1-2	3-4	5	6 or more
17. Beer	___	___	___	___	___	___
18. Wine or wine cooler	___	___	___	___	___	___
19. Shot of liquor or mixed drink	___	___	___	___	___	___

20. On the occasions that you drank alcoholic beverages while a student at FSU, how often did you drink enough to feel pretty high? (Check one number.)

___ 1. No occasion
___ 2. A few occasions
___ 3. About 1/2 of the occasions
___ 4. Most of the occasions
___ 5. Nearly all of the occasions

21. Think back over your LAST TERM AT FERRIS. How many times did you have 5 or more drinks in a row? (Check one letter.)

___ a. None
___ b. Once
___ c. Twice
___ d. 3-5 times
___ e. 6-9 times
___ f. 10 or more times

22. AT ANY TIME during your enrollment at Ferris, have you experienced any of the following? (Check ALL answers that apply.)

___ 1. A physical fight after drinking
___ 2. An argument after drinking
___ 3. Acquaintance/date rape after drinking

23. Did your use of alcohol during your enrollment at Ferris cause any of the following problems? (Check ALL answers that apply.)

___ 1. Trouble with your boss or fellow workers
___ 2. Difficulties of any kind with friends
___ 3. Automobile accident
___ 4. Criticism by a family member
___ 5. Trouble with the police
___ 6. Having an accident in your home/residence hall

Please continue to the next page ---->>

24. During the term(s) I attended Ferris, <u>at least once</u>, I experienced the following as a result of my use of alcohol. (Check ALL answers that apply.)

___ 1. Missed a class
___ 2. Earned less than a "C" on a quiz or exam
___ 3. Earned less than a "C" for a class
___ 4. Withdrew from a class

25. How often have YOU thought you should reduce or stop your use of alcohol? (Check one number.)

___ 1. Often
___ 2. Sometimes
___ 3. Seldom
___ 4. Never

26. I believe my use of alcohol has negatively affected my academic performance. (Check one number.)

___ 1. Strongly agree
___ 2. Agree
___ 3. Disagree
___ 4. Strongly disagree

How much did your <u>personal</u> use of alcohol influence your decision not to return to FSU in the . . . (Check one blank for each question.)

	Not at All	Very Little	Somewhat	To a Great Extent
27. Winter 1989-90 term?	_____	_____	_____	_____
28. Spring 1989-90 term?	_____	_____	_____	_____
29. Fall 1990-91 term?	_____	_____	_____	_____

How much did your <u>friends/peers'</u> use of alcohol influence your decision not to return to FSU in the . . . (Check one blank for each question.)

	Not at All	Very Little	Somewhat	To a Great Extent
30. Winter 1989-90 term?	_____	_____	_____	_____
31. Spring 1989-90 term?	_____	_____	_____	_____
32. Fall 1990-91 term?	_____	_____	_____	_____

Please continue to the next page ---->

Approximately how many drinks per month did you have during the following time periods when you were enrolled at Ferris? (Check one blank for each question.)

	NUMBER OF DRINKS PER MONTH							
	None	1-2	3-5	6-10	11-19	20-39	40-55	56+
33. Fall 1989-90 Term	____	____	____	____	____	____	____	____
34. Winter 1989-90 Term If not at FSU, check here ____	____	____	____	____	____	____	____	____
35. Spring 1989-90 Term If not at FSU, check here ____	____	____	____	____	____	____	____	____
36. Summer 1990 If not at FSU, check here ____	____	____	____	____	____	____	____	____

* * * FINALLY, WE WOULD LIKE TO ASK A FEW QUESTIONS ABOUT YOURSELF * * *

37. What is the highest level of schooling either your mother or your father completed? (Check one number.)

___ 1. Completed grade school or less
___ 2. Some high school
___ 3. Completed high school
___ 4. Some college
___ 5. Completed college
___ 6. Graduate or professional school after college
___ 7. Don't know, or does not apply

38. At the end of my last term at FSU, I had completed between 12 and 60 credit hours at Ferris State University. (Check one number.)

___ 1. Yes
___ 2. No

39. I had at least 12 credits every term I was at Ferris. (Check one number.)

___ 1. Yes
___ 2. No

40. At the end of my last term at *FSU*, my honor point average was: (Check one letter.)

___ a. 1.99 or below
___ b. 2.00-2.49
___ c. 2.50-2.99
___ d. 3.00-3.49
___ e. 3.50-4.00

41. My final *high school* grade point average (GPA) was: (Check one letter.)

___ a. 1.99 or below
___ b. 2.00-2.49
___ c. 2.50-2.99
___ d. 3.00-3.49
___ e. 3.50-4.00

Please continue to the next page ---->

42. My ACT Composite score was: (Check one letter.)

___ a. 0-5
___ b. 6-10
___ c. 11-15
___ d. 16-20
___ e. 21-25
___ f. 26-36

43. I describe myself as: (Check one number.)

___ 1. International student
___ 2. Black or African American
___ 3. Indian or Native American
___ 4. Oriental or Asian American
___ 5. Hispanic
___ 6. White or Caucasian
___ 7. Other (Specify: _____)

44. What was your age when you entered Ferris during the Fall 1989-90 term? (Check one letter.)

___ a. 17
___ b. 18
___ c. 19
___ d. 20

45. Gender (Check one number.)

___ 1. Male
___ 2. Female

Thank you for your help !!!

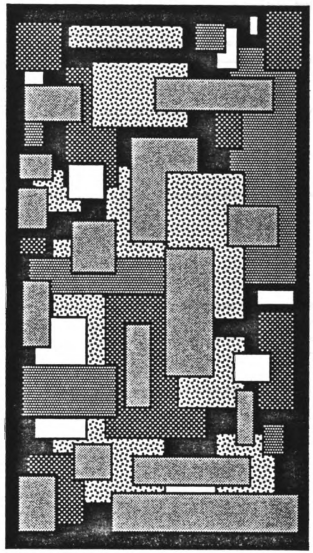
Your participation in the survey is greatly appreciated. If you are interested in a summary of the results, please print your name and address on the back of the return post card: NOT on this questionnaire.

