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I am submitting herewith a dissertation written by Margarette Phyliss Bailey Noah entitled "Framework for Alcohol Education, Prevention and Intervention Based on Findings of Alcohol Knowledge and Behavior at a Small Private College in East Tennessee." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Health Education.

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FRAMEWORK FOR ALCOHOL EDUCATION, PREVENTION AND
INTERVENTION BASED ON FINDINGS OF ALCOHOL
KNOWLEDGE AND BEHAVIOR AT A SMALL
PRIVATE COLLEGE IN EAST TENNESSEE

A Dissertation
Presented for the
Doctor of Education
Degree
The University of Tennessee, Knoxville

Margarette Phyliss Bailey Noah

December 1988

DEDICATION

This dissertation is dedicated to my son, Darren, and daughter, Ashlee. May their lives be filled with challenging and adventuresome mountains needing to be climbed, only to find enjoyable and rewarding achievements when the top has been reached.

I love you,

Mom

ACKNOWLEDGMENTS

The author wishes to thank her doctoral committee: Dr. Bill Wallace, chairman, Dr. Donald J. Dessart, Dr. Robert Kirk, Dr. James J. Neutens, and Dr. Robert J. Pursley. The contributions and inspiration of Dr. Angela Fryer are acknowledged and greatly appreciated.

The subjects, students at Lincoln Memorial University, are thanked for their willingness and eagerness to participate and assist in this study. Much appreciation is extended to them.

A special person, Dr. Gary J. Burchett, the President of Lincoln Memorial University, gave unlimited support and encouragement, not only for the pursuit, but also for the completion of this degree, and to him the author extends special thanks and a heart filled with gratitude.

Other colleagues, Bonnie B., Reba, Steve, Charlie, and Bonnie M. continuously offered their support, encouragement, sympathy, condolences, inspiration, hope, and congratulations. Appreciation is extended to Charlie Poteat and Mike O'Neil for their patience with me throughout the analysis of the data.

Much wit and humor, along with genuine concern and encouragement for completion of this degree was extended by Dr. Earl Brooks, Vice-President for Academic Affairs. He

never lost sight of the fact that I could be more than an "ABD," and his support was valued highly.

My mother and father, Mary and Hubert Bailey, provided unending support, care, concern, and love from the beginning of the project to its completion, along with a special aunt, Clara Mae, who served as typist and "chief morale supporter." All are deserving of much appreciation, thankfulness, and my love.

The motivation, encouragement, and many contributions of Dr. Donna Breitenstein, editor and special friend, were greatly appreciated and regarded as of immeasurable value. Her sincere "belief in me" will always be treasured.

An extended eternity of "Thank Yous" is given to my special friend, Okie Lee, who persevered with me all along the way and rekindled the fire when necessary. She knew just when clouds had surrounded the project, and for any situation, she always presented the needed rainbow.

Lastly, God has given me life, and this life is a journey, not a destination. I, like the eagle, have taken flight, and at last I have the wind beneath my wings.

ABSTRACT

The purpose of this study was to facilitate the formulation of a curriculum framework for an alcohol education program specifically designed to meet the needs of students at Lincoln Memorial University (LMU) in Harrogate, Tennessee. This study, by providing data concerning the alcohol knowledge and drinking patterns of LMU students and using that data to develop a curriculum framework for an alcohol education program to be used at LMU has laid the groundwork for filling a significant gap in the student services provided by LMU.

An analysis of the responses of 454 LMU students produced the following major findings:

1. Of the traditional college-age students, the percent of those who abstained from drinking beer decreased between ages 18 and 22, then increased again among 25-year-olds. The percentage of abstainers from liquor consumption continued to decrease after age 22 through age 25.
2. A larger percent of LMU students were heavy drinkers of beer at ages 21, 22, and 23, but the same was not true for wine and liquor consumption.
3. The fewest moderate and heavy drinkers for all ages were those who drank wine.

4. With all beverages, higher grade-point averages were reported by those who drank less and also less frequently. With all beverages, the students who drank more and more often reported achieving lower grade-point averages. There were fewer moderate and heavy wine drinkers who reported a lower GPA than was true of beer or alcohol drinkers.

5. As the reported importance of religion decreased, the acknowledged drinking of all alcoholic beverages increased.

6. All categories of consumption of alcohol were higher among students residing in dormitories than among those who lived off-campus.

7. Female students reported higher rates of abstinence from beer and liquor consumption than males, but were more likely to drink wine.

8. Males were more likely to be moderate and heavy drinkers of beer and liquor, which accounts for women reporting greater percentages in the category of light drinkers for these particular beverages. The highest percentage of heavy drinking was of beer by men.

9. Few patterns emerged on drinking behavior related to year in school. There was a slight, but progressive, decrease in heavy liquor drinking from freshman to senior year.

10. The most frequently experienced alcohol-related problem was vomiting, followed by having a hangover, drinking and driving, attending classes after drinking, and dating problems.

11. Few students scored high on alcohol knowledge, and the majority were unable to answer half the items correctly.

These findings and the conclusions drawn from them facilitated the development of a general profile of the student body in relation to the important variables of class ranking, ratio of males to females, on- or off-campus residence, GPAs, religious values, and drinking patterns.

This profile was then used to select those concepts which needed to be included in an alcohol education program for all LMU students and to determine the extent to which the selected concepts should be emphasized and the extent to which each should be incorporated into campus-wide alcohol education activities.

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CHAPTER I

FORMULATION AND DEFINITION OF THE PROBLEM

A. Introduction

The consumption of alcoholic beverages has been a part of college life on most campuses in the United States for several decades. Thus, one of the most perplexing challenges for postsecondary school administrators and counselors is the development and continuation of a suitable program for preventing and eliminating alcohol-related student problems. In an effort to create a data base for the development of such programs, student drinking patterns and drinking problems have been studied repeatedly over the years, beginning with the classic study by Straus and Bacon in 1953.

Alcohol has been referred to as the college students' drug of choice, as well as the world's number one psychoactive substance. Menninger (1988) reported that, in 1986, alcohol abuse caused over 100,000 deaths and cost Americans approximately \$120 billion in health and social expenditures. These figures are far higher than those published for drug abuse.

The use of alcohol has been prevalent in America for centuries. In fact alcohol is available to people all over the world, and repeated attempts to control its use or even

to eliminate its availability have failed. Much of this failure may be due to the fact that, in the United States, alcoholic beverages are of great economic importance. Ray and Ksir (1987) reported that Americans spent in excess of \$50 billion a year for beer, distilled spirits, and wine. Total sales of distilled spirits reached an all-time high in 1981 and declined yearly from 1982 through 1984. Beer sales leveled off between 1981 and 1984; however, wine sales continued to increase through 1984 (Ray & Ksir, 1987).

The literature contains abundant data identifying college students as a population with a significant consumption of alcoholic beverages, a population which has clearly contributed to the economic growth of the alcoholic beverages industry and which has thus become one of its major targeted markets.

Some of the earlier studies (Straus & Bacon, 1953, and Roger, 1956) indicate that a significant percentage of college students surveyed considered themselves to be "drinkers." Blane and Hewitt (1977) reviewed and summarized the findings of 68 surveys of drinking among college students and reported that alcohol use was common in the college population.

The widespread use of alcohol among college students concerns educators because, when researchers have studied the relationship between college students' drinking and

their academic achievement, a negative association has been found (Wechsler & Thum, 1973; DeMone, 1966; and Rachal, 1975). Engs (1977) found a significant correlation between quantity-frequency of alcohol consumption and academic achievement. The higher the students' grade-point average, the less alcohol the students drank. Those students who had poor grade-point averages consumed more alcohol and with greater frequency.

Engs and Hanson (1983) found a significant increase in several drinking-related problems when compared to a previous study in 1974. Students experienced more hangovers, vomiting, drinking and driving incidents, and missed classes because of hangovers. Students have reported other alcohol-related problems, such as fighting after drinking, damaging university property, having trouble with law enforcement agencies and college administrators, losing jobs because of drinking, and going to class after drinking. In the 1983 study, Engs and Hanson noted that there had been a slight decrease in the alcohol-related problems regarding going to class after drinking and trouble with college administrators. This particular decrease in some problems may be attributed to college officials' changing their alcohol policies and taking more stringent disciplinary action (Claydon & Sloane, 1986).

One of the most common reasons stated by college students for using alcohol is the "need to escape" personal problems. However, few studies have been found that show a strong correlation between students' emotional problems and their drinking. Reiskin and Thum (1981) stated that

little is known about the drinking of college students who are experiencing emotional difficulties of sufficient magnitude to lead them to seek mental health services (p. 717).

More research is needed in this area to identify the need and to establish a framework for programs which would make it easier for students to seek help for alcohol-related problems, either individually or through a referral. College counselors and administrators are particularly aware of the need for such programs. Alcohol has been identified as one of the "gateway" drugs leading to the use of other chemical substances, which are usually some of the illicit drugs. Studies by Wechsler (1976) and Rachal (1975) found that heavy drinkers were significantly more likely to report use of marijuana, amphetamines, and other drugs as compared to moderate or light drinkers.

B. Statement of the Problem

Experience has taught college administrators that students attending small Southeastern schools are not immune to alcohol-related problems which can harm

academic performance. Educators working in such schools have long recognized their need for effective programs aimed at preventing and eliminating alcohol-related student problems. Prior to this study, however, no effort had been made to collect relevant data and use the data to develop a curriculum framework for a suitable program for such schools and specifically for Lincoln Memorial University (LMU) in Harrogate, Tennessee. Without such a framework, it has been difficult for educators in small, Southeastern schools in general and specifically for those at LMU to develop effective plans and materials for an alcohol education program.

C. The Purpose of the Study

The purpose of the study was to develop a curriculum framework for an effective alcohol education program for all LMU students, based on the demographics, alcohol knowledge, alcohol-consumption patterns, and related behavior problems reported by a sample of LMU students.

This study specifically sought to answer the following questions:

1. What are the demographic characteristics of the students who use alcoholic beverages at LMU?
2. What are the drinking patterns of LMU students regarding beer, wine, and liquor?

3. What problem behaviors have been experienced as a result of drinking by LMU students?
4. What knowledge of alcohol do LMU students possess?
5. What type of curriculum framework for alcohol education would be effective with LMU students?

D. Need for the Study

There has continued to be a growing awareness about alcohol use among college students, especially during the earlier years of the 1980s. Further, it has become more and more apparent that alcohol use has caused significant problems for individual students and for college administrators (Claydon & Sloane, 1986). Unfortunately, small private colleges, although often located in small towns or rural areas, have not been exempt from the problems associated with alcohol usage. Stone's (1984) dissertation research surveyed college undergraduates at a small, private college in rural New England and found that 96 percent of the respondents considered themselves alcohol users. Two-thirds of the students reported drinking frequently, once or twice a week. Results of the study also indicated one-tenth of the women and one-fifth of the men were considered to be "heavily involved" with alcohol. It appears that alcohol use has no boundaries regarding large or small colleges and universities. The percentage of alcohol users and the percentage of related alcohol problems have been shown to

be approximately the same, regardless of campus size or rural versus metropolitan area.

Concern for the detrimental effects of student drinking has led to the raising of the legal drinking age in some states, the organization of parental and student support groups, placement of greater responsibility on drinking establishment owners and bartenders regarding volume of alcohol sold and consumed, and the attainment of further federal, state, and local funds for educational, treatment, and rehabilitation programs. These trends have indicated that parents and educators today are less likely to remain tolerant of alcohol use and the problems it has presented. Claydon and Sloane (1986) have also stated that

current trends in health and fitness and recent research implicating alcohol in the development of an array of acute and chronic diseases and disorders has further stimulated activity towards more moderate and responsible use of alcohol on the college campus (p. 226).

For many years, colleges and universities have attempted to inhibit the excessive use of alcohol by the implementation of many different alcohol education programs which represented different educational philosophies and ideas (Milgram, 1976). In 1974 the National Institute of Alcohol Abuse and Alcoholism (NIAAA) in the second report to the U.S. Congress reported that the drinking patterns of Americans had changed little in spite of all the available

programs. Engs (1977) implied that in the past when a health problem has been recognized as a crisis situation, "educational programs" were developed too quickly by individuals or agencies for the purpose of "program creation" and failed to consider the problems and needs of the affected individuals. Engs (1977) further stated

many of these programs are then foisted upon students and their public without being thoroughly evaluated as to their effect in changing knowledge, attitudes, and more importantly, behaviors . . . Because of the renewed interest in alcohol abuse, many alcohol education programs are now being developed . . . to meet the 'alcohol crisis.' However, before these programs are presented to large groups of people, they should be thoroughly evaluated to determine their effect, particularly upon behaviors associated with drinking (p. 39).

This idea is supported in another study by Engs and Hanson (1983) in which they stated

surveys of college drinking patterns and problems need to be carried out on individual campuses before alcohol awareness programming is implemented to determine the local patterns and problems. Possible changes in drinking related problems need to be observed over time so that campus alcohol policy and programs can be augmented based on these behavior changes (p. 80).

More recently, Curtis (1986) administered a survey to students at Virginia Polytechnic Institute and State University (VPI) which determined drinking patterns and related problems on that campus. Any changes made by Curtis in the existing alcohol education program would be based on

the particular needs and problems of students enrolled at VPI and possibly would be much more effective for that population.

Another issue some college officials are faced with is that of litigation. In response to the question, "Why do colleges and universities establish alcohol abuse and prevention programs?", Thorner (1984) said

they establish these programs in order to attempt to minimize damage to property, . . . and since auto fatalities and suicide among youth are mostly alcohol related, universities attempt to diminish alcohol abuse in order to prevent the mortality of some of its students and some institutions are defensive about their legal liability for incidents that may arise out of student drinking (p. 46).

According to Thorner (1984), the most recent court ruling appears to have released universities from legal responsibility for students' use of alcohol. College students are viewed as adults; thus, releasing colleges and universities from any "loco parentis" obligation. Nevertheless, postsecondary schools are eager to reduce alcohol-related problems among their students. One of the most effective ways to reduce problems occurring because of drinking alcohol is to educate individuals concerning the responsible use of alcoholic beverages. This trait can apparently be fostered by the use of alcohol education programs developed specifically for a particular population.

The literature has identified the existence among college officials of a keener interest in student alcohol use and its related problems. The literature also suggests that more research will be needed to develop effective alcohol education programs for specific colleges.

Lincoln Memorial University has as one of its purposes the education of all students fully so that each may become a productive citizen. Alcohol use and the related problems have discouraged some students from attaining their potential and completing their degrees at that institution.

Dr. Earl Brooks, Vice-President for Academic Affairs at LMU, has indicated a need to develop an effective counseling center on campus which would provide numerous services to students. One service, in particular, would be the development of a wellness center, which would house an alcohol education program. It is a goal at LMU to develop an effective alcohol education program suitable to the particular needs of the students who are enrolled there.

The literature has shown that the first step in developing an alcohol awareness program is to assess the particular college population to determine what the drinking patterns are and what problem behaviors exist. Following these findings, a program appropriate to the needs of those it will serve can be developed and implemented. Lincoln Memorial University needs such a program.

E. Delimitations

This study was delimited to undergraduate students enrolled at Lincoln Memorial University during the spring quarter, 1987.

F. Limitations

Results of this study are generalizable to Lincoln Memorial University and other similar institutions.

G. Basic Assumptions

1. The drinking patterns and related problem behaviors of LMU students could be accurately identified.
2. The instrument employed in this study was valid and reliable.

H. Definition of Terms

For the purposes of this study, the following definitions were employed:

Abstainer. An individual who drinks less than once a year or not at all (Engs, 1977).

Alcohol. An intoxicating drink derived from fermented and distilled liquors (e.g., beer, wine, whiskey), also known as ethanol.

Beer. An alcoholic drink made from malt and flavored with hops with an alcoholic content of at least 2.4 percent.

Distilled Spirits. Alcoholic liquor obtained by the process of distillation which contains at least 24 percent alcohol (e.g., whiskey, brandy, rum, gin, and vodka).

Drinking Pattern. An indication of the type, amount, and frequency with which an alcoholic beverage is consumed by an individual.

Heavy Drinker. An individual who consumes 6 or more servings of alcoholic beverages at any one sitting more than once a week (Engs, 1977).

Light Drinker. An individual who consumes an alcoholic beverage at least once a month, but not more than 1 to 3 drinks at any one sitting (Engs, 1977).

Liquor. An alcoholic drink which has been distilled rather than fermented.

Moderate Drinker. An individual who consumes an alcoholic beverage at least once a month with no more than 3 to 4 drinks or at least once a week with no more than 1 to 2 drinks at any one sitting (Engs, 1977).

Problem Behavior. Any negative behavior experienced as a direct result of consumed alcoholic beverage(s) which has potential for affecting the progress and success of a college student who is attempting to earn a degree.

Wine. An alcoholic beverage made from the fermentation of fruits with a natural alcohol content of from 8 to 14 percent.

I. Summary

Chapter I has provided information on how the problem which this study addresses was formulated and defined. It has established the prevalence of the use of alcoholic beverages by American college students and has cited the lack of relevant data for use in developing a curriculum framework for a suitable alcohol education program for LMU and similar small, Southeastern schools. The chapter has clarified both the purpose of the study and the need for such a study. Further, Chapter I has stated the delimitations, limitations, and basic assumptions of the study, as well as defining the major terms used in reporting the study's findings.

CHAPTER II

REVIEW OF LITERATURE

A. Introduction

Drinking patterns and related problem behaviors among college students have continued to be of great concern and interest to researchers for the past 30 years. Numerous studies have substantiated the high occurrence of alcohol consumption by young adults enrolled in institutions of higher education. More recently, studies have revealed not only that a significant percentage of college students have continued to use alcohol, but also that more students have become heavy drinkers and have experienced problems related to their drinking (Engs & Hanson, 1983). A growing awareness of alcohol consumption and the problems associated with its usage has promoted numerous studies (Archibald, 1986; Bell, 1986; Bergstrom, 1984; Bessmer, 1985; Claydon, 1983; Dimarco, 1986; Eakin, 1984; Finch, 1984; Hunte, 1983; Lonnstrom, 1985; Lundberg, 1985; Miller, 1983; Stockwell, 1984; and Stone, 1984).