APPENDIX H

FERRIS STATE UNIVERSITY 1989-90 FRESHMAN STUDENT SURVEY

(RETURNING STUDENTS)

Ferris State University
Returning Freshman Student Survey



Fall, 1990

Ferris State University Returning Student Survey/Fall 1990

Directions:
Participation in this study is voluntary. You indicate your voluntary agreement to participate by completing and returning this questionnaire. You may be assured of complete anonymity and there will be no penalty for not responding. There is no way we can identify from whom the questionnaires are returned.

Using either a pen or pencil, indicate your responses by placing a check (√) on the blank for the response that best describes you.

Once you complete the survey, place it in the white envelope with the FSU Bulldog logo. Seal the envelope and place it in a campus mail pick up location by November 1, 1990.

Thank you for your participation.

1. What is your pattern of term enrollment at Ferris State University? (Check ALL answers that apply.)

___ 1. I attended Fall, Winter and Spring 1989-90
___ 2. I attended Fall and Winter 1989-90 only
___ 3. I attended Fall and Spring 1989-90 only
___ 4. I attended Fall 1989-90 only

2. I am enrolled for a minimum of 12 credits as a student in the School/College of . . . (Check one number.)

___ 1. Allied Health
___ 2. Arts & Sciences
___ 3. Business
___ 4. Education
___ 5. Optometry
___ 6. Pharmacy
___ 7. Technology

* * * NEXT, WE WOULD LIKE TO ASK YOUR OPINIONS REGARDING THE USE OF ALCOHOL * * *

An alcoholic "drink" is defined as a bottle of beer, glass of wine, wine cooler, shot of liquor or mixed drink.

Do YOU approve of your friends/peers age 17, 18, 19 or 20 doing each of the following? (Check one blank for each question.)

	Strongly Approve	Approve	Disapprove	Strongly Disapprove
3. Trying 1 or 2 drinks of an alcoholic beverage?	_____	_____	_____	_____
4. Taking 1 or 2 drinks nearly everyday?	_____	_____	_____	_____
5. Taking 4 or 5 drinks nearly everyday?	_____	_____	_____	_____
6. Having 5 or more drinks once or twice each weekend?	_____	_____	_____	_____

Please continue to the next page --->

How much do YOU think your friends/peers age 17, 18, 19 or 20 risk harming themselves physically or in other ways if they . . . (Check one blank for each question.)

	No Risk	Slight Risk	Moderate Risk	Great Risk
7. Try 1 or 2 drinks of an alcoholic beverage?	____	____	____	____
8. Take 1 or 2 drinks nearly everyday?	____	____	____	____
9. Take 4 or 5 drinks nearly everyday?	____	____	____	____
10. Have 5 or more drinks once or twice each weekend?	____	____	____	____

11. How many of your friends/peers would you estimate drink alcoholic beverages? (Check one number.)

___ 1. None
___ 2. A few
___ 3. Some
___ 4. Most
___ 5. All

12. Among your group of friends/peers, alcohol use is . . . (Check one number.)

___ 1. Looked up to a lot.
___ 2. Looked up to some.
___ 3. Neither up or down.
___ 4. Looked down on some.
___ 5. Looked down on a lot.

13. My own feeling about the use of alcohol is that . . . (Check one number.)

___ 1. I look up to it a lot.
___ 2. I look up to it some.
___ 3. Neither up or down.
___ 4. I look down on it some.
___ 5. I look down on it a lot.

14. Have you ever wished that either one or both of your parents would drink less? (Check one number.)

___ 1. Parents don't drink at all
___ 2. No
___ 3. Yes

15. Have you ever had any beer, wine, wine coolers or liquor to drink? (Check one number.)

___ 1. Yes
___ 2. No

If you have never had an alcoholic drink, go to Question 37.

* * * NOW WE WOULD LIKE TO ASK YOU ABOUT YOUR PERSONAL USE OF ALCOHOL * * *

Please continue to the next page --->

16. Have you had any beer, wine, wine coolers, or liquor to drink within the last year? (Check one number.)

___ 1. Yes
___ 2. No

Since you have been enrolled at Ferris, on the average, how much have you *usually* had to drink at any one time? (Check one blank for each question.)

	NUMBER OF DRINKS					
	None	Less than 1	1-2	3-4	5	6 or more
17. Beer	____	____	____	____	____	____
18. Wine or wine cooler	____	____	____	____	____	____
19. Shot of liquor or mixed drink	____	____	____	____	____	____

20. On the occasions that you drank alcoholic beverages while a student at FSU, how often did you drink enough to feel pretty high? (Check one number.)

___ 1. No occasion
___ 2. A few occasions
___ 3. About 1/2 of the occasions
___ 4. Most of the occasions
___ 5. Nearly all of the occasions

21. Think back over your LAST TERM AT FERRIS. How many times did you have 5 or more drinks in a row? (Check one letter.)

___ a. None
___ b. Once
___ c. Twice
___ d. 3-5 times
___ e. 6-9 times
___ f. 10 or more times

22. AT ANY TIME during your enrollment at Ferris, have you experienced any of the following? (Check ALL answers that apply.)

___ 1. A physical fight after drinking
___ 2. An argument after drinking
___ 3. Acquaintance/date rape after drinking

23. Has your use of alcohol during your enrollment at Ferris caused any of the following problems? (Check ALL answers that apply.)

___ 1. Trouble with your boss or fellow workers
___ 2. Difficulties of any kind with friends
___ 3. Automobile accident
___ 4. Criticism by a family member
___ 5. Trouble with the police
___ 6. Having an accident in your home/residence hall

Please continue to the next page --->

24. During the 1989-90 year I attended Ferris, at least once, I experienced the following as a result of my use of alcohol. (Check ALL answers that apply.)