Kraft (1979) stated that more research is needed to determine factors that influence students' drinking patterns, especially those factors that contribute to negative consequences. Although much is known about the prevalence of alcohol consumption on college campuses, it

appears that little is known about the environmental factors that promote drinking and even less about effective prevention and intervention programs. The following literature review is intended to provide the theoretical basis for this study, which was undertaken in order to develop the curriculum framework for such programs at LMU.

B. Prevalence of College Drinking

The fact that alcoholic beverages have been used extensively, particularly by college students, has been well documented in the literature. Perhaps the most often cited study and one which is considered to be a landmark classic, is the study conducted by Straus and Bacon (1953) from 1949 to 1951, which reported college drinking as quite extensive. Theirs was a national study which involved approximately 17,000 students, and their findings showed 80 percent of the men and 61 percent of the women, or 74 percent of all the students surveyed, considered themselves to be drinkers.

In a study which included more than 2,000 students, Hanson (1974) reported more than 50 percent of the students considered themselves to be drinkers. At the State University of New York at Buffalo, Buchbinder and Thorner (1987) reported 90 percent of the college students drank alcoholic beverages. In New England, a study showed that 95 percent of college students were considered drinkers

(Wechsler & Rohman, 1981). At the University of Indiana, Engs (1978) reported that approximately 90 percent of the students consumed alcoholic beverages. Glassco (1970), Anderson and Gadaletto (1979), Nelson (1979), McBrien (1980), Cooper (1981), and Ramsey (1982) all indicated similar findings regarding college student use of alcoholic beverages. Their findings noted a significant percentage of students who consumed alcohol at colleges and universities across the nation.

Studies of college students' drinking patterns have been representative of most areas within the United States, and the results from those colleges and universities surveyed are similar. Most of the studies which followed Straus and Bacon's study (1953) have shown that a large percentage of college students use alcohol to some extent. Some of the more recent studies have shown that there has been an increase in the percentage of students who have ever used alcohol (Girdano & Girdano, 1976; Kopplin, et. al., 1977; Banks & Smith, 1980). Other studies, however, do not support those findings (Engs, 1977; Hanson, 1977; Tooley & Dezelsky, 1978; and Lavin, 1980).

Engs (1977) has reported findings from other studies, conducted during the 1950s, indicating that drinking was practiced by a significant number of college men and women. It has been reported most often that college males consume

more alcohol and with greater frequency than college females (Straus & Bacon, 1953; Hockhauser, 1977; Kaplan, 1979; Engs, 1983).

Reiskin and Wechsler's (1981) study found exception to this, but their study was limited to students at a campus medical center. Therefore, low generalizability could be assumed. Straus and Bacon (1953) and Blane and Hewitt (1977) stated that white and black men do not differ in their alcohol use, but that higher proportions of black women abstain from alcohol use when compared to white women. However, more recent studies (Engs, 1983, and Kaplan, 1979) have reported black college students have lower rates of alcohol consumption and fewer problems associated with heavier drinking when compared to white college students.

Bell (1985) further investigated this factor in a doctoral dissertation study at the University of Georgia which assessed black and white college students' expectancies and patterns of use regarding alcohol. Findings showed a significant difference between black college students' and white college students' use of alcohol and expectancies. White college students' drinking patterns were higher and so were the scores regarding expectancy factors.

Finch (1983), in a dissertation study at Mississippi State University, found race to be a significant factor

regarding alcohol consumption and reported that white college students drank more alcohol and had more alcohol-related problems than black college students.

Findings from a doctoral dissertation study at Southern Illinois University at Carbondale showed that alcohol-related problems and alcohol-consumption patterns did not change with age; however, older students became intoxicated less often and consumed less alcohol at parties (Bessmer, 1984). The researcher also reported that older college males tended to drive more often than younger college males after having consumed several alcoholic drinks. An average of 3.9 "drinking and driving" incidents were recorded for those age 21 and over.

Several states have raised the legal drinking age in an effort to reduce alcohol consumption and related problems. Bessmer's (1984) study found that this factor had no positive effect on alcohol consumption or related problems, nor did it reduce the frequency of intoxication. In fact the investigation found that the law seemed to have a negative effect on college students since intoxication was maintained at a higher level after the legal drinking age was raised.

Lonnstrom's (1984) doctoral dissertation at Rensselaer Polytechnic Institute revealed that there was a slight decrease in problem drinking, vandalism, grades, and class

attendance when the legal drinking age was raised from 18 to 19; however, campus enforcement problems increased, and more "closet drinking" and off-campus drinking occurred. The researchers also found a significant change in the drinking patterns of college women from 1974 to 1982. Their study found a similar percentage of women drinking during both years, but the number of heavy drinkers tripled.

Rogers's study (1956-56) surveyed approximately 700 students at a Midwestern university and determined 61 percent of the men and 38 percent of the women consumed alcoholic beverages. Gusfield (1955) completed a study of a small private college and found that 95 percent of the students used alcohol.

Blane and Hewitt (1977) reviewed and summarized the findings of 68 surveys of alcohol use among college students. The surveys were divided into three time periods: (1) those conducted prior to 1966, (2) those conducted from 1966 to 1970, and (3) those conducted from 1971 to 1975. Their findings indicated an increase in the prevalence of drinking between the first two time periods and for the third time period.

Throughout the 1970s, numerous studies further supported the belief that alcohol was consumed by a large majority of college men and women. The National Institute on Alcohol Abuse and Alcoholism (NIAAA) (1976) completed a

national study of the drinking patterns of college students and indicated that from 70 to 95 percent of the students surveyed drank alcoholic beverages. Another study in the early 1970s found that 85 percent of the men and 82 percent of the women in a Southern university used alcohol (Glassco, 1971). Penn (1973) completed a study that indicated 68 percent of students at a Northwestern university drank alcoholic beverages. Matross (1974) conducted a mailed survey to students at the University of Minnesota and found the majority of students (56 percent of men and 61 percent of women) were classified as moderate drinkers.

In 1975 Engs found that 86 percent of the students at a Midwestern university drank beer, 82 percent drank spirits, and 69 percent had tried wine within a year. In a study by Kuder and Madon (1976), it was reported that a large majority, 85 percent, of the college students used alcoholic beverages. Researchers (Engs, DeCoster, Larson & McPherson, 1976) completed a study with more than 4,000 college students at the University of Indiana and found that 87 percent of the students examined drank alcoholic beverages.

Wislogel (1978), in his dissertation study, surveyed students at West Chester State College on alcohol use and reported that 90 percent of the students used alcohol. His findings further indicated that more than one-half of the students surveyed acknowledged having had problems with law

enforcement, class attendance and studying. The researcher's findings indicated some type of alcohol education program probably would be useful on that particular campus.

Kraft (1979) studied some of the drinking patterns of college student and examined the implications of those patterns for prevention programs. He found that the characteristics of college students' drinking practices had changed little when compared to the findings of Straus and Bacon's study in 1953. College students exhibited more openness to drinking alcohol in 1979 than during the early 1950s.

The 1980s have shown little difference regarding alcohol consumption by college students enrolled in colleges and universities across the United States. Wakefield (1982) studied alcohol and other drug use at a Midwestern university and found that alcohol was used by 89 percent of the students surveyed. It was reported that students living off-campus tended to use alcohol more frequently than those living on campus.

Carter and Sedlacek (1983) examined drug use among University of Maryland freshmen in 1973 and again in 1983. They reported a significant decline in the use of some chemical substances; however, there was no reported decline

in the use of alcohol. Freshmen men consumed more beer, and freshmen women consumed more wine.

In another study regarding drinking patterns among college fraternities, Kodman and Sturmak (1984) reported 90 percent of college students acknowledged using alcohol. Beer was the preferred alcoholic beverage. Findings have implied that most students who belong to college fraternities use alcohol frequently.

The Student Drinking Information Questionnaire was administered to approximately 500 students at a large Midwestern university in an effort by the researchers to collect relevant data that would support an alcohol education program. The results showed that a significant percentage (90 percent) of the students reported using alcohol. Some of those students admitted having had problems as a result of drinking alcohol (Keane & Swinford, 1984).

Rapaport, et al. (1984) surveyed approximately 900 undergraduate students at Central Michigan University (CMU) to determine their drinking patterns and consequences related to their drinking. They found that most CMU students consumed alcohol and that alcohol use had resulted in problem behaviors for many.

Stone (1984) completed dissertation research at a New England coeducational college that examined drinking patterns of undergraduates. The results showed that 96

percent of the students considered themselves drinkers. More than two-thirds of the students surveyed indicated they drank alcoholic beverages as often as once or twice a week.

Several studies have indicated that college males consume more alcoholic beverages than college females (Straus & Bacon, 1953; Rogers, 1956; Hanson, 1974; Hockhauser, 1977; Cooper, 1981; and Engs, 1982). Some studies (Straus & Bacon, 1953; Rogers, 1956; Hanson, 1972; and Dvorak, 1972) reported that college seniors drank more alcoholic beverages than any other class of students; however, later studies (Hanson, 1974, and Engs & Hanson, 1977) have reported only minimal differences in alcohol consumption among the different class years of college students.

It has been reported often that college men consume alcohol not only more frequently, but in larger quantities than do college women. Men were reported to have experienced more problems than women related to alcohol consumption (Kaplan, 1979; Wechsler & McFadden, 1979; and Engs, 1982).

The relationship between alcohol use and religious affiliation has been heavily examined. A number of factors have been associated with college students' drinking patterns and related problems which have explained the reasons students use alcohol. Many researchers have

examined religiosity as a related factor. Religious affiliation has been widely researched over the past 25 years and has appeared to be strongly correlated with the use of alcohol by college students. Engs (1983) reported the highest percentage of drinkers was found among Jewish students, the lowest among Protestants, with Catholics ranking somewhere between the two. Jessor and Jessor (1975) concluded that college students' alcohol use was related to other religious factors. For example, the importance placed upon religion and church attendance and actual participation in religious activities were noted as important variables regarding alcohol consumption. Students who participated in these activities used alcohol less; therefore, fewer problems with alcohol were identified.

Stockwell (1984) completed a dissertation study at the University of Virginia and found the factors of "religion" and "importance of religion" to be related to drinking patterns. Results of the study reported more heavy drinking occurred among respondents who "did not consider religion important," and less drinking occurred among respondents who considered religion "very important."

Socioeconomic status has been cited as a factor that accounts for differences in alcohol use among college students in different colleges and universities across the nation. Straus and Bacon (1953) reported more alcohol

consumed by males and females from families with incomes in excess of \$10,000 and much less alcohol use by college students with family incomes less than \$2,500. Presently, alcohol consumption on college campuses has continued to be linked to the socioeconomic level of students' families. Those who can afford it spend more money, more often for entertainment and alcoholic beverages.

College students' drinking patterns have been strongly related to the drinking patterns of parents. A higher family income has led to greater opportunities and more reasons to use alcohol in the home. A strong relationship between parental drinking and student drinking was presented in Hanson's national study (1977) and was further supported in similar findings from the benchmark study by Straus and Bacon (1953). One study which examined religiosity and drinking patterns, however, refuted those previous findings (Banks & Smith, 1980).

Generally, most studies have not reported a high incidence of alcoholics among college students. Kraft (1979) described the nature of college drinking as transitory, which indicated that college students are likely to reduce their alcohol consumption after leaving college. Ingalls (1978) and Kodman and Sturmack (1984) have reported, however, that alcohol is the preferred drug among college

students and that many have experienced numerous problems because of alcohol usage.

Summary: Straus and Bacon (1953) established that two-thirds of 17,000 college students surveyed were drinking alcoholic beverages between 1949 and 1951. In 1974 Hanson found that more than half of 2,000 college students surveyed were drinking alcoholic beverages. Glassco (1970), Wislogel (1978), Engs (1978), Anderson and Gadaletto (1979), Nelson (1979), McBrien (1980), Cooper (1981), Wakefield (1982), Kodman and Sturmak (1984), Keane and Swinford (1984), Stone (1984), and Buchlunder and Thorner (1987) all found that approximately 90 percent of the college students whom they surveyed drank alcoholic beverages. Bessmer (1984) found that raising a state's legal drinking age is not likely to alter this high percentage.

Jessor and Jessor (1975) and Stockwell (1984) found that the importance students attributed to religion and the extent to which they participated in religious activities were strongly correlated with their consumptions of alcoholic beverages. Students who participated in the studies of these researchers and who also valued religion and regularly participated in religious activities were found to have used less alcohol than those students who valued religion less and were less involved in religious activities.

Relevance: The questionnaire used in this study sought to establish the percentage of surveyed students at LMU who drank alcoholic beverages and the value which each of the respondents assigned to religion.

C. Problems Associated With College Students' Alcohol Use

Alcohol-related problem behaviors have been reported in a number of studies. Engs (1977) reported 20 percent of students surveyed had never experienced any problems because of their alcohol use. However, 29 percent indicated they had experienced one or two problems, and 22 percent reported they had experienced three or four problems as a result of their alcohol usage. Engs (1977), Wechsler and McFadden (1979), Kraft (1979), Wechsler and Reiskin (1981), and Engs and Hanson (1985) have reported that a significant percentage of college students have indicated they have experienced some of the following problems (Engs, 1977) as a result of their consumption of alcoholic beverages:

1. Hangover
2. Nausea and vomiting
3. Driving after excessive drinking
4. Driving while drinking
5. Missing class because of hangover
6. Coming to class after drinking
7. Fighting after drinking
8. Being criticized by date because of drinking
9. Missing class after drinking
10. Damaging university property or setting off false fire alarms because of drinking
11. Knowing of problem with drinking
12. Having trouble with the law because of drinking

13. Receiving a lower grade because of drinking
14. Having trouble with school administration because of drinking
15. Being arrested for driving while intoxicated
16. Losing a job because of drinking (p. 2150).

Studies that have surveyed alcohol-related problem behaviors among college students who use alcohol have reported that most students have experienced hangovers, nausea and vomiting, and driving while drinking (Bogg & Hughes, 1973; Engs, 1977; Kraft, 1979; and Wechsler & McFadden, 1979). Engs and Hanson (1983) reported a significant increase in all of the problems surveyed from freshman students to senior students with the exception of the problems with the law and school administration and getting into fights. No significant difference was found among freshman and senior students regarding losing a job, being criticized by a date, or being arrested for driving while intoxicated.

Kraft (1979) reported 30 percent of students had driven a car when drunk; 11 percent had destroyed property; 16 percent had experienced minor injuries; and 4 percent had trouble with police. Wechsler and McFadden (1979) reported 10 percent of students had experienced automobile accidents because of their drinking and a similar percentage of students indicated they had experienced other alcohol-related accidents in which someone was injured.

One-fifth of students surveyed by Wechsler and McFadden (1979) reported having gone without things because of the cost of alcohol. Another 43 percent reported not knowing where they were or what they had done because of alcohol consumption. Engs (1977) reported that, within the past year, 30 percent of students drove after drinking excessively; 16 percent missed class because of a hangover; 8 percent of students had damaged university property; and 4 percent of students reported receiving a lower grade because of alcohol use. Rapaport, et. al. (1984) reported 47 percent of students (927) surveyed had been intoxicated at least once a week, and more college males indicated more problems with alcohol use than did college females. Other studies (Wright, 1983; Lester & Leach, 1983; Keane, 1984; Rapaport, 1985) have reported findings which identified similar alcohol-related problems experienced by college students who had used alcoholic beverages.

College students differ in their use of alcoholic beverages depending upon the kind and size of the college or university attended and the region or location of the college or university within the United States. Donovan (1977) implied that alcohol use is different from campus to campus and is directly related to the characteristics of the students enrolled in a particular college or university. Drinking patterns were thought to be reflective of students

from particular population groups. For example, some campuses were primarily church-affiliated and not expected to have a significant number of students who used alcoholic beverages. Warren (1979) noted that college females from a liberal, church-supported college consumed more beer than college females from a predominantly black college, a small conservative college, and a comprehensive state university.

Engs and Hanson (1977) reported the highest percentage of college alcohol users was found in the East; the second highest percentage was found in the north central states; and the third highest percentage of college alcohol users was found the South. More students who were heavy drinkers were found in regions where drinking occurred the most among the general population, and those students reported more problems with alcohol use.

Researchers have found similar reasons for college students' drinking alcoholic beverages. Engs and Hanson (1977), Donovan (1977), Haines (1983), Rapaport, et. al. (1984), and Hamilton (1985) identified some reasons offered by college students for their alcohol use. Student respondents indicated they drank because:

1. they liked the taste of alcohol.
2. they wanted to feel better.
3. they wanted to celebrate and have a good time.
4. they wanted to get drunk.
5. they wanted to socialize better.
6. of peer pressure.
7. they wanted to escape their problems.

8. they wanted to relieve anxiety and stress.
9. religion was not important to them.
10. they had had a stressful childhood and, sometimes, divorced parents.

Drinking patterns and alcohol-related problem behaviors among college students has remained of great concern and interest among researchers for more than three decades. The literature has revealed that a significant percentage of college men and women have experienced at least one negative consequence as a result of their drinking and that sometimes alcohol use interfered with their academic success and/or the completion of a college degree. Kraft (1979) and Engs and Hanson (1983) alluded to the fact that drinking practices appeared unchanged from 30 years ago, but college students have become more open in their drinking behavior on college and university campuses.

Summary: Engs (1977), Wechsler and McFadden (1979), Kraft (1979), Wechsler and Reiskin (1981), and Engs and Hanson (1985) have reported that a significant percentage of college students have indicated that they have experienced some alcohol-related problems. Engs and Hanson (1983) reported a significant increase from freshman students to senior students in almost all of the problems surveyed.

Relevance: The questionnaire used in this study examined the percentage of students who had experienced various

alcohol-related problems which had been cited in the literature.