___ 1. Missed a class
___ 2. Earned less than a "C" on a quiz or exam
___ 3. Earned less than a "C" for a class
___ 4. Withdrew from a class

25. How often have YOU thought you should reduce or stop your use of alcohol? (Check one number.)

___ 1. Often
___ 2. Sometimes
___ 3. Seldom
___ 4. Never

26. I believe my use of alcohol has negatively affected my academic performance. (Check one number.)

___ 1. Strongly agree
___ 2. Agree
___ 3. Disagree
___ 4. Strongly disagree

Did your personal use of alcohol in any way cause you to *consider* not returning to FSU in the . . .
(Check one number.)

27. Winter 1989-90 term?

___ 1. Yes
___ 2. No

28. Spring 1989-90 term?

___ 1. Yes
___ 2. No

29. Fall 1990-91 term?

___ 1. Yes
___ 2. No

Did your friends/peers' use of alcohol in anyway cause you to *consider* not returning to FSU in the . . .
(Check one number.)

30. Winter 1989-90 term?

___ 1. Yes
___ 2. No

31. Spring 1989-90 term?

___ 1. Yes
___ 2. No

32. Fall 1990-91 term?

___ 1. Yes
___ 2. No

Please continue to the next page --->

Approximately how many drinks per month did you have during the following time periods when you were enrolled at Ferris? (Check one blank for each question.)

	NUMBER OF DRINKS PER MONTH							
	None	1-2	3-5	6-10	11-19	20-39	40-55	56+
33. Fall 1989-90 Term	____	____	____	____	____	____	____	____
34. Winter 1989-90 Term If not at FSU, check here ____	____	____	____	____	____	____	____	____
35. Spring 1989-90 Term If not at FSU, check here ____	____	____	____	____	____	____	____	____
36. Summer 1990 If not at FSU, check here ____	____	____	____	____	____	____	____	____

* * * FINALLY, WE WOULD LIKE TO ASK A FEW QUESTIONS ABOUT YOURSELF * * *

37. What is the highest level of schooling either your mother or your father completed? (Check one number.)

___ 1. Completed grade school or less
___ 2. Some high school
___ 3. Completed high school
___ 4. Some college
___ 5. Completed college
___ 6. Graduate or professional school after college
___ 7. Don't know, or does not apply

38. At the end of my last term at FSU, I had completed between 12 and 60 credit hours at Ferris State University. (Check one number.)

___ 1. Yes
___ 2. No

39. I have had at least 12 credits every term I was at Ferris and am currently enrolled for at least 12 credits. (Check one number.)

___ 1. Yes
___ 2. No

40. At the end of my last term at *FSU*, my honor point average was: (Check one letter.)

___ a. 1.99 or below
___ b. 2.00-2.49
___ c. 2.50-2.99
___ d. 3.00-3.49
___ e. 3.50-4.00

41. My final *high school* grade point average (GPA) was: (Check one letter.)

___ a. 1.99 or below
___ b. 2.00-2.49
___ c. 2.50-2.99
___ d. 3.00-3.49
___ e. 3.50-4.00

Please continue to the nex page ---->>

42. My ACT Composite score was: (Check one letter.)

___ a. 0-5
___ b. 6-10
___ c. 11-15
___ d. 16-20
___ e. 21-25
___ f. 26-36

43. I describe myself as: (Check one number.)

___ 1. International student
___ 2. Black or African American
___ 3. Indian or Native American
___ 4. Oriental or Asian American
___ 5. Hispanic
___ 6. White or Caucasian
___ 7. Other (Specify: _____)

44. What was your age when you entered Ferris during the Fall 1989-90 term? (Check one letter.)

___ a. 17
___ b. 18
___ c. 19
___ d. 20

45. Gender (Check one number.)

___ 1. Male
___ 2. Female

Thank you for your help !!!

Your participation in the survey is greatly appreciated. If you are interested in a summary of the results, please inquire at the Ferris State University Library after June 1, 1991.

APPENDIX I

INTRODUCTORY LETTER (NONRETURNING STUDENTS)

Ferris State University

Office Of The President

July 27, 1990

Levi Jeans Strauss IV
2201 Veeblefetzer Rd.
Lansing, MI 48723

Dear Levi:

In the past few years there has been a lot of discussion about the reasons students choose to continue at a particular university, transfer to another institution or drop out of college altogether. Your name has been randomly selected from those Ferris State University 1989-90 freshmen who have not early registered for Fall Term 1990 and who, therefore, may plan not to return to Ferris at this time. We are interested in knowing why you may have decided to discontinue your education at Ferris.

Julie Bonkowski, Associate Professor at Ferris and doctoral student at Michigan State University, is undertaking a study regarding the relation, if any, between students' attitudes toward the use of alcohol and their decisions to continue or to discontinue their college education.

Within a week, you will receive a letter and questionnaire from Mrs. Bonkowski. Your response is very important since only a small but representative percentage of the freshman class members have been selected to participate in the study. We hope that this study will provide valuable information so we may better serve students who choose Ferris State.

I would greatly appreciate your completing the questionnaire and returning it promptly. Thank you!

Sincerely yours,

Helen Popovich

Helen Popovich
President

HP:ljt

APPENDIX J

FIRST LETTER OF TRANSMITTAL (NONRETURNING STUDENTS)

Ferris State University
Office Of Academic Affairs

August 3, 1990

Levi Jeans Strauss IV
2201 Veeblefetzer Rd.
Lansing, MI 48723

Dear Levi:

During the week of July 30, you should have received a letter from the president of Ferris State University, Dr. Helen Popovich, alerting you to a study regarding Ferris State University freshman students. Students who chose to attend Ferris during the Fall term 1989-90 may have decided to remain here during their sophomore year, may have chosen to transfer to another institution or to drop out of college altogether. We believe we understand some of the reasons students do not return to Ferris, but we would like to learn more in an effort to better serve the students who choose Ferris State.

You have been randomly selected from the Fall term 1989-90 freshman class to participate in this study. In order that the results will truly represent the views and experiences of the freshman student, it is important that you complete and return the questionnaire. Your input is especially valuable since the accuracy of the conclusions drawn increases with the number of individuals responding.

You may be assured of complete anonymity. There is no way we can identify from whom the questionnaires are returned. Instead, we ask that you print your name and student number (social security number) on the enclosed post card and mail it back separately so that we may remove your name from our mailing list. Only the questionnaire should be returned in the postage paid envelope. Mail the sealed envelope and post card by **Friday, August 10, 1990.**

Participation in the survey is voluntary and there will be no penalty for not responding. The results of this research will be made available to academic administrators and college staff at Ferris whose responsibilities include enrollment management. You may receive a summary of the results by writing "copy of results requested" on the back of the return post card and printing your name and address below it.

I would be most happy to answer any questions you might have. Please write or call. The telephone number is (616) 592-3660.

Thank you for your assistance.

Sincerely,

Julie Bonkowski

Julie Bonkowski
Associate Professor
Project Researcher

APPENDIX K

NUMBER 9 RETURN ENVELOPE (NONRETURNING STUDENTS)

Ferris State University
Office of Academic Affairs
Big Rapids, Michigan 49307

FERRIS STATE UNIVERSITY
Office of Academic Affairs
Starr 303
901 S. State Street
BIG RAPIDS, MI 49307-2295

Attn: J. Bonkowski

APPENDIX L

RETURN STAMPED POST CARD

(RETURNING AND NONRETURNING STUDENTS)

Front:

First Class
Postage Stamp

Julie Bonkowski, Associate Professor
Starr 119
Ferris State University
Big Rapids, MI 49307

Back:

I have returned my questionnaire separately.

_____
Please *print your name here*

Student Number: __ __ __ - __ __ - __ __ __ __

THANKS AGAIN FOR YOUR HELP WITH THIS IMPORTANT STUDY

APPENDIX M

NUMBER 10 "WINDOW" MAILING ENVELOPE

(NONRETURNING STUDENTS)

Ferris State University

Office of the President
Big Rapids, Michigan 49307

APPENDIX N

SECOND LETTER OF TRANSMITTAL (NONRETURNING STUDENTS)

Ferris State University
Office Of Academic Affairs

August 10, 1990

Levi Jeans Strauss IV
2201 Veeblefetzer Rd.
Lansing, MI 48723

Dear Levi:

A week ago I wrote to you seeking your assistance regarding the reasons members of the Fall 1989 freshman class may have chosen not to return to Ferris State University. ***If you have already returned your completed questionnaire, please disregard this letter. As well, let me express my appreciation for your cooperation.***

If you have not completed the questionnaire, may I urge you to do so? Your participation in the study is very important; every student has unique insight to share.

We have undertaken this study to learn more about the reasons students leave Ferris. The results will be of interest to the administrators and staff at Ferris and also to me as a doctoral student at Michigan State University. I will use the information as part of the research required in my Ph.D. program.

I am writing to you again because of the significance each questionnaire has to the usefulness of this study. In order for the results of this study to be truly representative of the opinions of nonreturning freshman students, it is essential that each person in the sample return their questionnaire. As I mentioned in my last letter, you may be assured of complete anonymity.

In the event that your questionnaire has been misplaced, a replacement is enclosed. If you have any questions about the purpose of the survey or completion of the questionnaire, please contact me at (616) 592-3660.

Please mail your completed survey and post card by August 17, 1990. Thank you for your cooperation.

Cordially,

Julie Bonkowski

Julie Bonkowski
Associate Professor
Project Researcher

Starr 303 • Big Rapids, Michigan 49307

APPENDIX O

NONRETURNING FRESHMAN STUDENT SURVEY LOG: 1990

NONRETURNING FRESHMAN STUDENT LOG SURVEY - 1990

Student	Intro Mailed	Survey #1 Mailed	Postcard Returned	Survey #2 Mailed	Reminder Mailed	Survey #3 Mailed	Phone Contact	Survey #4 Mailed	Results Requested	Comments
1	7-27	8-3	9-21	8-10	8-17	8-29	-	-		
2	7-27	8-3	-	8-10	8-17	8-29	YES	11-15		
3	7-27	8-3	8-13	8-10	-	-	-	-	*	
4	7-27	8-3	-	8-10	8-17	8-29	YES	11-15		
5	7-27	8-3	11-27	8-10	8-17	8-29	YES	11-22		
6	7-27	8-3	8-8	-	-	-	-	-		
7	7-27	8-3	-	8-10	8-17	8-29	DISC	NO		
8	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
9	7-27	8-3	-	8-10	8-17	8-29	LM	NO		
10	7-27	8-3	-	8-10	8-17	8-29	NA	NO		
11	7-27	8-3	-	8-10	8-17	8-29	NA	NO		
12	7-27	8-3	8-6	-	-	-	-	-		
13	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
14	7-27	8-3	9-4	8-10	8-17	8-29	-	-		
15	7-27	8-3	-	8-10	8-17	8-29	NA	NO		
16	7-27	8-3	9-4	8-10	8-17	8-29	-	-		
17	7-27	8-3	8-23	8-10	8-17	-	-	-		
18	7-27	8-3	8-9	-	-	-	-	-		
19	7-27	8-3	12-1990	8-10	8-17	8-29	YES	11-22		Returned Survey after Analyzation
20	7-27	8-3	-	8-10	8-17	8-29	YES	-		Said she would send old one
21	7-27	8-3	8-8	-	-	-	-	-		
22	7-27	8-3	-	8-10	8-17	8-29	LM	NO		
23	7-27	8-3	-	8-10	8-17	8-29	LM	NO		
24	7-27	8-3	8-15	8-10	-	-	-	-		
25	7-27	8-3	11-27	8-10	8-17	8-29	YES	11-22	*	
26	7-27	8-3	-	8-10	8-17	8-29	DISC	NO		
27	7-27	8-3	-	8-10	8-17	8-29	LM	NO		
28	7-27	8-3	-	8-10	8-17	8-29	LM	NO		
29	7-27	8-3	8-8	-	-	-	-	-	*	
30	7-27	8-3	8-13	8-10	-	-	-	-		
31	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
32	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
33	7-27	8-3	-	8-10	8-17	8-29	LM	NO		
34	7-27	8-3	-	8-10	8-17	8-29	DISC	NO		
35	7-27	8-3	8-15	8-10	-	-	-	-		PGM Student/Replaced