D. Trends of Colleges and Universities Regarding
Alcohol Consumption and Related Problems

Kinney and Peltier (1986) noted that efforts by colleges and universities which addressed alcohol consumption and related problems started approximately 15 years ago. Increased attention to these issues has been attributed to many factors. the National Institute on Alcohol Abuse and Alcoholism (NIAAA) sponsored the University 50 + 12 Project, which confirmed that alcohol was used significantly by college students. The Project cited alcohol usage percentages between 87 percent and 93 percent (Blane & Hewitt, 1977). The University 50 + 12 Project proposed to determine how colleges and universities nationwide had addressed alcohol use, alcohol-related problems, campus alcohol policies, and alcohol education and intervention programs from 1979 through 1982 (Anderson & Gadaletto, 1984). According to the results of the College Alcohol Survey, administered in 1979 and again in 1982, colleges and universities in 1982 were more involved in efforts to reduce alcohol use and prevent related problems among college students than they had been in 1979. Administrators showed more awareness of the alcohol-related

problems because of the University 50 + 12 Project and made alcohol-policy changes intended to promote responsible alcohol use among college students (Anderson & Gadaletto, 1984). College and university respondents further indicated that alcohol-related problems had increased 42 percent on their campuses. The same researchers, in 1982, also reported more education and prevention programs existed on college and university campuses than in 1979. From the same study, it became apparent that college and university administrators were more knowledgeable about the alcohol use and related problems on their campuses in 1982. the authors cited a need to continue research on a long-term basis for the purpose of identifying future changes in college students' drinking patterns and behavior problems.

Some college and university officials have recognized the need to develop and implement education and prevention programs to help deter and reduce students' alcohol use and its related problems. Much concern has been raised by the significant results of some studies regarding college students' alcohol usage and its related problems. Engs and Hanson (1983) showed that the percentages were significant. Some college and university officials have debated whether there has been an increase in alcohol usage and related problems or whether the entire issue has just been more publicized (Claydon & Sloane, 1986).

Engs and Hanson (1983) have presented some ideas regarding this debate, and Engs states:

- 1) students may be drinking more openly than in the past because of changes during the past 15 years in state laws regarding drinking;
- 2) students may be discussing drinking escapades more openly with university personnel; and
- 3) when alcohol was found to be the drug of choice in many studies conducted during the early 1970s, university personnel may have become more aware of drinking-related problems which had existed previously but had been ignored (p. 80).

Another factor, litigation, has captured the attentions of college and university officials. Buchanan (1983) identified some risk management principles for college and university officials' use and suggested they become knowledgeable of the laws pertaining to college students' use of alcohol and establish alcohol awareness programs, as well as appropriate disciplinary measures.

Janosik (1983) reviewed legislation and court litigation regarding liquor laws on campuses and presented some risk management suggestions that supported those in Buchanan's study (1983). Connell (1985) reported that recent verdicts have forced colleges and universities to examine more closely their possible liability to students enrolled in their institutions. Gregory (1985) noted that most of the litigation regarding college students' use of

alcohol and related problems, specifically accidents, claimed that institutions of higher education had been negligent. The researcher suggested that general trends or precedents may be set because of some previous court decisions and a reexamination of existing campus alcohol policies was recommended.

Society's attitudes toward alcohol consumption and resultant problems have changed, a fact which has compelled college and university officials to examine existing policies, problems, and educational programs with greater urgency. As alcohol-related problems, especially those that reflect injury or loss of life, have become more prevalent, society has tended to become less tolerant of alcohol use. Claydon and Sloane (1986) stated:

. . . campuses have moved on two fronts to counter disruption of students' lives and college communities caused by alcohol abuse. First, there has been an attempt to raise awareness and educate students about the risks and consequences of alcohol abuse in the hope that this knowledge will help curtail excessive drinking practices and promote a more responsible association between students and alcohol. Second, in response to the perceived risk of litigation and restrictive drinking legislation, colleges are overhauling their policies and regulations regarding alcohol. The latter approach seeks to restructure the drinking environment, while the former, educational approach acts to change students' alcohol-related behavior (p. 226).

Summary: The National Institute of Alcohol Abuse and Alcoholism sponsored the University 50 + 12 Project to

determine how American colleges and universities have addressed student alcohol use, alcohol-related problems, campus alcohol policies, and alcohol education and intervention programs from 1979 through 1982. The Project found that, during this time, there had been an increase in the efforts of colleges and universities to reduce alcohol use and prevent related problems. College and university survey respondents indicated that alcohol-related problems had increased 42 percent on their campuses and that, as a result, more alcohol education programs were being put into place. Fears of litigation have encouraged postsecondary school administrators to establish such programs (Buchanan, 1983; Jonosik, 1983; Connell, 1985; Gregory, 1985; and Claydon & Sloane, 1986).

Relevance: The purpose of this study was to develop a curriculum framework which would enable LMU to establish an effective alcohol education program, thus reducing student alcohol use, related problems, and possibilities of litigation.

E. Alcohol Education Programs

Many educational attempts have been made to alter alcohol consumption and to reduce the related problems on college and university campuses. The literature is replete

with alcohol education programs that have been in existence for several years at many institutions of higher education throughout the nation. Few of these programs, however, show that they have caused a significant decrease in student alcohol usage and its problems.

College and university officials have established alcohol education and prevention programs from a concern to minimize property damage, reduce litigation, and decrease alcohol problems that cause student injury or loss of life. These have been sincere and valid reasons, but program goals and objectives have seldom addressed the real bases of the problem, which are the perceptions and characteristics of the college alcohol user.

A principal component of some alcohol education and prevention programs has been education. Educators generally believe that more responsible choices and decisions are likely to be made once students have become knowledgeable about specific topics or issues. In a survey that examined college students' knowledge of alcohol, however, Engs (1977) found that knowledge does not always produce positive changes in behavior. Haines (1983) expressed a different viewpoint regarding methodology of alcohol education. He stressed teaching "alcohol wellness" from a positive approach, as opposed to employing "scare tactics" which he implied only worked minimally with some populations. He

inferred that individuals could become "alcoholically well" and, therefore, would have strengthened their adaptive responses and coping resources. Haines described a "healthy drinker" as one who has acquired the following characteristics: (1) able to recognize alcohol as a potent drug; (2) knowledgeable of family history; (3) capable of drinking two or three drinks or less daily; (4) able to abstain periodically from alcohol use; (5) able to drink within social sanctions and cultural rituals; and (6) prone to drink for positive reasons.

Riccelli (1985) described another alcohol intervention program which was designed to assist college students who had already experienced serious problems related to their alcohol use (i.e. not being able to remain in the dorm or on campus). He introduced the Student Opportunity Program (STOP) which supplemented disciplinary action, counseling, and other procedures. His staff formulated the following goals which were based specifically on the students' needs:

1. To learn about alcohol and its effects on the body;
2. To explore and identify one's own attitudes about alcohol, drinking patterns, and related problems;
3. To formulate, implement, and evaluate an individual plan to make desired changes in one's drinking patterns;
4. To select appropriate campus and/or community resources to assist and support in making these desired changes;

5. To receive individual help and referrals as necessary to ensure that appropriate follow-up plans are designed and implemented.

Lenhart and Wodarski (1984) introduced a rationale that supported a comprehensive program for combating student alcohol abuse, utilizing a group approach. Students learned to identify stress factors, to utilize assertiveness skills, to employ relaxation techniques, and to solve personal problems. All of these skills are relevant to problems which have potential to initiate drinking if not managed appropriately.

Gonzalez (1982) demonstrated that alcohol education programs which have been carefully and appropriately planned can be effective if they employ the Knowledge-Attitude-Behavior Model. He expressed caution, however, regarding the time needed for new attitudes to develop and for knowledge to be applied to alcohol use. Gonzalez stressed the importance of an appropriate social environment for promoting responsible drinking and recommended a "peer oriented approach."

Chen (1982) has reported some success with a voluntary alcohol education program. Students chose to participate in an alcohol awareness week. After one week, a 33 percent decrease was found in students' drinking and driving and an improvement was reported in students' drinking attitudes and behaviors. No long-term effects were reported in this

study, but such information would have been helpful to other program developers.

Engs (1977) indicated that alcohol education programs must do more than just increase students' knowledge of alcohol. Engs (1977) and Engs and Hanson (1983) have supported the concept that effective alcohol education and abuse prevention programs should be based on the specific needs of the intended population. Gonzalez (1977) concluded that alcohol education programs should be directly related to the needs of the students involved and meet the following requirements:

1. The behavior which is to be promoted among a specific population should be identified.
2. Students should be given time to apply newly acquired attitudes and knowledge to their drinking practices and to evaluate the results.
3. Students should be involved in the peer approach, that is educating other students about alcohol use and assisting in the prevention of alcohol-related problems.

Alcohol education and prevention program developers should be sensitive to the local needs of college students who use alcohol. Drinking patterns and related problems also need to be determined prior to the planning and implementing of any program (Engs, 1977). College and university administrative support is needed if alcohol education programs are to achieve success.

Summary: Engs (1977) emphasized that alcohol knowledge alone will not always produce positive changes in behavior. Haines (1983) stressed the value of programs encouraging students to develop responsible attitudes toward the use of alcohol. Riccelli (1985) cited the need for combining alcohol education programs with counseling and the use of appropriate community resources. Lenhart and Wodarki (1984) recommended a group approach involving stress management skills, while Gonzalez (1982) urged the use of a Knowledge-Attitude-Behavior model with peer counseling. Gonzalez (1977), Engs (1977), and Engs and Hanson (1983) stressed the need for alcohol education programs which are specifically based on the needs of the intended student population. ✓

Relevance: The purpose of this study was to develop a curriculum framework for an alcohol education program based on the specific needs of the LMU student population. The literature confirms the value of such a program and offers some possible techniques for presenting such a program.

F. Summary

Chapter II presented a review of related literature designed to provide a theoretical basis for this study. It examined studies of the prevalence of college drinking from 1949 to 1984, touching briefly on motivational, socioeconomic, religious, age, parental, sexual, and

geographical differences. Chapter II detailed numerous studies of alcohol-related problems among college students who drink alcoholic beverages. Finally, this chapter presented several studies of alcohol education and prevention programs at various colleges and universities, emphasizing the need for programs tailored to the specific needs of the intended student populations.

CHAPTER III

METHODOLOGY

A. Introduction

This chapter describes the methodology employed in this study. Included are the procedures for sample selection, instrument selection, method of data collection, procedures for analyzing the data, and development of a curriculum framework for an alcohol education program.

B. The Study Population

The study population included 454 male and female undergraduate students enrolled at Lincoln Memorial University during the spring quarter, 1987. Students chosen to participate were selected from the School of Professional Studies and the School of Arts and Sciences. A total of 43 classes were identified as appropriate for study, based on the assumption that each class had a high probability that students from every major and class level were in these classes (Appendix C).

C. Instrumentation

A questionnaire was used to collect the data needed for this research. The instrument selected was the Student

Alcohol Questionnaire (SAQ). Dr. Ruth C. Engs developed the SAQ and has used it in several nationwide research studies. The National Institute of Alcohol Abuse and Alcoholism has recommended the instrument and utilized it in the nationwide 50 + 12 Project regarding alcohol use among college students. Two other doctoral research studies (Weislogel, 1978, and Stockwell, 1984) have used the Student Alcohol Questionnaire to collect data.

The Student Alcohol Questionnaire consists of eight demographic items, six items that determine quantity-frequency levels of alcohol usage, 17 statements or problems that result because of alcohol consumption, and 36 items that determine alcohol knowledge. To determine the validity of the content of the instrument, Engs had a panel of experts who worked in the field of alcohol education and research examine the questionnaire. Subsequently, a preliminary questionnaire was developed and administered to a group of students who were also asked to offer comments and suggestions. Afterwards, the questionnaire was revised and resubmitted to the panel of experts for their further examination and suggestions. Upon additional revision, Engs readministered the questionnaire to students. Thus, the reliability of the questionnaire was established by utilizing a test and retest situation and its validity by test subject and expert panel evaluations.

D. Method of Data Collection

During the data collection sessions (May 18-22, 1987), the researcher explained the purpose of the study and administered the questionnaire. Instructions for completing the questionnaire were given orally, and subjects were encouraged to inquire about any area that seemed unclear. Participation in this study was voluntary, and all participants were assured anonymity. Each participant's willingness to participate in the study was established by the completion of the questionnaire, so no signed consent form was used. This method allowed greater confidentiality and anonymity. Minors were asked not to participate in the research since, legally, parental consent would have been required. Any subject could have discontinued involvement in the study at any time without penalty. No rewards, incentives, or monetary compensation were offered to any subject. At the end of each data-collection session, the researcher collected all questionnaires.

E. Data Analysis

An explicit demographic composition was described with reflected data received from all demographic items. Percentages were stated for the demographic variables of

sex, race, class level, resident/non-resident status, religion, and major area of study.

A quantity-frequency (Q-F) index was used to determine four alcohol usage categories: (1) abstainer, (2) light drinker, (3) moderate drinker, or (4) heavy drinker (Engs, 1977). An individual quantity-frequency level was calculated for each respondent, and each was placed in one of the four categories. For the variables of age, GPA, value placed on religion, residence, sex, and year in school, frequencies of heavy, moderate, and light alcohol consumption and abstinence were reported.

Problem behaviors that resulted from alcohol consumption were rank ordered according to frequencies and percentages. Alcohol knowledge was reported in percentages of correct responses and measure of central tendency.

F. Curriculum Framework of Alcohol Education Program

Based on an analysis of the responses to the Student Alcohol Questionnaire, an alcohol education curriculum framework directed specifically to the needs of the students of Lincoln Memorial University was developed. The decision to use the conceptual approach was based on findings and proposals of the School Health Education Study (1968) which recommended promoting learning through conceptualizing ideas about health issues. Such an approach is also desirable

because it promotes behavioral changes through attitude changes.

The framework contains specific and observable objectives, written as expected outcomes for the learner. It encompasses a concept which is widely recognized among health educators: direct instruction must be complemented by a positive environment and supportive services (Creswell, et. al., 1985). For this reason, proposals have been made for activities involving the entire campus and community. Since it has been shown that greater success in alcohol prevention and intervention can be achieved if the approach is multi-faceted (Lenhart and Wodarski, 1984), such an approach is used. As presented in Chapter VI, the curriculum framework also includes curriculum guides, supplemental texts, and visual aids.

G. Summary

Chapter III described the methodology of this study. Included were a description of the sample and instrument selection and methods used to collect and analyze data, as well as a statement concerning the development of a curriculum framework for an alcohol education program for LMU based on responses to the Student Alcohol Questionnaire, an instrument that determines alcohol consumption patterns and related problem behaviors, as well as alcohol knowledge.

CHAPTER IV

PRESENTATION OF DATA

A Introduction

The data have been divided into five sections for presentation in this chapter. The first section concerns the demographic characteristics of the sample, which include resident/nonresident status, sex, age, major area of study, year in college, grade-point average, race, religion of preference, and religious importance. The Student Alcohol Questionnaire (SAQ), which was developed by Dr. Ruth Engs, was used to elicit the data discussed in Sections C, D, E, and F of this chapter. Section C presents alcohol drinking patterns according to the quantity and frequency of alcohol consumption (Q-F). Alcohol consumption patterns relative to demographic variables were presented in Section D. Section E concerns problem behaviors which respondents had experienced as a result of drinking alcoholic beverages. Students' knowledge of alcohol is reported in Section F.

B. Description of Demographic Characteristics

The sample consisted of 454 of the 1,140 students enrolled at Lincoln Memorial University (LMU). Thirty percent of the sample was male and 70 percent female, while 40 percent of the student population at that time was

male and 60 percent female. There was a good distribution found among students who completed the SAQ relative to class ranks: 29 percent were freshman; 23 percent were sophomores; 21 percent were juniors; 25 percent were seniors; one percent were graduate students; and two-tenths of one percent were identified as "Other." The median age of the respondents was 21, with a range which extended from 18 to 54. Seventy-five percent of those who completed the SAQ were less than 26 years old (See Table 1).

Most of the respondents were either majoring in education (50 percent) or nursing (25 percent). Other majors included social science, arts and humanities, psychology, pre-social work, pre-law, pre-med, forensic studies, physical science, engineering, and religion and comprised the other 25 percent of respondents. The percentages for grade-point average were 4.00 GPA (6 percent), 3.50 GPA (22 percent), 3.00 GPA (36 percent), 2.50 GPA (26 percent), 2.00 GPA (3 percent), and less than 2.00 GPA (3 percent). Thirty-one percent of participants lived in dormitories on campus, while 69 percent were commuters. The respondents were predominantly white (95 percent), as is the majority of the student body. The remainder were black (3 percent), Spanish American (.2 percent), oriental

TABLE 1

FREQUENCIES AND PERCENTAGES OF DEMOGRAPHIC VARIABLES OF
SURVEY RESPONDENTS, LINCOLN MEMORIAL UNIVERSITY, 1987

DEMOGRAPHIC VARIABLE	FREQUENCY	PERCENTAGE
RESIDENCE		
Commuter	310	68.7
Dorm Resident	141	31.3
SEX		
Male	136	30.2
Female	314	69.8
AGE		
18	44	9.7
19	63	13.9
20	54	11.9
21	68	15.0
22	38	8.4
23	34	7.5
24	18	4.0
25	13	2.9
26 - 54	122	26.6
MAJOR		
Social Science	12	4.8
Arts and Humanities	12	4.8
Psychology	13	5.2
Pre-social Work	14	5.6
Nursing	62	24.7
Pre-law	2	0.8
Education	126	50.2
Pre-med	8	3.2
Forensic Studies	2	0.8

TABLE 1 (continued)

DEMOGRAPHIC VARIABLE	FREQUENCY	PERCENTAGE
YEAR		
Freshman	129	26.5
Sophomore	103	22.8
Junior	96	21.2
Senior	115	25.4
Graduate	8	1.8
Other	1	.2
GRADE-POINT AVERAGE		
4.00	28	6.3
3.50	98	22.0
3.00	159	35.7
2.50	114	25.6
2.00	35	7.9
-2.00	11	2.5
RACE		
White or Caucasian	432	95.4
Black	12	2.6
Spanish American	1	0.2
Oriental or Asian American	1	0.2
Native American Indian	1	0.2
Foreign Student	6	1.3
RELIGION		
Roman Catholic	12	3.0
Jewish	2	0.5
Protestant (Religion allows drinking of alcoholic beverages)	51	12.6
Protestant (Religion does not allow drinking of alcoholic beverages)	179	44.3
None or Other	159	39.4

TABLE 1 (continued)

DEMOGRAPHIC VARIABLE	FREQUENCY	PERCENTAGE
RELIGIOUS IMPORTANCE		
Very Important	256	56.5
Moderately Important	141	31.1
Mildly Important	46	10.2
Not Important	10	2.2

or Asian American (.2 percent), American Indian (.2 percent), and foreign (1 percent).