NONRETURNING FRESHMAN STUDENT LOG SURVEY - 1990

Student	Intro Mailed	Survey #1 Mailed	Postcard Returned	Survey #2 Mailed	Reminder Mailed	Survey #3 Mailed	Phone Contact	Survey #4 Mailed	Results Requested	Comments
36	7-27	8-3	8-13	8-10	-	-	-	-		
37	7-27	8-3	9-11	8-10	8-17	8-29	-	-		
38	7-27	8-3	8-8	-	-	-	-	-		
39	7-27	8-3	9-11	8-10	8-17	8-29	-	-		
40	7-27	-	8-2	-	-	-	-	-		PGM Student/Replaced
41	7-27	8-3	8-20	8-10	8-17	-	-	-		In the Navy as noted by parents/Replaced
42	7-27	8-3	-	8-10	8-17	8-29	YES	-		Not willing
43	7-27	8-3	-	8-10	8-17	8-29	NA	NO		
44	7-27	8-3	8-7	-	-	-	-	-	*	
45	7-27	8-3	-	8-10	8-17	8-29	DISC	NO		
46	7-27	8-3	11-26	8-10	8-17	8-29	YES	11-22		
47	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
48	7-27	8-3	9-4	8-10	8-17	8-29	-	-		
49	7-27	8-3	-	8-10	8-17	8-29	LM	NO		
50	7-27	8-3	9-4	8-10	8-17	8-29	LM	NO		
51	7-27	8-3	8-15	8-10	-	-	-	-		
52	7-27	8-3	8-9	-	-	-	-	-		
53	7-27	8-3	-	8-10	8-17	8-29	LM	NO		
54	7-27	8-3	-	8-10	8-17	8-29	DISC	NO		
55	7-27	8-3	-	8-10	8-17	8-29	YES	-		Not willing
56	7-27	8-3	8-7	-	-	-	-	-		
57	7-27	8-3	-	8-10	8-17	8-29	-	-		
58	7-27	8-3	8-9	-	-	-	-	-		
59	7-27	8-3	-	8-10	8-17	8-29	NA	NO		
60	7-27	8-3	8-9	-	-	-	-	-	*	
61	7-27	8-3	8-15	8-10	-	-	-	-		
62	7-27	8-3	11-28	8-10	8-17	8-29	YES	11-22		
63	7-27	8-3	8-20	8-10	8-17	-	-	-		
64	7-27	8-3	8-13	8-10	-	-	-	-		
65	7-27	8-3	-	8-10	8-17	8-29	YES	-		Not willing
66	7-27	8-3	-	8-10	8-17	8-29	LM	NO		
67	7-27	8-3	-	8-10	8-17	8-29	LM	NO		
68	7-27	8-3	8-6	-	-	-	-	-		Personal Note on Survey
69	7-27	8-3	02-26-91	8-10	8-17	8-29	YES	NO		Returned Survey after Analyzation
70	7-27	8-3	-	8-10	8-17	8-29	LM	NO		

NONRETURNING FRESHMAN STUDENT LOG SURVEY - 1990

Student	Intro Mailed	Survey #1 Mailed	Postcard Returned	Survey #2 Mailed	Reminder Mailed	Survey #3 Mailed	Phone Contact	Survey #4 Mailed	Results Requested	Comments
71	7-27	8-3	8-15	8-10	-	-	-	-		PGM student/Replaced
72	7-27	8-3	-	8-10	8-17	8-29	NA	NO		
73	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
74	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
75	7-27	8-3	11-28	8-10	8-17	8-29	YES	11-22		
76	7-27	8-3	11-28	8-10	8-17	8-29	YES	11-22		
77	7-27	8-3	-	8-10	8-17	8-29	LM	NO		
78	7-27	8-3	-	8-10	8-17	8-29	NA	NO		
79	7-27	8-3	-	8-10	8-17	8-29	NA	NO		
80	7-27	8-3	8-13	8-10	-	-	-	-		
81	7-27	8-3	8-20	8-10	8-17	-	-	-		Wants Financial Aid to Return
82	7-27	8-3	-	8-10	8-17	8-29	YES	NO		Phone # given was Mead Paper Mill
83	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
84	7-27	8-3	-	8-10	8-17	8-29	NA	NO		
85	7-27	8-3	8-9	-	-	-	-	-	*	
86	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
87	7-27	8-3	8-15	8-10	-	-	-	-		
88	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
89	7-27	8-3	8-27	8-10	8-17	-	-	-		
90	7-27	8-3	-	8-10	8-17	8-29	NO	NO		
91	7-27	8-3	8-9	-	-	-	-	-		
92	7-27	8-3	9-4	8-10	8-17	8-29	-	-		
93	7-27	8-3	-	8-10	8-17	8-29	NA	NO		
94	7-27	8-3	11-27	8-10	8-17	8-29	YES	11-22		
95	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
96	7-27	-	-	-	-	-	-	-		Intro ret./Unable to forward/Replaced
97	7-27	8-3	-	8-10	8-17	8-29	YES	NO		Said he had already returned Survey
98	7-27	8-3	-	8-10	8-17	8-29	NA	NO		
99	7-27	8-3	9-4	8-10	8-17	8-29	-	-		
100	7-27	8-3	-	8-10	8-17	8-29	DISC	NO		
101	7-27	8-3	8-14	8-10	-	-	-	-	*	
102	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
103	7-27	8-3	-	8-10	8-17	8-29	LM	NO		
104	7-27	8-3	8-13	8-10	-	-	-	-		
105	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		

NONRETURNING FRESHMAN STUDENT LOG SURVEY - 1990

Student	Intro Mailed	Survey #1 Mailed	Postcard Returned	Survey #2 Mailed	Reminder Mailed	Survey #3 Mailed	Phone Contact	Survey #4 Mailed	Results Requested	Comments
106	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
107	7-27	8-3	-	8-10	8-17	8-29	DISC	NO		
108	7-27	8-3	8-8	-	-	-	-	-		
109	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
110	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
111	7-27	8-3	8-31	8-10	8-17	8-29	-	-		
112	7-27	8-3	-	8-10	8-17	8-29	DISC	-		Survey ret. incomplete
113	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
114	7-27	8-3	11-30	8-10	8-17	8-29	YES	11-22		
115	7-27	8-3	8-15	8-10	-	-	-	-		
116	7-27	8-3	-	8-10	8-17	8-29	NA	NO		
117	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
118	7-27	8-3	11-27	8-10	8-17	8-29	YES	11-22		
119	7-27	8-3	8-8	-	-	-	-	-	*	
120	-	-	-	-	-	-	-	-		Intro Ret./Unable to forward/Replaced
121	7-27	8-3	8-23	8-10	8-17	-	-	-	*	
122	7-27	8-3	8-8	-	-	-	-	-	*	
123	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
124	7-27	8-3	-	8-10	8-17	8-29	DISC	NO		
125	7-27	8-3	-	8-10	8-17	8-29	DISC	NO		
126	7-27	8-3	-	8-10	8-17	8-29	NA	NO		
127	7-27	8-3	8-9	-	-	-	-	-		
128	7-27	8-3	8-27	8-10	8-17	-	-	-		
129	7-27	8-3	-	8-10	8-17	8-29	DISC	NO		
130	7-27	8-3	-	8-10	8-17	8-29	YES	11-22		
131	7-27	8-3	-	8-10	8-17	8-29	NA	NO		
132	7-27	8-3	-	8-10	8-17	8-29	NA	NO		
133	7-27	8-3	-	8-10	8-17	8-29	LM	NO		
134	7-27	8-3	-	8-10	8-17	8-29	DISC	NO		
135	7-27	8-3	-	8-10	8-17	8-29	NA	NO		
136	7-27	8-3	8-9	-	-	-	-	-	*	
137	7-27	8-3	9-11	8-10	8-17	8-29	-	-		
138	7-27	8-3	-	8-10	8-17	8-29	YES	NO		Will send old one he has
139	7-27	8-3	8-15	8-10	8-17	-	-	-		In Airforce/Couldn't complete/Replaced
140	7-27	8-3	-	8-10	8-17	8-29	DISC	NO		

NONRETURNING FRESHMAN STUDENT LOG SURVEY - 1990

Student	Intro Mailed	Survey #1 Mailed	Postcard Returned	Survey #2 Mailed	Reminder Mailed	Survey #3 Mailed	Phone Contact	Survey #4 Mailed	Results Requested	Comments
141	7-27	8-3	-	-	8-17	8-29	YES	11-22		
142	8-24	8-31	-	9-10	9-14	9-14	NO	NO		
143	8-24	8-31	-	9-10	9-14	9-14	NO	NO		
144	8-24	8-31	-	9-10	9-14	9-14	NO	NO		
145	8-24	8-31	-	9-10	9-14	9-14	NO	NO		
146	8-24	8-31	9-7	-	-	-	-	-		
147	8-24	8-31	-	9-10	9-14	9-14	NO	NO		
148	8-24	8-31	-	9-10	9-14	9-14	NO	NO		

* - Preliminary Results sent 02/14/91
NA - Phone contact attempted/No answer
LM - Left Message
DISC - Phone disconnect or unlisted

APPENDIX P

REMINDER POST CARD (NONRETURNERS)

Front:

FERRIS STATE UNIVERSITY
Office of Academic Affairs
901 S. State Street
Big Rapids, MI 49307-2295

First Class
Postage Stamp

Student Name
Address
City State Zip

Back:

August 17, 1990

IT'S NOT TOO LATE TO PARTICIPATE.....

During the week of July 30, you should have received a letter from Dr. Helen Popovich, President of Ferris State University, asking you to participate in our survey of students who were freshmen at FSU during Fall 1989-90. Since then, you should have received two questionnaires.

If you have already completed and returned one of the questionnaires to us, ***please accept our sincere thanks!*** If not, ***please do so today.*** YOUR response is extremely important to the outcome of this study.

If by some chance you did not receive a questionnaire, or it got misplaced, please call (616) 592-3660 and we will gladly send you a new questionnaire today.

Sincerely,

Julie Bonkovski

Julie Bonkovski
Project Researcher

APPENDIX Q

THIRD LETTER OF TRANSMITTAL (NONRETURNERS)

Ferris State University
College of Arts and Sciences

August 30, 1990

Dear name *(hand written)*:

At the end of July, we informed you of a study we are conducting at Ferris regarding the reasons some of the Fall 1989-90 freshman students may have left during the school year or may not be returning to FSU this September. As you know, the information we are seeking should be useful for enrollment management here at Ferris, but also, I am writing my doctoral dissertation based on the data we are gathering. The response has been less than we anticipated so I am continuing to seek your participation.

Enclosed is another questionnaire, postage-paid post card and return envelope. Please complete the survey and mail it TODAY! **Your cooperation would be greatly appreciated.**

Sincerely yours,

Julie Bonkowski

Julie Bonkowski
Project Researcher

name (hand written)
street address (hand written)
city, state, zip (hand written)

APPENDIX R

FOURTH LETTER OF TRANSMITTAL (NONRETURNERS)

julie h bonkowski

Associate Professor
Educational Counselor
Arts & Sciences

To:

Date: Thanksgiving Day/ November 22, 1990

My son, David, called earlier this week requesting you help me with my dissertation project.

THANK YOU SO MUCH FOR AGREEING TO COMPLETE THE ENCLOSED SURVEY SO MY RESPONSE RATE WILL BE ACCEPTABLE TO MY PROFESSORS AT MICHIGAN STATE.

For directions, please refer to the questionnaire.

No stamps necessary, just a few minutes of your valuable time!!