The religious affiliations of students in the sample were Roman Catholic (3 percent), Jewish (.5 percent), Protestant whose religion allows drinking of alcoholic beverages (13 percent), Protestant whose religion does not allow drinking (44 percent), and 39 percent reported no religious affiliation or stated "Other." It should be noted that these categories caused some confusion for a few of the respondents, since some Baptists consider themselves to be Protestants, while others do not because Baptists existed under the name Anabaptists long before the Protestant Reformation.

Students were asked how important religion was to them, and 57 percent of the respondents indicated that religion was very important to them; 31 percent reported that religion was moderately important to them; 10 percent reported that religion was mildly important to them; and 2 percent indicated that religion was not important to them. Demographic characteristics in relationship to patterns of drinking alcoholic beverages and problems related to drinking alcoholic beverages are described in subsequent sections.

C. Alcohol Consumption Patterns of Respondents

The alcohol consumption patterns for beer, wine, and liquor (spirits) were tabulated, and the quantity-frequency index (Q-F) was used to identify drinker classifications. According to Dr. Engs (1977), the index has been used frequently by others, such as Maxwell (1952); Straus and Bacon (1953); Mulford and Miller (1960); Calahan, et. al. (1969); and the National Institute of Alcohol Abuse and Alcoholism (1980) and has been reorganized regarding the quantity and frequency responses for various purposes. Engs' (1977) description of drinker classifications is as follows:

abstainer is one who drinks less than once a year or not at all; an infrequent drinker is one who drinks at least once a year, but less than once a month; a light drinker is one who drinks at least once a month, but not more than 1 to 3 drinks at any one sitting; a moderate drinker is one who drinks at least once a month with no more than 3 or 4 drinks, or at least once a week with no more than 1 to 2 drinks at any one sitting; a moderate-heavy drinker is one who drinks 3 or 4 drinks at least once a week or drinks 5 or more drinks at least once a month; a heavy drinker is one who drinks 5 or more drinks at any one sitting (p. 2148).

The classifications of alcohol drinkers as described by Engs (1977) for the abstainer, light, moderate, and heavy drinker were used in this study so as to be consistent with what each pattern measured. Patterns 1, 3, and 5

measured the frequency of alcohol consumption. The term "heavy" in this category was used to describe respondents who drank an alcoholic beverage more than once per week or every day. Moderate drinkers were identified as those who drank alcoholic beverages at least once per month. Light drinkers were classified as individuals who drank alcoholic beverages less than once per month, but at least once per year.

Patterns 2, 4, and 6 measured alcohol consumption regarding quantity at any one sitting or drinking occasion. Heavy drinkers were classified as those individuals who consumed 5 or more alcoholic drinks at any one sitting. One drink was equal to one twelve-ounce beer or one glass of wine or one ounce of liquor. Moderate drinkers were those individuals who consumed 3 to 4 alcoholic drinks at any one sitting or drinking occasion, and light drinkers were those individuals who consumed two or less alcoholic drinks at any one sitting or drinking occasion.

To reduce confusion regarding the two measures (frequency of drinking and amount of alcohol consumed), a matrix of drinking patterns was used. Frequencies in 4 cells were tabulated to indicate a heavy drinker (cells a, b, f, and g). Moderate drinking was scored in 5 cells (c, h, m, k, and l). Cells d, e, i, p, and n through y were used to determine students classified as light drinkers (See Figure 1).

ALCOHOL CONSUMED HOW OFTEN	AMOUNT OF ALCOHOL CONSUMED AT ONE SITTING				
	6 or More Drinks	5 or 6 Drinks	3 or 4 Drinks	1 or 2 Drinks	Less Than 1 Drink
Every Day	a	b	c	d	e
Once a Week, But Not Every Day	f	g	h	i	j
Once a Month, But Less Than Once a Week	k	l	m	n	o
More Than Once a Year, But Less Than Once a Month	p	q	r	s	t
Once a Year or Less	u	v	w	x	y

FIGURE 1

ILLUSTRATION OF CELLS WITHIN MATRIX INDICATING HEAVY, MODERATE, AND LIGHT DRINKING BEHAVIOR
AMONG THE STUDENTS AT LINCOLN MEMORIAL UNIVERSITY, 1987

(Frequencies in cells a, b, f, and g were tabulated to indicate heavy drinker, in cells c, h, k l, and m to indicate moderate drinker, and in cells d, e, i, j, and n through y were tabulated to indicate light drinker.)

Abstainers were determined from the respondents' failure to answer items 9, 11, and 13 on the SAQ. Engs' method of collapsing data within a matrix of drinking patterns to 6 categories (1977) was taken a step further because of smaller sample size. Students were categorized as heavy, moderate, or light drinkers or as abstainers.

For this study, drinking patterns relative to choice of beverage were determined. Of the 454 respondents, 28 percent indicated that they consumed beer at least once a year; 38 percent indicated that they consumed wine at least once a year; and 30 percent indicated that they drank liquor at least once a year. Taking into account possible overlapping of drinking behavior, 77 percent were drinkers of some alcoholic beverage, and 23 percent abstained completely.

Twenty-nine percent of the beer drinkers reported drinking once a week, but not every day; while 17 percent of the beer drinkers indicated drinking at least once a month, but less than once a week. Twenty-three percent of the beer consumers reported drinking beer more than once a year, but less than once a month (See Table 2).

Twenty-seven percent of the students who drank beer also indicated that they drank 5 or more cans of beer at any one sitting. Twenty-two percent of the beer drinkers reported drinking 3 or 4 cans of beer at any one sitting,

TABLE 2

FREQUENCIES AND PERCENTAGES OF CONSUMPTION BY BEVERAGE OF CHOICE
LINCOLN MEMORIAL UNIVERSITY, 1987

PATTERN	FREQUENCY	PERCENTAGE
BEER CONSUMED HOW OFTEN		
Every Day	10	4.3
At Least Once a Week, but Not Every Day	68	28.9
At Least Once a Month, but Less Than Once a Week	40	17.0
More Than Once a Year, but Less Than Once a Month	53	22.6
Once a Year or Less	64	27.6
AMOUNT OF BEER CONSUMED AT ONE SITTING		
More Than 1 Six-Pack (6 or More Cans or Glasses)	30	12.8
5 or 6 Cans or Glasses	34	14.5
3 or 4 Cans or Glasses	52	22.1
1 or 2 Cans or Glasses	62	26.4
Less Than 1 Can or Glass	57	24.3
WINE CONSUMED HOW OFTEN		
Every Day	3	1.4

TABLE 2 (continued)

PATTERN	FREQUENCY	PERCENTAGE
At Least Once a Week, but Not Every Day	10	4.5
At Least Once a Month, but Less Than Once a Week	32	14.5
More Than Once a Year, but Less Than Once a Month	9	42.1
Once a Year or Less	83	37.6
AMOUNT OF WINE CONSUMED AT ONE SITTING		
More than 1 Six-Pack (6 or More Cans or Glasses)	16	7.2
5 or 6 Cans or Glasses	13	5.9
3 or 4 Cans or Glasses	34	15.4
1 or 2 Cans or Glasses	104	47.1
Less Than 1 Can or Glass	54	24.4
LIQUOR CONSUMED HOW OFTEN		
Every Day	2	0.8
At Least Once a Week, but Not Every Day	16	6.6
At Least Once a Month, but Less Than Once a Week	60	24.9

TABLE 2 (continued)

More Than Once a Year, but Less Than Once a Month	91	37.8
Once a Year or Less	72	29.9
AMOUNT OF LIQUOR CONSUMED AT ONE SITTING		
More Than 1 Six-Pack (6 or More Cans or Glasses	19	7.9
5 or 6 Cans or Glasses	29	12.0
3 or 4 Cans or Glasses	62	25.6
1 or 2 Cans or Glasses	104	43.0
Less Than 1 Can or Glass	57	24.3

*

All glasses are standard tavern beer glasses.

and 26 percent of those who drank beer reported that they drank 1 or 2 cans of beer at a single sitting. Less than one can of beer was consumed at one sitting by 24 percent of those who indicated that they drank beer.

Five percent of the respondents who drank wine reported consuming wine at least once a week, but not every day. Fifteen percent of the students who drank wine indicated that they consumed wine at least once a month, but less than once a week. Forty-two percent of the respondents reported drinking wine more than once a year, but less than once a month. Thirteen percent of the wine drinkers drank 5 or more glasses of wine at any one sitting. On any one drinking occasion, 15 percent of the wine drinkers indicated drinking 3 or 4 glasses of wine, and 47 percent of the wine consumers indicated that they consumed 1 or 2 glasses of wine at a single drinking occasion. Twenty-four percent of those who drank wine, consumed only one glass at any one sitting.

Seven percent of the respondents who reported that they drank liquor indicated that they drank liquor at least once a week, but not every day. Twenty-five percent of the respondents indicated that they drank liquor at least once a month, but less than once a week. Thirty-eight percent of those who indicated that they consumed liquor did so more than once a week, but less than once a day. Twenty

percent of the liquor drinkers drank 5 or more glasses of liquor at any one sitting. Twenty-six percent reported consuming 3 or 4 glasses of liquor at any one sitting, while 43 percent of liquor drinkers reported drinking 1 or 2 glasses of liquor at a given sitting. Twelve percent of those respondents who drank liquor drank less than one glass at any one sitting.

From the total sample of 454 students, 48 percent reported that they did not drink beer; 51 percent reported that they did not drink wine; and 47 percent reported that they did not drink liquor. Those who abstained from all alcohol use comprised 23 percent of the sample.

D. Drinking Patterns by Demographic Variables

The percentages of respondents drinking beer, wine, and liquor were reported in relation to the demographic variables of age, grade-point average, religious importance, residence, sex, and year in school. Several demographic variables were not reported in relationship to drinking patterns. For example, race was not statistically treated because of the extremely low percentage of non-whites within the sample. Majors were not examined as a variable because a large number of respondents (203) were undecided concerning a major or failed to report their major area of study.

Beer Drinking Patterns by Age

Of the 454 respondents, 334 were ages 18 to 25. These more typical "college-age" students were compared to determine the quantity-frequency distribution of beer consumption (See Table 3). Percentages of beer drinkers by age group were determined in ascending order and are as follows: 25-year-olds (39 percent*), 20-year-olds (46 percent), 21-year-olds (54 percent), 18-year-olds (57 percent), 24-year-olds (58 percent), 19-year-olds (60 percent), 22-year-olds (61 percent), and 23-year-olds (71 percent).

The highest percentage of heavy beer consumers was found in the 23-year-old age group (32.4 percent), followed by 22-year-olds (13.2 percent), 21-year-olds (13.0 percent), 19-year-olds (9.5 percent), 18-year-olds (6.8 percent), 20-year-olds (5.6 percent), and 25-year-olds (0 percent). The highest percentage of light drinkers was found in the 18-year-old age group (40.9 percent^{*}). The next highest percentage of light drinkers was the 22-year-old age group (34.2 percent). The lowest percentage of moderate drinkers was found in the 20-year-old age group (7.4 percent), followed closely by the 25-year-olds (7.7 percent) and 23-

*N=13. Sample very small and results may appear more significant than they really are.

TABLE 3

PERCENTAGES OF BEER, WINE, AND LIQUOR CONSUMPTION
BY AGE, LINCOLN MEMORIAL UNIVERSITY, 1987

PATTERN		PERCENTAGES								
	AGE:	18	19	20	21	22	23	24	25	
Pattern 1 by Pattern 2 (Beer)										
Abstainer		43.2	39.7	53.7	46.4	39.5	29.4	42.1	61.5	
Light		40.9	31.7	33.3	24.6	34.2	29.4	26.3	30.8	
Moderate		9.0	19.0	7.4	15.9	13.2	8.8	26.3	7.7	
Heavy		6.8	9.5	5.6	13.0	13.2	32.4	5.3	0.0	
Pattern 3 by Pattern 4 (Wine)										
Abstainer		52.3	52.4	53.7	63.2	36.8	38.2	44.4	38.5	
Light		47.7	34.9	40.7	33.8	60.5	55.9	44.4	46.1	
Moderate		0.0	9.5	5.6	1.5	2.6	2.9	11.1	7.7	
Heavy		0.0	3.2	0.0	1.5	0.0	2.9	0.0	7.7	
Pattern 5 by Pattern 6 (Liquor)										
Abstainer		52.3	38.1	50.0	51.5	42.1	29.4	33.3	23.1	
Light		36.4	41.3	37.0	33.8	36.8	55.9	50.0	69.2	
Moderate		9.1	14.3	11.1	13.2	18.4	11.8	16.7	7.7	
Heavy		2.3	6.3	1.9	1.5	2.6	2.9	0.0	0.0	

year-olds (8.8 percent) The highest percentage of moderate beer drinkers was found in the 24-year-old age group (26.3 percent), followed by 19-year-olds at 19 percent.

Abstainers from drinking beer were most often found among 25-year-olds (61.5 percent; small N should be kept in mind), then among 20-year-olds (53.7 percent), and 21-year-olds (46.4 percent). The 23-year-olds were least likely to abstain from beer drinking (29.4 percent). Drinking patterns of beer by age lacked continuity, i.e., no gradual increase or decrease in beer drinking percentages was evident.

Wine Drinking Behavior by Age

Of those who drank wine, a definite pattern emerged in comparison with beer drinkers. Very few students of all ages reported being heavy or even moderate drinkers of wine. percentages of heavy drinkers ranged from 0 percent (ages 18, 20, and 22) to 7.7 percent (age 25). No 18-year-olds reported moderate use of wine. The highest percentage occurred at age 24, with 11.1 percent reporting moderate consumption of wine.

There was no consistent progression of light wine drinkers and abstainers. The range of percentage of light wine drinkers was from 33.8 percent at age 21 to 60.5 percent at age 22. Over 50 percent of 18 to 21-year-olds

abstained from drinking wine, but after age 21 there was a significant decline in abstinence.

Liquor Drinking Behavior by Age

The age difference of liquor drinkers was very great and ranged from 18 to 54 years of age. Only 79 percent of those who responded that they drank liquor were compared because of the wide range of ages and the few number of respondents in each age group over 25 years of age. The percentage of heavy liquor drinkers varied from 0 percent (ages 24 and 25) to 6.3 percent (age 19). The percentages of individuals who were thought to be moderate drinkers of liquor were led by the 22-year-old age group (18.4 percent), and the fewest number of moderate consumers of liquor were the 18- and 25-year-old age groups (9.1 and 7.7 percent, respectively).

Allowing for low frequencies, the most light liquor drinkers were the 25-year-olds (69.2 percent), followed by the 23-year-olds (55.9 percent), 24-year-olds (50 percent), and 19-year-olds (41.3 percent). The percentage of light liquor drinkers was found to be lowest among the 21-year-olds (33.8 percent).

Those who drank no liquor were found most frequently among 18-year-olds (52.3 percent), 21-year-olds (51.5 percent), and 20-year-olds (50 percent). Of those 21 years

old and younger, only 19-year-olds were significantly different in reporting abstinence (38.1 percent). As with wine consumption, the percentage of abstainers from drinking liquor decreased sharply after age 21.

Beer Drinking Patterns by Grade-Point Average

The grade-point averages (GPAs) of the respondents were compared with the quantity and frequency of their beer consumption. Due to the very small frequency of students with less than a 2.00 GPA (N=11), the overall analysis will only make minor reference to this group. As would be expected, students' GPAs decreased as consumption of beer increased. This was most clearly shown among heavy and moderate drinkers of beer. Zero percent of those achieving a 4.00 GPA were heavy drinkers of beer as compared with 14.3 percent of those earning a 2.00. Of those whose GPA was 4.00, only 7.1 percent were moderate drinkers, whereas 20.0 percent of those achieving a 2.00 GPA drank moderately. Abstainers from drinking beer were most likely to have earned a 4.00 GPA (53.6 percent) or a 3.50 (64.3 percent), whereas only 40 percent of those earning a GPA of 2.00 were abstainers.

Wine Drinking Patterns by Grade-Point Average

The quantity and frequency of wine consumption was analyzed from the data reported by the respondents. Because of the low frequency of students with a GPA of less than 2.00 (N=11), the analysis of this group in comparison with other groups is difficult and may be misleading. The same assumptions can be made for those respondents with a 4.00 GPA (N=28). Forty-six percent of the respondents indicated they drank wine, and 53 percent indicated that they abstained from consuming wine.

The relationship between grade-point average and the consumption of wine is not as clear as with the consumption of beer. The percentage of abstainers was similar for students earning a GPA of 3.50 (55.1 percent), 3.00 (52.2 percent), 2.50 (46.5 percent), and 2.00 (51.4 percent). For students who were heavy drinkers of wine, the pattern was for GPA to decrease as wine drinking increased; but there were no discernible trends concerning differences in GPA among light and moderate wine drinkers.

Liquor Drinking Patterns by Grade-Point Average

Pattern 5 by Pattern 6 measured the quantity and frequency of liquor consumption, controlling for grade-point average. Low frequencies remained consistent in the 4.00

GPA group (12), and in the group of students who had a GPA of less than 2.00 (10). Therefore, comparisons with other GPA groups were difficult, a fact which must be taken into consideration when considering the following information. With the exception noted above, there was almost a continual progressive decrease in GPA as liquor consumption increased: 4.00 GPA (3.6 percent), 3.50 GPA (1.0 percent), 3.00 GPA (1.3 percent), 2.50 GPA (1.8 percent), 2.00 GPA (5.7 percent), and less than 2.00 GPA (18.2 percent).

Discounting the extremes in measurement of grade-point average (4.00 and below 2.00), there are discernible associations among heavy drinking of liquor and GPA and abstinence from drinking liquor and GPA. Again, the increase in percentage of heavy drinkers is negatively associated with grade-point average. The lower GPA is also associated with a lower percentage of those who abstain from drinking liquor. Light and moderate consumption of liquor are not consistently related to grade-point average (See Table 4).

When beer, wine, and liquor consumption are considered together, a definite pattern emerges. While a causal relationship cannot be concluded, it is clear that academic performance as measured by GPA is poorer when drinking increases.

TABLE 4

PERCENTAGES OF BEER, WINE, AND LIQUOR CONSUMPTION BY GRADE-
POINT AVERAGE, LINCOLN MEMORIAL UNIVERSITY, 1987

PATTERN	PERCENTAGES					
	GPA: 4.0	3.5	3.0	2.5	2.0	-2.0*
Pattern 1 by Pattern 2 (Beer)						
Abstainer	53.6	64.3	47.2	38.6	40.0	27.3
Light	39.3	23.5	34.0	35.0	25.7	36.4
Moderate	7.1	8.2	9.4	14.9	20.0	18.2
Heavy	0.0	4.1	9.4	11.4	14.3	18.2
Pattern 3 by Pattern 4 (Wine)						
Abstainer	53.6	55.1	52.2	46.5	51.4	54.5
Light	39.3	39.8	45.3	46.5	31.4	36.4
Moderate	7.1	5.1	1.9	6.1	8.6	9.0
Heavy	0.0	0.0	.6	.9	8.6	0.0
Pattern 5 by Pattern 6 (Liquor)						
Abstainer	57.1	58.2	47.2	42.1	37.1	9.0
Light	32.1	38.8	39.6	41.2	48.6	54.5
Moderate	7.1	2.0	11.9	14.9	8.6	18.2
Heavy	3.6	1.0	1.3	1.8	5.7	18.2

*
N = 11. Sample is small; results may appear more significant than they really are.

Beer Drinking Patterns by Religious Importance

Percentages of alcohol consumption, quantity of alcohol consumed, and frequency (or how often alcohol was consumed) were compared to the response given by each respondent which reflected his or her belief that religion was (1) very important, (2) moderately important, (3) mildly important, or (4) not important. Pattern 1 by Pattern 2 measured the quantity and frequency of beer consumption, controlling for the degree of importance which the respondent assigned to religion.

A total of 453 students provided responses for the Pattern 1 by Pattern 2 analysis, and 51 percent indicated that they consumed beer, while 49 percent indicated that they did not. The respondents for whom religion was very important reported the following beer drinking patterns: heavy (3.9 percent), moderate (7.8 percent), light (25.0 percent), and abstainers (63.3 percent).

For those respondents who stated "religion is moderately important," the following beer-drinking percentages were true: 16.3 percent were moderate or heavy drinkers of beer; 32.6 percent were light drinkers of beer; and 34.8 percent were abstainers. There were fewer abstainers from beer among those who reported that religion was mildly important and even fewer abstainers (10 percent)

among those reporting "religion was not important to them" (See Table 5).

Wine Drinking Patterns by Religious Importance

Pattern 3 by Pattern 4 measured the quantity and frequency of wine consumption when controlled for religious importance. The frequency of individuals to whom religion was not important was very small (N=10). Therefore, the statistics calculated for this group may be misleading and seem to be more significant than they actually are. One significant factor, however, is the fact that only 10 of the 454 respondents stated that religion was not important to them. The percentages of individuals who drank in each group increased as religion's importance decreased. Only 36 percent of the individuals who indicated that religion was very important to them consumed wine. Fifty-eight percent of those to whom religion was moderately important, 83 percent who stated religion was mildly important to them, and 80 percent to whom religion was not important drank wine.

Trends in wine consumption were similar to those of beer consumption in relation to religious importance. Percentages of abstainers decreased among those for whom religion was less important: 64 percent of those who said religion was very important abstained from drinking wine;

TABLE 5

PERCENTAGES OF BEER, WINE, AND LIQUOR CONSUMPTION BY RELIGIOUS
IMPORTANCE, LINCOLN MEMORIAL UNIVERSITY, 1987

PATTERN	PERCENTAGES			
	VERY IMPORTANT	MODERATELY IMPORTANT	MILDLY IMPORTANT	NOT IMPORTANT
Pattern 1 by Pattern 2 (Beer)				
Abstainer	63.3	34.8	17.4	10.0
Light	25.0	32.6	54.3	70.0
Moderate	7.8	16.3	15.2	10.0
Heavy	3.9	16.3	13.0	10.0
Pattern 3 by Pattern 4 (Wine)				
Abstainer	64.0	41.8	17.4	20.0
Light	33.6	48.2	71.7	70.0
Moderate	1.6	9.2	8.7	0.0
Heavy	.8	.7	2.2	10.0
Pattern 5 by Pattern 6 (Liquor)				
Abstainer	61.7	30.5	19.6	20.0
Light	32.8	48.2	56.5	70.0
Moderate	3.9	19.9	17.4	0.0
Heavy	1.6	1.4	6.5	10.0

*N = 10. Sample is small; results may appear more significant than they really are.

41.8 percent of those for whom religion was moderately important abstained; and 17.4 percent of those for whom religion was mildly important abstained from drinking wine.

Liquor Drinking Patterns by Religious Importance

Pattern 5 by Pattern 6 examined the quantity and frequency of liquor consumption and controlled for religious importance. The smallest percentage of liquor consumers was found in the group to whom religion was very important. Only 38 percent of the individuals in this group consumed liquor, followed by moderately important (70 percent), mildly important (80 percent), and not important (80 percent).

The respondents who answered that religion was very important to them accounted for the smallest percentage of heavy drinkers of liquor (1.6 percent) and the largest percentage of abstainers from liquor (61.7 percent). At the other end of the response continuum ("religion is not important to me"), the reverse was true: only 20 percent were abstainers, and 10 percent were heavy drinkers.

*

N=10. Sample very small and results may appear more significant than they really are.

Beer Drinking Patterns by Residence

The beer drinking patterns of dorm-resident students and commuter students were compared, and the results were tabulated according to quantity and frequency of beer consumption. Forty-five percent of the commuter students indicated that they drank beer, and 55 percent indicated that they did not. Sixty-five percent of the dorm-resident students responded that they drank beer, and 35 percent responded that they did not (See Table 6).

Dorm-resident students had higher percentages regarding beer consumption than commuter students. The percentages for dorm-resident students were as follows: heavy beer drinkers (16.2 percent), moderate beer drinkers (16.9 percent), and light beer drinkers (32.4 percent). Thirty-six percent of the dorm-resident students indicated that they abstained from beer.

Beer consumption by commuter students was not as high as for dorm-resident students. The percentage of heavy beer consumption by commuter students was 5.5 percent, followed by moderate beer drinkers (8.7 percent), and light beer drinkers (30.9 percent). Fifty-five percent of the commuter students indicated that they abstained from beer.

TABLE 6

PERCENTAGES OF BEER, WINE, AND LIQUOR CONSUMPTION BY
RESIDENCE, LINCOLN MEMORIAL UNIVERSITY, 1987

PATTERN	PERCENTAGES	
	COMMUTER	DORM RESIDENT
Pattern 1 by Pattern 2 (Beer)		
Abstainer	55.0	35.5
Light	30.9	32.4
Moderate	8.7	16.9
Heavy	5.5	16.2
Pattern 3 by Pattern 4 (Wine)		
Abstainer	53.3	46.8
Light	41.6	45.4
Moderate	4.2	5.7
Heavy	.6	2.1
Pattern 5 by Pattern 6 (Liquor)		
Abstainer	53.2	32.6
Light	37.7	47.5
Moderate	8.1	14.9
Heavy	1.0	5.0

Wine Drinking Patterns by Residence

The patterns of wine consumption were compared between dorm-resident students and commuter students. Forty-six percent of the commuter students indicated that they drank wine, and 54 percent of the commuter students indicated that they did not. Fifty-three percent of the dorm-resident students responded that they drank wine, and 47 percent of the dorm-resident students responded that they did not.

The heavy drinkers of wine among dorm-resident students had a percentage of 2.1, followed by moderate wine drinkers (5.7 percent), and light drinkers of wine (45.4 percent). Therefore, more dorm-resident students were considered light drinkers of wine.

Wine consumption by commuter students received similar percentages. Heavy consumers of wine among commuter students made up only six-tenths of one percent, followed by moderate wine drinkers (4.2 percent), and light consumers of wine (41.6 percent). Again, the light drinkers of wine had the highest percentage among commuter students, as they did among dorm-resident students.

Liquor Drinking Patterns by Residence

The liquor consumptions of dorm-resident students and commuter students were compared, and the results of the

quantity and frequency of liquor consumption were compiled. Forty-seven percent of the commuters indicated that they drank liquor, and 53 percent indicated that they did not. Sixty-seven percent of the dorm-residents indicated that they drank liquor, and 33 percent indicated that they did not. Therefore, the percentage of dorm-residents who drank liquor was greater than the percentage of commuters who did.

Dorm-resident students received the higher percentages in all categories when compared to commuter students. Heavy drinkers of liquor among dorm-resident students showed a percentage of 5.0 percent, while the percentage of heavy drinkers of liquor among commuter students was 1.0 percent. The percentage of moderate drinkers of liquor among dorm-resident students was 14.9 percent; and for commuter students, the percentage was 8.1 percent. Light drinkers of liquor among dorm-resident students showed a percentage of 47.5 percent; and for commuter students, the percentage was 37.7 percent.

Consumption of alcoholic beverages (beer, wine, and liquor) in all categories of drinkers (heavy, moderate, and light) was found to be higher among dorm-resident students.

Beer Drinking Patterns by Sex

Drinking patterns of males and females were compared regarding the consumption of beer. Sixty-six percent of

the males responded that they drank beer, and 34 percent responded that they did not. Forty-five percent of the females indicated that they drank beer, and 55 percent indicated that they did not (See Table 7).

Beer consumption was found to be the highest among male students for the categories of heavy and moderate beer drinkers. The percentage for heavy beer consumption for males was 19.7, and for females the percentage was 4.1. Moderate beer drinkers were more common among males (20.4 percent), than females (7.3 percent). However, the females were found to have the highest percentage for light beer consumption, which was 34.0 percent. The males showed a percentage of 25.5 for the category of light beer consumption.

Wine Drinking Patterns by Sex

Drinking patterns of males and females were compared regarding their consumption of wine. Forty-six percent of the males indicated that they drank wine, and 54 percent that they did not. Fifty percent of the females responded that they drank wine, and fifty percent responded that they did not.

The study revealed that 41.9 percent of the males and 43.3 percent of the females were considered light wine drinkers. Moderate wine consumers accounted for 2.9

TABLE 7

PERCENTAGES OF BEER, WINE, AND LIQUOR CONSUMPTION BY
SEX, LINCOLN MEMORIAL UNIVERSITY, 1987

PATTERN	PERCENTAGES	
	MALE	FEMALE
Pattern 1 by Pattern 2 (Beer)		
Abstainer	34.3	54.6
Light	25.5	34.0
Moderate	20.4	7.3
Heavy	19.7	4.1
Pattern 3 by Pattern 4 (Wine)		
Abstainer	54.4	50.0
Light	41.9	43.3
Moderate	2.9	5.4
Heavy	.7	1.3
Pattern 5 by Pattern 6 (Liquor)		
Abstainer	39.7	50.0
Light	39.0	41.4
Moderate	16.9	7.3
Heavy	4.4	1.3

percent of the males and 5.4 percent of the females. Heavy wine drinkers were found to have the highest percentage among the female (1.3 percent), followed closely by the male students at .7 percent.

Liquor Drinking Patterns by Sex

Heavy liquor drinkers were found to be the highest among the males (4.4 percent) when compared to the females (1.3 percent). In the moderate and light categories of liquor drinkers, however, females were shown to have the highest percentages (7.3 percent in the moderate category and 41.1 percent in the light) when compared to the male liquor drinkers (16.9 percent in the moderate category and 39.0 percent in the light).

Regarding liquor consumption by sex, the results of the study showed that females drank more liquor in the light category of consumption; however, male liquor drinkers were considered to be the heavy consumers of liquor. Forty percent of the males surveyed indicated they abstained from consuming liquor, while 50 percent of the females indicated that they abstained from liquor consumption.

Beer Drinking Patterns by Year in School

Drinking patterns of freshmen, sophomores, juniors, and seniors were compared to determine any differences among quantity and frequency of beer, wine, and liquor consumption. The percentages of students who indicated that they drank beer varied little: freshmen (57 percent), sophomores (47 percent), juniors (55 percent), and seniors (47 percent). However, the number of heavy beer drinkers showed a progressive increase as class rank increased: freshmen (6.2 percent), sophomores (6.8 percent), juniors (10.4 percent), and seniors (13 percent). Moderate drinkers of beer showed an increase in frequency of consumption: freshmen (11.6 percent), sophomores (10.7 percent), juniors (11.5 percent), and seniors (12.2 percent). See Table 8. Those who abstained from drinking beer completely were 42.6 percent of freshmen, 53.4 percent of sophomores, 44.8 percent of juniors, and 53.0 percent of seniors. Drinking patterns by class standing were progressive for heavy drinkers, increasing by year in school, but inconsistent for other class ranks.

Wine Drinking Patterns by Year in School

Pattern 3 by Pattern 4 measured the drinking patterns of freshmen, sophomores, juniors, and seniors and determined

TABLE 8

PERCENTAGES OF BEER, WINE, AND LIQUOR CONSUMPTION
BY YEAR, LINCOLN MEMORIAL UNIVERSITY, 1987

PATTERN	QUANTITY			
	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR
Pattern 1 by Pattern 2 (Beer)				
Abstainer	42.6	53.4	44.8	53.0
Light	39.5	29.1	33.3	21.7
Moderate	11.6	10.7	11.5	12.2
Heavy	6.2	6.8	10.4	13.0
Pattern 3 by Pattern 4 (Wine)				
Abstainer	51.2	53.4	57.3	46.1
Light	41.9	42.7	37.5	48.7
Moderate	4.7	2.9	5.2	4.3
Heavy	2.3	1.0	0.0	.9
Pattern 5 by Pattern 6 (Liquor)				
Abstainer	44.1	49.5	53.1	43.5
Light	42.6	37.9	35.4	45.2
Moderate	9.3	9.7	9.4	11.3
Heavy	3.9	2.9	2.1	0.0

the differences for wine consumption. The percentage of students who drank wine varied little. Forty-nine percent of the freshmen, 47 percent of the sophomores, 43 percent of the juniors, and 54 percent of the seniors drank wine. Little difference was found among these classifications of students regarding frequency of wine consumption. The heavy wine drinkers more or less declined with class ranking: freshmen (2.3 percent), sophomores (1.0 percent), juniors (0 percent), and seniors (.9 percent), with very few wine drinkers reporting heavy use. Moderate wine drinkers were most common among juniors 5.2 percent, followed by freshman (4.7 percent), seniors (4.3 percent), and sophomores (2.9 percent). The number of individuals from each class who were considered light drinkers varied little: freshmen (41.9 percent), sophomores (42.7 percent), juniors (37.5 percent), and seniors (48.7 percent).

The following percentages of students were reported to abstain from drinking wine: freshmen (51.2 percent), sophomores (53.4 percent), juniors (57.3 percent), and seniors (46.1 percent).

Liquor Drinking Patterns by Year in School

In terms of class rank little difference was found in the percentages of those who drank liquor at least once per

year: freshmen (56 percent), sophomores (50 percent), juniors (47 percent), and seniors (57 percent). There was a little difference in the percentages among heavy liquor drinkers: freshmen (3.9 percent), sophomores (2.9 percent), juniors (2.1 percent), and seniors (0 percent). Moderate liquor drinkers were as follows: freshmen (9.3 percent), sophomores (9.7 percent), juniors (9.4 percent), and seniors (11.3 percent). Senior students (45.2 percent) who were considered light liquor drinkers had the highest liquor consumption percentage, followed by freshmen (42.6 percent), sophomores (37.9 percent), and juniors (35.4 percent). Abstinence from liquor was most common among sophomores (49.5 percent) and juniors (53.1 percent) and occurred less often among freshmen (44.1 percent) and seniors (43.5 percent).

Drinking patterns by class rank were not predictable or progressive. Speculation about the accessibility of beverages of choice and the possible effects of legislation resulting in an increase in the legal drinking age will be included in Chapter VII.

E. Alcohol-Related Problems

Alcohol-related problems which other college students had experienced and reported were the basis for the third section of the Student Alcohol Questionnaire. Students who

currently drank alcohol or had been drunk in the past were asked to respond to the 17 items concerning alcohol-related problems. Participants were given the following choices as to frequency of occurrence of each of these problems: (1) at least once during the past two months and at least one additional time during the past year; (2) at least once within the past two months, but not during the rest of this past year; (3) not during the past two months, but at least once during the past year; (4) has happened at least once in my life, but not during the past year; or (5) has not happened to me. Students who indicated that they did not consume alcohol were directed to omit the alcohol-related problems portion of the questionnaire and resume with the Alcohol Knowledge section.

The study of alcohol-related problems was limited to those who had drunk alcohol at least once in their lives and to those who drank more frequently. Therefore, percentages are based on an N of 350. Obviously, those who abstained from drinking would not have directly experienced alcohol-related problems.

Table 9 outlines the percentage of those who had ever experienced alcohol-related problems. The problems are arranged in descending order of frequency: vomiting being the most commonly reported problem (by 37.2 percent at least once in their lives) and having lost a job

TABLE 9

PERCENTAGES OF STUDENTS WHO DRANK AT LEAST ONCE A YEAR (N = 454) REPORTING
ALCOHOL-RELATED PROBLEMS AT LEAST ONCE OR AT LEAST ONCE IN PAST YEAR
LINCOLN MEMORIAL UNIVERSITY, 1987

ALCOHOL-RELATED PROBLEM	PERCENTAGES	
	ONCE	ONCE IN PAST YEAR
Vomited	37.2	31.0
Had a hangover	30.6	42.3
Drove after several drinks	27.1	27.4
Drove when knowing you had drank too much	22.0	18.9
Drank while driving	18.9	29.7
Attended class after several drinks	11.1	10.9
Were criticized by date for drinking	11.0	11.5
Missed a class because of a hangover	10.3	12.6
Fought after drinking	10.1	7.5
Thought you had a possible drinking problem	10.1	4.3
Damaged property, gave false alarm, etc.	9.5	4.0
Received a lower grade because of drinking	7.8	5.2
Had trouble with the law because of drinking	7.5	9.2
"Cut" class after several drinks	7.1	13.1
Had trouble with school administration	4.9	2.3
Arrested for Driving While Intoxicated	2.0	.9
Lost a job because of drinking	.9	.6

because of drinking being reported least often (by only .9 percent of those who drank). The second most common problem acknowledged by more than a fourth of the drinkers was driving after several drinks (27.1 percent). All problems listed in the SAQ were experienced at least once by at least five of the respondents.

Thirty-one percent of those who consumed alcoholic beverages had experienced a hangover at least once. Forty-two percent of the respondents indicated that they had experienced a hangover at least once within the past two months or once within the past year. Of those who indicated that they drank alcoholic beverages, 27 percent reported never having experienced a hangover.