Ferris State

APPENDIX S

BRIEFING NOTES FOR DISTRIBUTION OF THE INSTRUMENT, INCLUDING TELEPHONE LINK (RETURNING STUDENTS)

October 1990

BRIEFING NOTES FOR DISTRIBUTION OF THE INSTRUMENT:

Ferris State University
Returning Freshman Student Survey
Fall, 1990

Introduction:

Part of your class assignment this term will be to distribute a questionnaire that has been developed by a Michigan State University doctoral student who also is employed here at Ferris. As you will find out while doing your client project, you also will be looking for a high response rate from those you survey. Your help will be greatly appreciated!

Each schedule sheet given to you contains a student's name, permanent address, school address and campus/local phone number. An "X" on the schedule grid indicates the times that student is in class. You are expected to make arrangements to meet with each student outside of any regularly scheduled class time so that you may present him/her with the questionnaire. Based on the student's schedule, you should be able to contact him/her by phone at reasonable times of the day or evening. (Note: Students may have changed their class schedule since this information was obtained or they may have a job).

IT IS EXTREMELY IMPORTANT THAT YOU PRESENT YOURSELF AS ONE WHO IS CHARGED WITH THE SPECIAL TASK OF DISTRIBUTING THE QUESTIONNAIRE. THE INFORMATION YOU SHARE WITH THE RETURNING FRESHMAN STUDENT SHOULD BE INTRODUCED TO THAT STUDENT IN AN OPEN AND NO PRESSURE TYPE OF ATMOSPHERE.

Items you will be responsible for distributing:

A. Letter of transmittal

B. Questionnaire

C. Pre-addressed white envelope with red bulldog logo

D. Pre-addressed white envelope "Results Requested"

E. Peach colored return post card

OVER.....

Instructions:

1. After looking over each student schedule, give each student a telephone call at a reasonable time.

2. Explain to the student you are a marketing student and you have been "charged" with distributing a questionnaire for a Michigan State University student who is working on her doctoral dissertation and who is employed here at Ferris State University.

3. Arrange to meet with the student at a mutually agreeable location (ie: the residence hall, Rankin Center or immediately after a class.)

4. Be on time for the appointment and prepared to present items A-E to the student(s).

5. Allow the student(s) to read the letter of transmittal (Item A) and the questionnaire (Item B).

6. Confirm that the student understands the "Directions" section of the questionnaire (ie: participation is voluntary, anonymity will be assured, etc).

7. Answer any questions the student may have. (You may also refer them to me at 592-3660 M-F/8:00-noon and 1-5:00 if there are any concerns you are not comfortable handling.)

   If the student prefers <u>not</u> to complete the questionnaire, thank them for their time. The student should then return items A and B to you.

   If the student indicates he/she will complete the questionnaire, thank him/her for their time. Give him/her item C and so the instrument can be returned via campus mail.

   If the student wants results of the research, give him/her item D.

   Give the student item E and explain he/she should return the post card via campus mail.

8. Return all student schedule sheets and unused items to your marketing research instructor the day following distribution of all of your questionnaires.

T E L E P H O N E L I N K

EXAMPLE:

My name is _____ and I am a senior research student here at Ferris. I am seeking your cooperation by asking you to complete a questionnaire regarding the quality of student life here at FSU.

You are part of a random group of 203 sophomores who have been selected to participate in a survey regarding the quality of student life at Ferris.

****

COMMENTS:

APPENDIX T

EXAMPLE OF SCHEDULE SHEET (RETURNING STUDENTS)

APPENDIX U

LETTER OF TRANSMITTAL (RETURNING STUDENTS)

Ferris State University
College of Arts and Sciences

November 10, 1990

Dear Sophomore!

I REALLY NEED YOUR HELP.... *You have been randomly selected from the fall term 1989-90 freshman class to participate in the study I am performing regarding the attitudes toward alcohol use and alcohol consumption patterns of freshman students at Ferris State University. Your participation is very important because I will analyze the results and use the analysis as the basis for my doctoral dissertation.*

I KNOW THIS IS A BUSY TIME IN THE TERM; IF YOU'LL TAKE ONE TEN MINUTE BREAK TO COMPLETE THE ENCLOSED SURVEY AND POST CARD, IT WOULD BE GREATLY APPRECIATED!!

Even though you are no longer a freshman, your participation in this study will allow you to express the views and experiences you had as a freshman at FSU. Since nationwide studies show a significant number of first year students do not return to the same college the following fall or leave college altogether, reasons that may be related to why students leave Ferris before their sophomore year are being examined. Because we are concerned with the quality of the freshman experience here at Ferris, both President Helen Popovich and Vice President of Academic Affairs E. Gary Nash have sanctioned this study.

Your input is especially valuable since the accuracy of the conclusions drawn increases with the number of individuals responding. You are one among only 203 sophomores to be invited to participate.

You may be assured of complete anonymity. **There is no way we can identify from whom the questionnaires are returned. Once you complete the questionnaire, place it in the white preaddressed and stamped envelope provided. Seal the envelope and mail it by November 16, 1990.**

Please put your name and student number on the preaddressed and stamped peach colored post card and mail it separately from the questionnaire so that I know you have returned a completed survey.

The results of this research will be made available to academic administrators and college staff at Ferris whose responsibilities include enrollment management. You may receive a summary of the results by writing your name, address and "Freshman 1989-90: Copy of Results Requested" on the peach colored post card, NOT ON THE QUESTIONNAIRE.

Thank you for your assistance during this especially busy time. GOOD LUCK WITH YOUR FINAL EXAMS.....YOU'RE GETTING CLOSER TO A DEGREE EACH TERM!!

Sincerely,

Julie Bonkowski

Julie Bonkowski
Associate Professor
Project Researcher

ltrtm/1.&lt

Student Academic Affairs • Starr 119 • 901 S. State Street • Big Rapids, Michigan 49307-2295 • (616) 592-3666

APPENDIX V

NUMBER 10 RETURN ENVELOPE--BULLDOG LOGO (RETURNING STUDENTS)

DEAN'S OFFICE/ SCHOOL OF ARTS & SCIENCES
STARR 119
ATTENTION: *JULIE BONKOWSKI*

APPENDIX W

NUMBER 10 ENVELOPE--RESULTS REQUESTED (RETURNING STUDENTS)

DEAN'S OFFICE/ SCHOOL OF ARTS & SCIENCES
STARR 119
ATTENTION: *JULIE BONKOWSKI*

☞ R E S U L T S R E Q U E S T E D

APPENDIX X

FOLLOW-UP LETTER (RETURNING STUDENTS)

H E L P !!!!!!!