Problem 2 addressed the issue of whether the respondent had gotten nauseated and vomited from drinking alcoholic beverages. Thirty-two percent of the drinking respondents indicated that they had never experienced this problem, while 37 percent reported having experienced this problem at least once. Thirty-one percent of the respondents indicated that they had experienced this problem at least once within the past two months or at least once within the past year.

Whether the student had driven a car while under the influence was the issue in Problem 3. Forty-five percent

of the respondents indicated that, while they did consume alcoholic beverages, they had never experience this problem. Twenty-seven percent of the respondents reported having experienced this problem at least once. Likewise, 27 percent of the respondents indicated that they had experienced this problem at least once during the past two months or at least once within the past year.

Students who responded to the alcohol-related problems section of the questionnaire were asked if they had driven a car when they knew that they had consumed too much alcohol (Problem 4), and 59 percent of them reported that they had never experienced this problem. Twenty-two percent indicated that they had experienced this problem at least once. Nineteen percent reported having experienced this problem at least once within the past two months or at least once within the past year.

"Have you consumed alcohol and driven a car?" was asked in Problem 5, and 51 percent of the respondents indicated that they had never experienced this problem. Nineteen percent indicated that they had experienced this problem at least once. Thirty percent of the respondents reported having experienced this problem at least once within the past two months or at least once within the past year.

Students who responded to Problem 6 were asked if they had gone to class after having several drinks, and 11

percent reported that they had experienced this problem at least once. Seventy-eight percent had never experienced this problem, and 11 percent indicated that they had experienced this problem at least once within the past two months or at least once within the past year.

Eighty percent of the respondents had never cut class after having several drinks, which was Problem 7; but 7 percent had experienced this problem at least once. Thirteen percent of the respondents had experienced this problem at least once within the past two months or at least once within the past year.

Students who consumed alcohol were asked if they had ever missed a class because of a hangover (Problem 8), and 77 percent of the respondents reported never having experienced this problem. Ten percent of the respondents had experienced this problem at least once, and 13 percent had experienced this problem at least once within the past two months or at least once within the past year.

When asked in Problem 9 if they had ever been arrested for driving while intoxicated(DWI), 97 percent of the respondents reported never having experienced this problem. Two percent reported having experienced this problem at least once. Nine-tenths of one percent of the respondents reported that they had experienced this problem at least

once in the past year or at least once in the past two months.

Problem 10 asked whether those surveyed had ever been criticized by a date because of drinking. Seventy-eight percent of those who acknowledged alcohol use reported that they had never experienced this problem, and 12 percent indicated that they had experienced this problem at least once during the past two months or at least once within the past year. Eleven percent indicated that they had experienced this problem at least once in their lifetime.

Ninety-one percent of those respondents who consume alcohol reported that they had never been in trouble with the law (Problem 11). Eight percent of the respondents indicated that they had experienced this problem at least once, and 9 percent indicated that they had experienced this problem at least once within the past two months or at least once within the past year.

Problem 12 asked students if they had lost a job because of drinking alcoholic beverages, and 99 percent of the respondents who were drinkers reported that they had never experienced this problem. Less than one percent of the respondents reported that they had experienced this problem at least once in their lives or once within the past year or the past two months.

Five percent of the respondents who drank indicated that they had received a lower grade because of drinking

alcoholic beverages(Problem 13) at least once in the past two months or at least once in the past year. Eight percent of the respondents indicated they had experienced this problem at least once, and 86 percent that they had never experienced this problem.

Being in trouble with the school administration because of drinking (Problem 14) had never been a problem for 93 percent of the respondents. Five percent reported they had experienced this problem at least once, and two percent indicated that they had experienced this problem at least once within the past two months or at least once within the past year.

Whether the student had been in a fight because of drinking was asked in Problem 15. Eighty-three percent of those who drank at least once indicated they had never experienced this problem. Eight percent of the respondents indicated they had experienced this problem at least once within the past two months or a least once within the past year. Ten percent experienced this problem once in a lifetime.

Eighty-six percent of the respondents who drank indicated they had never thought of themselves as having a problem with their drinking of alcoholic beverages, which was Problem 16. Ten percent reported they had thought this at least once, and 4 percent indicated that they had

experienced such thoughts at least once within the past two months or at least once within the past year.

Problem 17 asked students if they had damaged property because of drinking alcohol, and 86 percent of the respondents who acknowledged drinking indicated that they had never experienced this problem. Ten percent reported that they had experienced this problem at least once, and 4 percent indicated that they had experienced this problem at least once within the past two months or at least once within the past year.

The rank order of problems experienced by LMU students was similar to the findings of Engs (1977) in sequence and by percentage. This similarity was particularly evident with the most common alcohol-related problems of hangovers, intoxication to the point of nausea, and driving under the influence. In Chapter V, recommendations for addressing alcohol-related problems in an alcohol education program will be made.

F. Frequencies and Percentages of Alcohol Knowledge

In the last section of the questionnaire, students were asked to respond to 36 statements which indicated their knowledge of alcohol. Respondents were instructed to write "1" for a true response, "2" for a false response, and "0" for a don't know response, rather than recording a guess

response. The results were tabulated, and percentages and frequencies were determined for each alcohol-knowledge item.

Approximately 450 students responded to this portion of the questionnaire. The highest possible score was 36 correct responses, and the highest score obtained was 30. Therefore, the highest percentage score was 83.3 percent. The lowest score obtained was 0; thus, the range was 30. The mean score of correct responses was 18; thus, the mean percentage correct was 50 percent. The SAS univariate reveals a skewness of -0.4857 ; therefore, the majority of the values (number correct) were distributed below the mean. Kurtosis, (Ray, p. 19) was found to be -0.1841 , which means almost all of the number of correct scores appear very close to the mean. The standard deviation was found to be 5.76. The median was 19 correct responses. The mode, or the most frequently occurring number of correct responses, was also 19. The results of the SAS univariate concerning the number of correct responses were found to be significant at the .0001 level. The chances of the mean being equal to 0 were non-existent ($\alpha = .0001$).

The number of incorrect responses and don't know responses were added together in order to determine an overall score, since incorrect responses and don't know responses both indicated a lack of knowledge. The mean of the two was found to be 17.5 with a standard deviation of

5.94. The median and mode of incorrect and don't know responses were both 17. the range of the combined variables was 35. These results were found to be significant at the .0001 level. The skewness of the combined variables was $-.2335$, and the kurtosis was negative (-0.1313). Therefore, the numbers of incorrect and don't know responses were clustered below the mean, once again revealing a lack of knowledge, since the mean of these variables was less than a fifty percent correct response.

Frequencies and percentages of right, wrong, and don't know responses were determined for each of the following alcohol-knowledge questions (See Table 10). The male respondents had 21 percent correct responses, while the females had 18 percent.

Question 32, "Drinking milk before drinking an alcoholic beverage will slow down the absorption of alcohol into the body," is true. A total of 450 students (99 percent) of those surveyed responded to this question. Twenty-nine percent indicated a correct response, and 24 percent indicated a wrong response. Forty-seven percent of the respondents offered a don't know response. Consequently, 71 percent of those who responded to this question indicated a wrong or don't know response.

TABLE 10

FREQUENCIES AND PERCENTAGES OF ALCOHOL KNOWLEDGE
LINCOLN MEMORIAL UNIVERSITY, 1987

KNOWLEDGE ITEM	CORRECT RESPONSES		INCORRECT RESPONSES		DON'T KNOW	
	F	%	F	%	F	%
Question 32: "Drinking milk before drinking an alcoholic beverage will slow down the absorption of alcohol into the body."	130	28.9	109	24.2	211	46.9
Question 33: "Wines are made by fermenting grains."	203	45.2	125	27.8	121	26.9
Question 34: "Alcoholic beverages do not provide weight increasing calories."	387	85.6	35	7.7	30	6.6
Question 35: "In America drinking is usually considered an important socializing custom in business, for relaxation, and for improving interpersonal relationships."	344	76.3	65	14.4	42	9.3
Question 36: "Gulping of alcoholic beverages is a commonly accepted drinking pattern in this country."	169	37.6	174	38.7	107	23.8
Question 37: "Alcohol is usually classified as a stimulant."	245	54.7	152	33.9	51	11.4
Question 38: "Alcohol is not a drug."	421	93.1	21	4.6	10	2.2

TABLE 10 (continued)

KNOWLEDGE ITEM	CORRECT RESPONSES		INCORRECT RESPONSES		DON'T KNOW	
	F	%	F	%	F	%
Question 39: "A blood alcohol content of 0.1% is the legal definition of alcohol intoxication in most states in regards to driving."	228	50.8	89	19.8	132	29.4
Question 40: "Approximately 10% of fatal highway accidents are alcohol-related."	189	42.1	135	30.1	125	27.8
Question 41: "Alcohol was used for centuries as a medicine in child-birth, sedation, and surgery."	319	71.0	22	4.9	108	24.1
Question 42: "Table wines contain from 2 12% alcohol by volume."	24	5.3	217	48.3	208	46.3
Question 43: "It is estimated that approximately 85% of the adult Americans who drink misuse or abuse alcoholic beverages."	55	12.2	231	51.4	163	36.3
Question 44: "Many people drink to escape from problems, loneliness, and depression."	418	92.5	18	4.0	16	3.5
Question 45: "Liquor mixed with soda pop will affect you faster than liquor drunk straight."	262	58.2	37	8.2	151	33.6

TABLE 10 (continued)

KNOWLEDGE ITEM	CORRECT RESPONSES		INCORRECT RESPONSES		DON'T KNOW	
	F	%	F	%	F	%
Question 46: "The most commonly drunk alcoholic beverages in the United States are distilled liquors (whiskey, gin, vodka)."	168	37.3	106	23.6	176	39.1
Question 47: "A 150 pound person, to keep his blood alcohol concentration below the legally intoxicated level, means that he would have to drink less than 3 beers in an hour."	72	16.1	161	35.9	215	48.0
Question 48: "A person cannot become an alcoholic by just drinking beer."	392	86.7	28	6.2	32	7.1
Question 49: "To prevent getting a hangover, one should sip his drink slowly, drink and eat at the same time, space drinks over a period of time and don't over drink for your limit."	290	64.3	62	-3.7	99	22.0
Question 50: "Responsible drinking can result in relaxation, enhanced social interactions, and a feeling of well-being."	203	45.2	145	32.3	101	22.5
Question 51: "Distilled liquors (Gin, whiskey, vodka, etc.) usually contain about 15-20% alcohol by volume"	144	32.1	94	21.0	210	46.9

TABLE 10 (continued)

KNOWLEDGE ITEM	CORRECT RESPONSES		INCORRECT RESPONSES		DON'T KNOW	
	F	%	F	%	F	%
Question 52: "Moderate consumption of alcoholic beverages is generally not harmful to the body."	129	28.7	237	52.8	83	18.5
Question 53: "It takes about as many hours as the number of beers drunk to completely burn up the alcohol ingested."	144	32.0	90	20.0	216	48.0
Question 54: "An ounce of whiskey contains about 60 calories."	54	12.3	81	18.4	305	69.3
Question 55: "Many people drink for social acceptance, because of peer group pressures, and to gain adult status."	426	94.7	9	2.0	15	3.3
Question 56: "A blood alcohol concentration of .02 causes a person to be in a stupor."	108	24.4	80	18.1	254	57.5
Question 57: "Liquors such as gin, scotch, and whiskeys are usually distilled from mashies made from fermenting grains."	257	57.4	18	4.0	173	38.6
Question 58: "Proof on a bottle of liquor represents half the percent of alcohol contained in the bottle."	154	34.4	108	24.1	186	41.5

TABLE 10 (continued)

KNOWLEDGE ITEM	CORRECT RESPONSES		INCORRECT RESPONSES		DON'T KNOW	
	F	%	F	%	F	%
Question 59: "The United States lacks a national consensus on what constitutes the responsible use of alcoholic beverages."	208	46.6	39	8.7	199	44.6
Question 60: "There is usually more alcoholism in a society which accepts drunken behavior than in a society which frowns on drunkenness."	229	51.5	94	21.1	122	27.4
Question 61: "Beer usually contains from 2 - 12% alcohol by volume."	190	42.5	29	6.5	228	51.0
Question 62: "Eating while drinking will have no effect on slowing down the absorption of alcohol in the body."	288	64.1	64	14.3	97	21.6
Question 63: "Drinking coffee or taking a cold shower can be an effective way of sobering up."	210	46.7	171	38.0	69	15.3
Question 64: "Wines throughout history have been commonly drunk at religious ceremonies and family gatherings."	290	66.9	19	4.2	40	8.9
Question 65: "Drinking of alcoholic beverages has been common in the USA since the Puritans first settled here."	215	47.9	54	12.0	180	40.1

TABLE 10 (continued)

KNOWLEDGE ITEM	CORRECT RESPONSES		INCORRECT RESPONSES		DON'T KNOW	
	F	%	F	%	F	%
Question 66: "Alcohol has only been used in a very few societies throughout history."	297	66.3	30	6.7	121	27.0
Question 67: "Liquor taken straight will affect you faster than liquor mixed with watter."	287	63.9	37	8.2	125	27.8

Question 33, "Wines are made by fermenting grains," is false. A total of 449 students (99 percent) responded to this item. Forty-five percent gave a correct response, and 28 percent gave a wrong response. Twenty-seven percent indicated a don't know response. Consequently, 55 percent indicated a wrong or don't know response.

Question 34, "Alcoholic beverages do not provide weight-increasing calories," is false. In all 452 students (99 percent) responded to this question. Eighty-six percent of the respondents indicated a correct response, and 8 percent indicated a wrong response. Seven percent of the respondents indicated a don't know response. A total of 15 percent of the respondents indicated a wrong or don't know response.

Question 35, "In America drinking is usually considered an important socializing custom in business, for relaxation and for improving interpersonal relationships," is true. The percentage for correct responses to this question was 76, and for wrong responses the percentage was 14. Don't know responses had a percentage of 9. Together, the wrong and don't know responses equalled 24 percent.

Question 36, "Gulping of alcoholic beverages is a commonly accepted drinking pattern in this country," is false. Thirty-eight percent of the respondents to this question indicated the right answer, and 39 percent

indicated a wrong answer. Twenty-four percent of the respondents indicated a don't know response. The total percentage for wrong and don't know responses was 63 percent.

Question 37, "Alcohol is usually classified as a stimulant," is false. Fifty-five percent of the students who responded to this question responded with a correct response, while 34 percent responded incorrectly. Eleven percent of the students gave a don't know response. The total of wrong and don't know responses was 45 percent.

Question 38, "Alcohol is not a drug," is false. Ninety-three percent of the respondents indicated a correct response to this question, and 5 percent indicated a wrong response. Only 2 percent indicated a don't know response. Consequently, 7 percent of the respondents indicated a wrong or don't know response.

Question 39, "A blood alcohol concentration of 0.1% is the legal definition of alcohol intoxication in most states in regards to driving," is true. Fifty-one percent of the students who responded to this question indicated the correct answer, while 20 percent of the students who responded to this question indicated a wrong response. Twenty-nine percent of the students who responded to this question indicated a don't know response. Thus, 49 percent of the students did not know the correct answer.

Question 40, "Approximately 10% of fatal highway accidents are alcohol-related," is false. Thirty percent of those students who responded to this question gave a correct response, while 42 percent indicated a wrong response. The percentage of don't know responses was 28. The total percentage of wrong and don't know responses was 70.

Question 41, "Alcohol was used for centuries as a medicine in childbirth, sedation, and surgery," is true. The percentage of correct responses for this question was 71, and for wrong responses the percentage was 5. Don't know responses received a percentage of 25. Twenty-nine percent was the total percentage for wrong and don't know responses.

Question 42, "Table wines contain from 2-12% alcohol by volume," is true. Only 5 percent of the respondents indicated the right answer; while 48 percent of the respondents indicated a wrong answer, and 46 percent indicated a don't know response. Together, the percentage of wrong and don't know responses was 95.

Question 43, "It is estimated that approximately 85% of the adult Americans who drink misuse or abuse alcoholic beverages," is false. Correct responses from those who responded to this question received a percentage of 12. Fifty-one percent of the respondents indicated an incorrect response, while 36 percent of the respondents indicated they

did not know. Together, the wrong and don't know responses equalled 88 percent.

Question 44, "Many people drink to escape from problems, loneliness, and depression," is true. Ninety-two percent of the respondents answered this question correctly. Wrong responses and don't know responses both equalled 4 percent each. Wrong and don't know responses totaled 8 percent.

Question 45, "Liquor mixed with soda pop will affect you faster than liquor drunk straight," is false. Fifty-eight percent of the students who responded to this question indicated a right response. Eight percent of the respondents indicated a wrong response, and 34 percent indicated a don't know response. The total percentage of wrong and don't know responses was 42 percent.

Question 46, "The most commonly drunk alcoholic beverages in the United States are distilled liquors (whiskey, gin, vodka)," is false. Thirty-seven percent of the respondents reported the correct response, and 24 percent of the respondents reported an incorrect response. Thirty-nine percent of the respondents indicated a don't know response. Sixty-three percent of the respondents indicated a wrong or don't know response.

Question 47, "A 150-pound person, to keep his blood alcohol concentration below the legally intoxicating level, means that he would have to drink less than 3 beers in an

hour," is false. Sixteen percent of the respondents indicated the correct response to this question, while 36 percent of the respondents answered incorrectly. Forty-eight percent of the respondents indicated a don't know response. The total percentage of wrong and don't know responses was 84.

Question 48, "A person cannot become an alcoholic by just drinking beer," is false. Eighty-seven percent of the respondents reported the right answer, and 6 percent indicated a wrong response. Seven percent of the respondents indicated a don't know response. Thirteen percent of the respondents reported a wrong or don't know response.

Question 49, "To prevent getting a hangover one should sip his drink slowly, drink and eat at the same time, space drinks over a period of time, and don't over drink for your limit," is true. Sixty-four percent of the respondents indicated a correct response, and 13 percent of the respondents indicated an incorrect response. Twenty-two percent of the respondents indicated a don't know response. Forty-nine percent of the respondents reported a wrong or don't know response.

Question 50, "Responsible drinking can result in relaxation, enhanced social interactions, and a feeling of well-being," is true. Forty-five percent of the respondents

chose the correct response, and 32 percent of the respondents were incorrect. Twenty-three percent of the respondents reported a don't know response. Fifty-five percent of the respondents reported wrong or don't know responses.