IT'S A BUSY TIME OF THE TERM AND I DESPERATELY NEED YOUR HELP SO I MAY COMPLETE MY CLASS PROJECT. AFTER READING THE ENCLOSED LETTER AND LOOKING OVER THE MATERIALS, PLEASE FILL OUT:

GOLDENROD SURVEY (PLACE IN WHITE ENVELOPE WITH RED BULLDOG LOGO, SEAL, AND RETURN VIA CAMPUS MAIL)

PEACH COLORED POST CARD (RETURN VIA CAMPUS MAIL)

IF YOU WOULD LIKE RESULTS--INDICATE YOUR NAME AND ADDRESS ON A SHEET OF PAPER AND SEND VIA CAMPUS MAIL IN THE "RESULTS REQUESTED" ENVELOPE.

NO STAMPS NECESSARY!!!!!!!!!!!

PLEASE TAKE A 10 MINUTE BREAK FROM STUDYING FOR FINALS AND HELP ANOTHER STUDENT.....ME!!!!

Julie Bonkowski

JULIE BONKOWSKI

APPENDIX Y

LETTER OF ENDORSEMENT

Ferris State University
Office of Academic Affairs

June 13, 1990

To whom it May Concern:

Julie Bonkowski, Associate Professor in the School of Arts and Sciences at Ferris State University, is undertaking research to satisfy the requirements of the Ph.D. in College and University Administration at Michigan State University. The researcher will examine the attitudes toward alcohol use and the self-reported alcohol consumption patterns of non-returning freshman students who were enrolled at Ferris State University during the Fall 1989-90 term. Results of the research may be used to gain insight regarding attrition factors and may reveal additional information regarding the relationship of alcohol to the freshmen student attrition process.

Professor Bonkowski has the joint endorsement of the university and the Substance Abuse Task Force in this endeavor. She may have access to such records and equipment that will facilitate the research. She is given permission to use the official letterhead stationary and envelopes in the external contacts and to sign correspondence with her professional title.

Sincerely,

E.G. Nash, Vice President
Academic Affairs

R Paul Sullivan

Paul Sullivan, Chair
Substance Abuse Task Force

APPENDIX Z

LETTERS OF APPROVAL

MICHIGAN STATE UNIVERSITY

UNIVERSITY COMMITTEE ON RESEARCH INVOLVING
HUMAN SUBJECTS (UCRIHS)
206 BERKEY HALL
(517) 353-9738

EAST LANSING • MICHIGAN • 48824-1111

July 26, 1990 **IRB# 90-323**

Julie Haggin Bonkowski
14955 Chula Vista
Big Rapids, MI 49307

Dear Ms. Bonkowski:

RE: "ATTITUDES TOWARD ALCOHOL USE, ALCOHOL CONSUMPTION PATTERNS AND THE ATTRITION OF FRESHMAN STUDENTS: IS THERE A RELATIONSHIP? **IRB# 90-323**"

The above project is exempt from full UCRIHS review. The proposed research protocol has been reviewed by another committee member. The rights and welfare of human subjects appear to be protected and you have approval to conduct the research.

You are reminded that UCRIHS approval is valid for one calendar year. If you plan to continue this project beyond one year, please make provisions for obtaining appropriate UCRIHS approval one month prior to July 26, 1991.

Any changes in procedures involving human subjects must be reviewed by UCRIHS prior to initiation of the change. UCRIHS must also be notified promptly of any problems (unexpected side effects, complaints, etc.) involving human subjects during the course of the work.

Thank you for bringing this project to my attention. If I can be of any future help, please do not hesitate to let me know.

Sincerely,

Kenneth O. Marvin, Jr.
Acting Co-Chair, UCRIHS

KOM/sar

cc: L. Hekhuis

Ferris State University
Student Publication

September 25, 1990

Mrs. Julia Bonkowski, Associate Professor
Starr 119
College of Arts and Sciences

Dear Mrs. Bonkowski,

The Institutional Review Board (IRB) at Ferris State University has approved your study to examine the attitudes towards alcohol use and self-reported alcohol consumption patterns of returning freshman students.

Your revisions covered the principal concerns of the committee in terms of protecting "subjects at risk."

Please let me know if the committee can be of further help in any aspect of your research.

Sincerely,

Jack McNamara

Jack McNamara, Chairman
Institutional Review Board

MICHIGAN STATE UNIVERSITY

OFFICE OF VICE PRESIDENT FOR RESEARCH
AND DEAN OF THE GRADUATE SCHOOL

EAST LANSING • MICHIGAN • 48824-1046

October 17, 1990

Julie Haggin Bonkowski
14955 Chula Vista
Big Rapids, MI 49307

RE: ATTITUDES TOWARD ALCOHOL USE, ALCOHOL CONSUMPTION PATTERNS AND THE ATTRITION OF FRESHMAN STUDENTS: IS THERE A RELATIONSHIP?, IRB# 90-323

Dear Ms. Bonkowski:

Your proposed revision in the questionnaire for the above proposal is approved. However, since this is an approval of your revision only, you are reminded that UCRIHS approval of the parent project is valid for one calendar year. If you plan to continue this project beyond one year please make provisions for obtaining appropriate UCRIHS approval one month prior to July 26, 1991.

Any changes in procedures involving human subjects must be reviewed by the UCRIHS prior to initiation of the change. UCRIHS must also be notified promptly of any problems (unexpected side effects, complaints, etc.) involving human subjects during the course of the work.

Thank you for bringing this revision to our attention. If we can be of any future help, please do not hesitate to let us know.

Sincerely,

David E. Wright, Ph.D.
Chair
University Committee on Research
Involving Human Subjects

DEW/deo

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BIBLIOGRAPHY

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