Question 51, "Distilled liquors (gin, whiskey, vodka, etc.) usually contain about 15-20% of alcohol by volume," is false. The correct response was chosen by 32 percent of the respondents and the incorrect response by 21 percent. Forty-seven percent of the respondents indicated a don't know response. The total percentage for wrong and don't know responses was 68.

Question 52, "Moderate consumption of alcoholic beverages is generally not harmful to the body," is true. Twenty-nine percent of the respondents responded correctly, while 53 percent gave an incorrect response. Nineteen percent of the respondents indicated a don't know response. Wrong and don't know responses received a percentage of 72.

Question 53, "It takes about as many hours as the number of beers drunk to completely burn up the alcohol ingested," is true. Thirty-two percent of those who responded to this question reported a right response. Twenty percent of the respondents reported a wrong response, and 48 percent reported a don't know response. Together, the wrong and don't know responses were 68 percent.

Question 54, "An ounce of whiskey contains about 60 calories," is false. Twelve percent of the respondents indicated a correct response; while 18 percent responded with a wrong response, and 69 percent responded with a don't know response. Eighty-seven percent responded with a wrong or don't know response.

Question 55, "Many people drink for social acceptance, because of peer group pressures, and to gain adult status," is true. Ninety-five percent of the respondents answered correctly. Two percent responded with a wrong response, and 3 percent reported a don't know response. The total of wrong and don't know responses was 5 percent.

Question 56, "A blood alcohol concentration of .02 causes a person to be in a stupor," is false. Of those who responded to this question, 24 percent were correct, and 18 percent were incorrect. Fifty-eight percent of the respondents indicated a don't know response. Wrong and don't know responses accounted for 76 percent of the responses.

Question 57, "Liquors such as gin, scotch and whiskeys are usually distilled from mashes made from fermenting grains," is true. Fifty-seven percent of the respondents reported a right response, and 4 percent reported a wrong response. Thirty-nine percent gave a don't know response.

Forty-three percent of the respondents offered a don't know or wrong response.

Question 58, "Proof on a bottle of liquor represents half the percent of alcohol contained in the bottle," is true. The percentage of respondents who gave a correct response was 34, and the percentage of wrong responses was 24. Forty-two percent of the respondents reported a don't know response. Sixty-six percent gave either a wrong or don't know response. It should be noted that the wording of this question may have been misleading.

Question 59, "The United States lacks a national consensus on what constitutes the responsible use of alcoholic beverages," is true. Forty-seven percent of those who responded to this question answered correct, and nine percent of the respondents responded incorrectly. Forty-five percent responded with a don't know response. A total percentage of wrong and don't know responses was 54.

Question 60, "There is usually more alcoholism in a society which accepts drunken behavior than in a society which frowns on drunkenness," is true. Fifty-two percent of the respondents indicated a right response, while 21 percent indicated a wrong response. Twenty-four percent of the respondents indicated a don't know response. Wrong and don't know responses received a percentage of 45 percent.

Question 61, "Beer usually contains from 2-12% alcohol by volume," is true. Forty-three percent of the respondents answered this question correctly. Seven percent of the respondents reported a wrong response, and 51 percent reported a don't know response. Wrong and don't know responses received a total percentage of 58.

Question 62, "Eating while drinking will have no effect on slowing down the absorption of alcohol in the body," is false. Sixty-four percent of the respondents reported a right response, while 14 percent reported a wrong response. Twenty-one percent of the respondents reported a don't know response for a total of 35 percent for wrong and don't know responses.

Question 63, "Drinking coffee or taking a cold shower can be an effective way of sobering up," is false. Forty-seven percent of the respondents gave correct responses, and 38 percent of the responses were incorrect. Don't know responses received 15 percent of the total responses. Together, the total percentage for wrong and don't know responses was 53.

Question 64, "Wines throughout history have been commonly drunk at religious ceremonies and family gatherings," is true. Eighty-eight percent of the respondents reported a right response, and 4 percent reported a wrong response. Nine percent indicated that they

did not know the correct answer. Respondents reported a total of 13 percent wrong and don't know responses.

Question 65, "Drinking of alcoholic beverages has been common in the U.S.A. since the Puritans first settled here," is true. Forty-eight percent of the respondents answered correctly, and 12 percent gave a wrong response. Forty percent of the respondents reported a don't know response. Fifty-two percent responded with a wrong or don't know response.

Question 66, "Alcohol has only been used in a very few societies throughout history," is false. Of those who responded to this question, 66 percent responded with a correct response, and 7 percent recorded an incorrect response. Twenty-seven percent responded with a don't know response, and 34 percent with a wrong or don't know response.

Question 67, "Liquor taken straight will affect you faster than liquor mixed with water," is true. Sixty-four percent of the respondents gave a right response, and 8 percent gave an incorrect response. Twenty-eight percent of the respondents responded with a don't know for a total of 36 percent wrong and don't know responses.

The knowledge items of the Student Alcohol Questionnaire included questions on physiological reactions to alcoholic beverages, motivation for use, traditional and

historical uses, the chemical make-up and nutritional content of alcoholic beverages, and potential for abuse. Respondents were best able to answer correctly questions about motivations and traditions. Surprisingly, respondents seem to no longer believe the misconception that alcohol is not a drug (Question 38 was answered correctly by 93 percent of respondents). Items with specific numbers and statistics may be a little outdated, since the instrument was developed in 1975, a fact which may partly account for the low percentage of correct responses for item 43.

G. Summary

In Chapter IV, the findings of the study have been described. Included were a description of demographic variables of student respondents. The drinking patterns of the respondents and their relationship to other variables were reported. The percentage of the respondents who had experienced various alcohol-related problems was reported, and the extent of their knowledge of alcoholic beverages was described.

CHAPTER V

SUMMARY OF THE FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

A. Introduction

Approximately 40 percent of Lincoln Memorial University's (LMU) students were selected to participate in the survey which formed the basis of the study. The respondents answered the Student Alcohol Questionnaire, an instrument established as valid and reliable, which has been utilized by many researchers studying the college-age population's alcohol consumption patterns and alcohol knowledge. The responses to the LMU survey were then tabulated and the findings reported as frequencies and percentages.

This chapter contains a summary of the findings of the study and the major conclusions which were drawn from these findings. Based on these conclusions, recommendations for an effective alcohol education program for all LMU students are also presented in the form of a curriculum framework which has been developed based on this study's findings concerning the drinking patterns and lack of alcohol knowledge of LMU students. This framework is presented in Chapter VI.

B. Summary of the Findings

The study yielded these findings:

Research question number one: What are the demographic characteristics of the students who use alcoholic beverages at LMU?

1. The moderate to heavy student drinker at LMU is likely to be a 21- to 25-year-old, male dorm resident with a GPA of 2.50 or less.

2. He or she is also likely to place a moderate-to-high importance on religion and to be an adherent of a Protestant church which does not allow the drinking of alcoholic beverages. ✓

Research question number two: What are the drinking patterns of LMU students regarding beer, wine, and liquor?

1. Among the traditional college-age students, the percent of those who abstained from drinking beer or wine decreased between ages 18 and 22, then increased again among 25-year-olds. The percentage of abstainers from liquor consumption continued to decrease after age 22 through age 25.

2. A larger percent of LMU students were heavy drinkers of beer at ages 21, 22, and 23, but the same was not true for wine and liquor consumption.

3. The fewest moderate and heavy drinkers for all ages were those who drank wine.

4. With all beverages, higher grade-point averages were reported by those who drank less and also less frequently. With all beverages, the students who drank more and more often reported achieving lower grade-point averages. There were fewer moderate and heavy wine drinkers who reported a lower GPA than was true of beer or liquor drinkers.

✓ 5. As the reported importance of religion decreased, the acknowledged drinking of all alcoholic beverages increased.

6. All categories of consumption of alcohol were higher among students residing in dormitories than among those who lived off-campus.

7. Female students reported higher rates of abstinence from beer and liquor consumption than males, but were more likely to drink wine.

8. Males were more likely to be moderate and heavy drinkers of beer and liquor, which accounts for women reporting greater percentages in the category of light drinkers for these particular beverages. The highest percentage of heavy drinking was of beer by men.

9. Few patterns emerged on drinking behavior related to year in school. There was a slight, but progressive,

decrease in heavy liquor drinking from freshman to senior year.

10. All logical combinations of the variables which were used in this study to examine the demographics and drinking patterns of LMU students were statistically analyzed, and no statistically significant relationships were found other than those reported above.

✓ Research question number three: What problem behaviors have been experienced as a result of drinking by LMU students?

1. The most frequently experienced alcohol-related problem was vomiting.

2. The second most frequently experienced problem was having a hangover, followed by drinking and driving, attending classes after drinking, and dating problems.

Research question number four: What knowledge of alcohol education do LMU students possess?

1. Few students scored high on alcohol knowledge and the majority were unable to answer half the items correctly.

C. Conclusions

The following conclusions were drawn from the findings produced in response to research question number one:

1. The inclusion of a concept promoting religious values would increase the effectiveness of the alcohol education curriculum framework developed for LMU.

2. Since students who live in the dormitories at LMU are more likely to drink, to drink heavily, and to be on campus in the evenings, a campus-wide component of the framework is likely to be effective.

The following conclusions are based on an analysis of the findings produced in response to research question number two:

1. The older the LMU student, the more likely he or she is to need the intervention component of the framework.

2. Any portion of the framework which relates to the abuse of wine needs to be tailored to appeal particularly to LMU's female students.

3. Any portion of the framework which relates to the abuse of beer and liquor needs to be tailored to appeal particularly to LMU's male students.

4. The framework needs to present the relationship between alcohol consumption and problem behaviors which might result in a low GPA, especially emphasizing this relationship with LMU's male students.

The following conclusion is based on an analysis of the findings produced in response to research question number three:

Alcohol-related problems of LMU students may seriously impair the quality of their lives academically, vocationally, legally, socially, and relative to health.

The following conclusion is based on an analysis of the findings produced in response to research question number four:

LMU students have a clear lack of accurate knowledge about alcohol and its effects, and this deficit may reduce their ability to make appropriate decisions about alcohol use.

Chapter VI presents the conclusions based on the analysis of the findings produced in response to research question number five:

D. Recommendations

The following general recommendations for an alcohol education program are offered to LMU based on the findings of this study and the review of the literature:

1. Research should be done longitudinally to learn how changes in alcohol legislation, campus policy, and level of awareness affect student drinking behaviors.

2. Alcohol education on the LMU campus must be well-planned, based on the needs of the learner, sequential, and interdisciplinary in nature.

3. Evaluations should be conducted on which aspects of LMU's new alcohol education program (affective, content, skill-building, values clarification) are most effective in encouraging positive student drinking behaviors.

4. LMU should make every effort to insure that the environment of the campus and neighboring community are such that irresponsible drinking behavior is discouraged and responsible attitudes and behaviors are positively reinforced.

5. New services should be provided (an alcohol abuse task force, a BACCUS chapter, and a wellness center), and the utilization of existing services should be encouraged.

6. The Curriculum Framework for Alcohol Education (which was based on the findings and conclusions of this study and recommendations 2, 4, and 5) should be implemented with further input from students, faculty, staff, and administration. This framework is presented in Chapter VI.

CHAPTER VI

CURRICULUM FRAMEWORK FOR AN ALCOHOL EDUCATION PROGRAM FOR ALL STUDENTS AT LINCOLN MEMORIAL UNIVERSITY

A. Introduction

This chapter will present in both narrative and tabular form a curriculum framework for an alcohol education program which is to be used to implement a required health course ✓ for all of Lincoln Memorial University's students.

The preliminary step in developing this framework was the completion of a survey of a representative sample of LMU students during spring quarter 1987. This survey utilized a nationally recognized instrument to collect data concerning the demographics and drinking patterns of LMU students.

The findings yielded by this study and the conclusions drawn from those findings facilitated the development of a general profile of the student body in relation to the important variables of class ranking, ratio of males to females, on- or off-campus residence, GPAs, religious values, and drinking patterns.

This profile was then used to select those concepts which needed to be included in an alcohol education program for LMU students and to determine the extent to which the selected concepts should be emphasized and the extent to

which each should be incorporated into campus-wide alcohol education activities.

The value which an LMU student placed on religion was the one factor which most strongly correlated with his or her drinking patterns. In light of this finding, the curriculum framework designed for LMU students, if it were to truly be merely an outgrowth of the study's findings, would have had to include a strong emphasis on religion as a deterrent to alcohol abuse.

The members of the Board of Trustees and the administrators of LMU, on the other hand, have traditionally taken a strong and unwaivering stand in support of the principle of freedom of religion. In keeping with this stand, they have allowed students freedom of choice in regard to their participation or nonparticipation in religious activities. They also have consistently avoided any promotion of religion among LMU students. In light of LMU's traditional insistence on this principle, it is obvious that any curriculum framework developed for LMU must avoid a strong emphasis on religion as a deterrent to alcohol abuse.

For this reason, the finding that the value which an LMU student placed on religion was the one factor which most strongly correlated with his or her drinking patterns was not developed into a concept to be included in the curriculum framework. Since its importance could not be

overlooked, however, it led to the inclusion of values clarification activities in the framework and to a decision on the part of the researcher to make this finding available to the organized religious groups on the LMU campus.

B. Concepts to Be Included in the Curriculum Framework
of LMU's Alcohol Education Program

The findings of this study and the review of the related literature which formed the conceptual framework for this study indicate that the concepts which LMU students most need to have included in an alcohol education program are

1. Alcohol is a drug which is commonly and dangerously abused in the United States and which is abused by some LMU students (a finding produced in response to research question number two).

2. Drunk driving is a serious legal, social, and health problem in our nation and is a problem for some LMU students (a finding produced in response to research question number three).

3. Women who drink during pregnancy risk exposing their unborn children to fetal alcohol syndrome, and female students at LMU who drink are probably unaware of this fact (a finding produced in response to research question number four).

4. There are laws which regulate aspects of alcohol use, such as its sale, legal drinking age, and driving while intoxicated, and LMU students are largely unaware of or misinformed about these laws (a finding produced in response to research question number four).

5. Young people may experiment with alcohol for a variety of reasons, and LMU students tend to experiment with alcohol more frequently if they are slightly older dormitory residents (a finding produced in response to research question number two)

6. There are differences among alcohol use, abuse, and alcoholism, and LMU students have little understanding of these differences (a finding produced in response to research question number four).

7. Alcoholism has serious effects on the individual, the family, and society at large, effects not fully understood by LMU students (a finding produced in response to research question number four).

8. There are many community agencies which serve as resources for the alcoholic and his/her family, and LMU students need to be familiar with the locations and services of these agencies.

9. The decision to drink or not should be made after thoughtful consideration, and LMU students lack the

information to make an informed decision (a finding produced in response to research question number four).

The above concepts are to be presented to LMU students in the following manner:

Concept 1: Alcohol is a drug which is commonly and dangerously abused in the United States and which is abused by some LMU students.

Objectives for the Concept: The student will (1) define alcohol as a drug, (2) categorize alcohol as a depressant, (3) list short-term and long-term effects of alcohol use, (4) describe alcohol as a drug with a high potential for abuse, (5) compared society's perception of alcohol with that of illicit drugs, such as cocaine or marijuana, and (6) describe alcohol as to tolerance, potential for addiction, and potential for overdose.

Implementation Plans for the Classroom: (1) The use of visual aids, e.g., transparencies covering the content of drug effects, levels of intoxication (BAC), number of abusers of alcohol as compared with other drugs, charts on tolerance to alcohol and other drugs. (2) The staging of debates on whether prohibition could have worked and whether advertising of alcoholic beverages should be banned from television programs viewed by children and teens.

Implementation Plans for the Campus: Hold an "Alcohol Abuse Awareness" Week sponsored by the proposed BACCHUS

Chapter and invite a prominent speaker on alcohol education to the fall freshman orientation.

Concept 2: Drunk driving is a serious legal, social, and health problem in our nation and is a problem for some LMU students.

Objectives for the Concept: The student will
(1) conclude that alcohol-related accidents are a leading cause of death for teens and young adults, (2) define BAC and list factors which influence level of intoxication, (3) describe how driving ability is impaired when an individual is intoxicated, (4) demonstrate (through role play) appropriate decision making relative to driving while intoxicated or riding with an intoxicated driver, and (5) analyze possible community solutions to the problem of drinking and driving.

Implementation Plans for the Classroom: (1) The use of visual aids and lecture to describe the laws in Tennessee, Kentucky, and Virginia which prohibit drunk driving, including penalties for DWI, (2) the use of a guest speaker from MADD, SADD, RIDD, STARR, or a state highway patrol unit, (3) the staging of a debate on how problems of drunk driving can be controlled in the community, and (4) role playing to illustrate decision making and problem solving for prevention or intervention in drunk driving situations.

Implementation Plans for the Campus: (1) Gain community support of a "designated driver program" with local restaurants and bars serving free non-alcoholic beverages to designated drivers, (2) university officials and the Chamber of Commerce requesting that local bars and restaurants remain open one hour after the last alcohol drink is served, (3) public service announcement made through WLMU to discourage drunk driving, and (4) the provision of a bus for spectators attending off-campus athletic and social events.

Concept 3: Women who drink during pregnancy risk exposing their unborn children to fetal alcohol syndrome (FAS), and female students at LMU who drink are probably unaware of this fact.

Objectives for the Concept: The student will (1) define fetal alcohol syndrome and list birth defects associated with it, (2) conclude that fetal alcohol syndrome is a leading, but preventable, cause of mental retardation, and (3) cite the level of drinking considered safe by physicians and researchers.

Implementation Plans for the Classroom: (1) Slides or print illustrations of facial distortion associated with Fetal Alcohol Syndrome and (2) Lecture/discussion on prenatal health care and avoidance of alcohol and other drugs.

Implementation Plans for the Campus: (1) Providing pamphlets on FAS through Family Medical Center and (2) counseling by Family Medical Center on avoidance or reduction of alcohol intake during pregnancy .

Concept 4: There are laws which regulate aspects of alcohol use, such as its sale, legal drinking age, and driving while drinking, and LMU students are largely unaware of or misinformed about these laws.

Objectives for the Concept: The student will (1) state existing laws regarding sale and use of alcohol and laws governing driving while intoxicated, (2) analyze how the increased drinking age may affect alcohol consumption by young people, and (3) judge whether existing alcohol legislation seems fairly applied and effective.

Implementation Plans for the Classroom: (1) A guest speaker from the police department or sheriff's office concerning the laws, (2) interviews of fellow students or community adults as to whether laws related to alcohol sale and use are fair, fairly applied, and effective, (3) a questionnaire to be administered confidentially to classmates as to how frequently underage drinking occurs, and (4) a debate as to whether alcohol, if invented today, would be a legal and socially acceptable drug. ✓

Implementation Plans for the Campus: (1) Offer public service announcements on the legal drinking age on radio

station WLMU, (2) serve non-alcoholic "mocktails" at social functions attended by underage students, and (3) create an Alcohol Use Task Force of students and faculty to establish policies for campus communities.

Concept 5: Young people may experiment with alcohol for a variety of reasons; continued use in adulthood may be related to fulfillment of needs or dependency.

Objectives for the Concept: The student will

- (1) list reasons young people may experiment with alcohol,
- (2) analyze which reasons may influence his/her choice to abstain or to use alcohol, (3) conclude that a user of alcohol may perceive a variety of needs (social, emotional, etc.) being met through alcohol use, and (4) describe the potential for drug dependency with alcohol.

Implementation Plans for the Classroom: (1) Brainstorming - students will list any and all reasons why young people might drink, then rank order those they believe to be most significant, (2) Record-keeping - students will record how the use of alcohol is portrayed in the media and analyze the advertising appeals used by beer, wine, and liquor companies, (3) Discussion - students will discuss the "modeling effect" of drinking behavior by parents and peers, (4) Values clarification - students will list "natural highs" (alternatives to alcohol use that promote health and well-being, and (5) a guest speaker from Alcoholics

Anonymous or alcohol rehabilitation will be invited to speak on the physical and psychological dependencies associated with alcohol.

Implementation Plans for the Campus: (1) Offer practice in refusal skills and assertiveness through Wellness Program, (2) Continue policy of refusing advertising and inducements (such as sponsorship of student activities) by alcohol distributors, and (3) begin a peer counseling program for adult children of alcoholics in conjunction with Cherokee Mental Health (TN) and Cumberland River Mental Health (KY).

Concept 6: There are differences among alcohol use, abuse, and alcoholism, and LMU students have little understanding of these differences.

Objectives for the Concept: The student will (1) define social drinking, moderation, and responsible alcohol use, (2) contrast alcohol abuse and alcoholism relative to one's ability to control drinking behavior, and (3) predict that alcohol abuse can lead to alcohol dependency.

Implementation Plans for the Classroom: (1) Buzz session - students will analyze alcohol use and abuse by college students and clarify whether patterns of use appear to be antecedents to alcohol dependency and (2) Values clarification - students will rank order alcohol with other

drugs considered dangerous (PCP, cocaine, heroin, barbiturates), comparing patterns of abuse and potential to do harm.

Implementation Plans for the Campus: (1) Inservice sessions for faculty, staff, and resident assistants on recognizing symptoms of alcohol abuse and alcoholism, (2) creation of a BACCHUS chapter on campus, (3) use of posters in the University Center, (3) an evening program in stress management for faculty, staff, and students (emphasizing positive coping skills and avoidance of alcohol use to cope with stress), and (4) supplement disciplinary action with counseling for students who have encountered alcohol-related problems.

Concept 7: Alcoholism has serious effects on the individual, the family, and society at large, effects not fully understood by LMU students.

Objectives for the Concept: The student will (1) define alcoholism as a progressive disease characterized by addiction to alcohol, (2) list symptoms of early, middle, and late stages of alcoholism, (3) describe the association between alcoholism and serious illness and premature death, (4) explain the impact of alcoholism on society, and (5) define co-dependency and compare positive and negative coping strategies of families of alcoholics.

Implementation Plans for the Classroom: (1) Handout on progression of disease alcoholism from early stages to recovery or death and a discussion of the need for early intervention, (2) a lecture/discussion on association of alcoholism with morbidity, mortality, and life expectancy, and (3) brainstorming concerning the consequences of alcoholism on society and families.

Implementation Plans for the Campus: (1) Posters on campus on identifying those who are problem drinkers and (2) including information on alcohol as a disease (such as a self-test, "Are You a Problem Drinker?") at a campus Health Fair.

Concept 8: There are many community agencies which serve as resources for the alcoholic and his/her family, and LMU students need to be familiar with the location and services of these agencies.

Objectives for the Concept: The student will (1) define prevention and intervention, (2) describe factors which influence successful intervention (e.g., early detection, level of denial, social support), (3) explain the low success rate of treatment programs, and (4) list and describe the functions of community agencies which provide services to alcoholics and their families.

Implementation of Plans for the Classroom: (1) Guest speakers from Alcoholics Anonymous and Al Anon and Ala Teen

and (2) role playing to illustrate how to confront a friend or family member about alcoholism.

Implementation of Plans for the Campus: (1) Inservice education for the faculty, staff, and RAs on community agencies which provide support for alcoholics and their families and an explanation of how to do alcohol referrals, (2) public service announcement on radio station WLMU on where problem drinkers can go for help, and (3) posting in the University Center of a list of alcohol counseling services in neighboring counties.

Concept 9: The decision to drink or not should be made after thoughtful consideration, and LMU students lack the information necessary to make this decision.

Objectives for the Concept: The student will (1) describe the decision-making model, (2) identify factors to consider in making a decision about alcohol, (3) analyze the social and media influences relative to alcohol use, and (4) apply the decision-making model to making responsible choices regarding personal use of alcoholic beverages.

Implementation Plans for the Classroom: (1) students will brainstorm a list of choices about drinking, (2) a handout of the decision-making model will be given to students to apply to the choices made during the brainstorming activity, (3) Values clarification - students will (confidentially) define themselves as abstainers or light, moderate, or heavy

users of alcohol, and (3) affective educational activities will be used which promote high levels of self-esteem and self-empowerment to increase the students' confidence in their decision making.

Implementation Plans for the Campus: (1) Information sessions for officers of student organizations concerning responsible party hosting, (2) a policy that nonalcoholic ✓ beverages and food are to be served with alcoholic beverages ✓ at campus-related social functions, and (3) the continuing offering of a wide variety of extracurricular activities as alternatives to alcohol use.

C. The Implementation of the Curriculum Framework

The implementation of this curriculum framework at LMU is tentatively planned for the fall of 1989. After LMU's administrators have reviewed and approved it in its current form, a complete copy of the framework in a compact format (shown in Table 11) will be widely distributed to faculty members, students, and other interested parties at LMU for their reactions. Based upon their comments, the framework may be revised slightly or may be simply implemented in its present form. At the end of each semester, students participating in the alcohol education course will be asked to evaluate the appropriateness, effectiveness and completeness of the framework. Studies will also be

TABLE 11

CURRICULUM FRAMEWORK FOR ALCOHOL EDUCATION, PREVENTION AND INTERVENTION PROGRAM
BASED ON FINDINGS OF ALCOHOL DRINKING PATTERNS, PROBLEMS, AND KNOWLEDGE,
LINCOLN MEMORIAL UNIVERSITY, 1987

TOPIC & CONCEPT	OBJECTIVES	IMPLEMENTATION PLANS FOR CLASSROOM	IMPLEMENTATION PLANS FOR CAMPUS	RESOURCES
<u>Alcohol as a Drug</u> Alcohol is a drug which is commonly and dangerously abused in the United States.	The student will: 1) define alcohol as a drug, 2) categorize alcohol as a depressant, 3) list short-term and long-term effects of alcohol use, 4) describe alcohol as a drug with a high potential for abuse, 5) compare society's perception of alcohol with that of illicit drugs such as cocaine or marijuana, and 6) describe alcohol as to tolerance, potential for addiction, and potential for overdose	Visual aids -transparencies covering the content of drug effects, levels of intoxication (BAC), number of abusers of alcohol as compared with other drugs, charts on tolerance to alcohol and other drugs. Debate - whether prohibition could have worked, whether advertising of alcoholic beverages should be banned from television programs viewed by children and teens.	Provide an "Alcohol Abuse awareness" week, sponsored by proposed BACCHUS chapter Speaker on alcohol awareness at fall freshman orientation	Chapter entitled "Alcohol: More than a Beverage" in <u>Understanding Your Health</u> by Payne and Hahn <u>Prevention Plus</u> (Public Health Service) - charts graphs Teacher-made test on misconceptions about alcohol

TABLE 11

CURRICULUM FRAMEWORK FOR ALCOHOL EDUCATION, PREVENTION AND INTERVENTION PROGRAM
BASED ON FINDINGS OF ALCOHOL DRINKING PATTERNS, PROBLEMS AND KNOWLEDGE,
LINCOLN MEMORIAL UNIVERSITY, 1987 (continued)

TOPIC & CONCEPT	OBJECTIVES	IMPLEMENTATION PLANS FOR CLASSROOM	IMPLEMENTATION PLANS FOR CAMPUS	RESOURCES
Driving While Intoxicated	The student will: 1) conclude that alcohol-related accidents are a leading cause of death for teens and young adults 2) define BAC and list factors which influence level of intoxication, 3) describe how driving ability is impaired when an individual is intoxicated, 4) demonstrate (through role play) appropriate decision making relative to driving while intoxicated or riding with an intoxicated driver, and 5) analyze possible community solutions to the problem of drinking and driving	Visual aids and lecture - describing laws in Tennessee, Kentucky, and Virginia which prohibit drunk driving, including penalties for DWI Guest speaker - from MADD, SADD, RIDD, STAR, or state highway patrol. Debate - on how problem of drunk driving can be controlled in the community Role play - illustrating decision making and problem solving for prevention and intervention of drunk driving	Gain community support for designated driver program" (restaurants and bars serve non-alcoholic beverages free to designated drivers) Have university officials and Chamber of Commerce request that bars and restaurants remain open one hour after last drink is served. Public service announcements through WLMU which discourage drunk driving Provide a bus for spectators attending off-campus athletic and social events	BAC "wheels" from Anheuser-Busch Film: <u>Kevin's Story</u> Posters from <u>Readers' Digest</u> Report on the <u>National Conference for Youth on Drinking and Driving</u> Film: <u>You're Under Arrest</u> Videotape: <u>But If You Live</u>

TABLE 11

CURRICULUM FRAMEWORK FOR ALCOHOL EDUCATION, PREVENTION AND INTERVENTION PROGRAM
BASED ON FINDINGS OF ALCOHOL DRINKING PATTERNS, PROBLEMS, AND KNOWLEDGE,
LINCOLN MEMORIAL UNIVERSITY, 1987 (continued)

TOPIC & CONCEPT	OBJECTIVES	IMPLEMENTATION PLANS FOR CLASSROOM	IMPLEMENTATION PLANS FOR CAMPUS	RESOURCES
<u>Fetal Alcohol Syndrome</u> Women who drink during pregnancy risk exposing their unborn children to fetal alcohol syndrome.	The student will: 1) define fetal alcohol syndrome and list birth defects associated with it. 2) conclude that fetal alcohol syndrome is a leading, but preventable cause of mental retardation, and cite the level of drinking considered safe by physicians and researchers 3) cite the level of drinking considered safe by physicians and researchers	Visual aids - Slides or print illustrations of facial distortions associated with fetal alcohol syndrome Lecture/discussion on prenatal health care and avoidance of alcohol and other drugs	Provide pamphlets on FAS through Family Medical Center Counseling on avoidance or reduced alcohol intake during pregnancy to be done by Family Medical Clinic	Pamphlets and posters from the March of Dimes Film: <u>Alcohol: Crisis for the Unborn</u>

TABLE 11

CURRICULUM FRAMEWORK FOR ALCOHOL EDUCATION, PREVENTION AND INTERVENTION PROGRAM
BASED ON FINDINGS OF ALCOHOL DRINKING PATTERNS, PROBLEMS, AND KNOWLEDGE,
LINCOLN MEMORIAL UNIVERSITY, 1987 (continued)

TOPIC & CONCEPT	OBJECTIVES	IMPLEMENTATION PLANS FOR CLASSROOM	IMPLEMENTATION PLANS FOR CAMPUS	RESOURCES
<u>Alcohol Law & Legislation</u> There are laws which regulate aspects of alcohol use, such as its sale, legal drinking age, and driving while intoxicated.	The student will: 1) state existing laws regarding sale and use of alcohol and laws governing driving while intoxicated, 2) analyze how the increased drinking age may affect alcohol consumption by young people, 3) judge whether existing alcohol laws seem fairly applied and effective	Guest speaker - from police or sheriff's office on new laws Interview - of fellow students or adults in community as to whether laws related to alcohol are fair, fairly applied, and effective Questionnaire - to be administered to classmates (with results being confidential) as to how frequently underage drinking occurs Debate - whether alcohol (if invented today) would be a legal and socially acceptable drug	Offer public service announcements on legal drinking age through radio station WLMU Serve non-alcoholic mocktails at social functions attended by underaged students. Create Alcohol Use Task Force (of students and faculty) to establish policies for campus	Pamphlets from law enforcement agencies on legal drinking age and Safe Roads Act of 1983

TABLE 11
CURRICULUM FRAMEWORK FOR ALCOHOL EDUCATION, PREVENTION AND INTERVENTION PROGRAM
BASED ON FINDINGS OF ALCOHOL DRINKING PATTERNS, PROBLEMS, AND KNOWLEDGE,
LINCOLN MEMORIAL UNIVERSITY, 1987 (continued)

TOPIC & CONCEPT	OBJECTIVES	IMPLEMENTATION PLANS FOR CLASSROOM	IMPLEMENTATION PLANS FOR CAMPUS	RESOURCES
<u>Patterns of Alcohol Use</u> There are differences among alcohol use, abuse, and alcoholism.	The student will: 1) define social drinking, moderation, and responsible alcohol use, 2) contrast alcohol abuse and alcoholism relative to one's ability to control drinking behavior, predict that alcohol abuse can lead to alcohol dependency 3) predict that alcohol abuse can lead to alcohol dependency	Buzz session - have students analyze alcohol use and abuse by college students and clarify whether patterns of use appear to be antecedents to alcohol dependency Values clarification - rank order alcohol with other drugs considered dangerous (PCP, cocaine, heroin, barbiturates), comparing patterns of abuse and potential to do harm	In-service education for faculty, staff, and resident assistants on recognizing symptoms of alcohol abuse and alcoholism Creation of a BACCHUS chapter on campus Poster: "Getting Drunk" to be displayed in University Center Offer evening program in stress management for faculty, staff, and students (emphasize positive coping skills and avoidance of alcohol use to cope with stress) Supplement disciplinary action with counseling for students who have encountered alcohol-related problems.	Prevention Plus (Public Health Service) Posters from National Clearinghouse on Alcohol Information (Rockville, MD) Film: <u>Alcohol: The Social Drug, the Personal Problem</u> Personal assessment chart (p. 99 of <u>Understanding Your Health, Instructors' Manual</u>, by Payne, Hahn, & Lipnicky)

TABLE 11

CURRICULUM FRAMEWORK FOR ALCOHOL EDUCATION, PREVENTION AND INTERVENTION PROGRAM
BASED ON FINDINGS OF ALCOHOL DRINKING PATTERNS, PROBLEMS, AND KNOWLEDGE,
LINCOLN MEMORIAL UNIVERSITY, 1987 (continued)

TOPIC & CONCEPT	OBJECTIVES	IMPLEMENTATION PLANS FOR CLASSROOM	IMPLEMENTATION PLANS FOR CAMPUS	RESOURCES
<u>Alcoholism as a Disease</u> Alcoholism has serious effects on the individual, the family, and society at large.	The student will: 1) define alcoholism as a progressive disease characterized by addiction to alcohol, 2) list symptoms of early, middle, and late stages of alcoholism, 3) describe the association between alcoholism and serious illness and premature death, 4) explain the impact of alcoholism on society, and 5) define co-dependency and compare positive and negative coping strategies of families of alcoholics	Handout - on progression of disease alcoholism from early stages to recovery or death, discuss need for early intervention Lecture/discussion - on association of alcoholism with morbidity, mortality, and life expectancy Brainstorming - consequences of alcoholism on society and families	Posters on campus on identifying those who are problem drinkers Include information on alcohol as a disease at campus Health Fair (with self-test "Are You a Problem Drinker?")	Film: <u>Father Martin's Guidelines</u> Handout: "Disease Progression of Alcoholism With and Without Intervention" Film: <u>I'll Quit Tomorrow</u> Film: <u>And I'm An Alcoholic</u>

TABLE 11
CURRICULUM FRAMEWORK FOR ALCOHOL EDUCATION, PREVENTION AND INTERVENTION PROGRAM
BASED ON FINDINGS OF ALCOHOL DRINKING PATTERNS, PROBLEMS, AND KNOWLEDGE,
LINCOLN MEMORIAL UNIVERSITY, 1987 (continued)

TOPIC & CONCEPT	OBJECTIVES	IMPLEMENTATION PLANS FOR CLASSROOM	IMPLEMENTATION PLANS FOR CAMPUS	RESOURCES
<u>Community Resources</u> There are many community agencies which serve as resources for the alcoholic and his/her family.	The student will: 1) define prevention and intervention, which influence successful intervention (e.g., early detection, level of denial, social support), 2) explain the low success rate of programs, and 3) list and describe the functions of community agencies which provide services to alcoholics and their families	Guest speaker - from Alcoholics Anonymous, Al Anon, and/or Ala Teen Role play - illustrating how to confront a friend or family member about alcoholism	In-service education for faculty, staff, and RAs on community agencies which provide support for alcoholics and families and how to do alcohol referral Public service announcements on radio station WLMU on where problem drinkers can get help Posting in the University Center of a list of alcohol services in neighboring counties	List of agencies from National Clearinghouse for Alcohol Information (Rockville, MD) Film: <u>Alcoholism: A Model of Drug Dependency</u>

TABLE 11

CURRICULUM FRAMEWORK FOR ALCOHOL EDUCATION, PREVENTION, AND INTERVENTION PROGRAM
BASED ON FINDINGS OF ALCOHOL DRINKING PATTERNS, PROBLEMS, AND KNOWLEDGE,
LINCOLN MEMORIAL UNIVERSITY, 1987 (continued)

TOPIC & CONCEPT	OBJECTIVES	IMPLEMENTATION PLANS FOR CLASSROOM	IMPLEMENTATION PLANS FOR CAMPUS	RESOURCES
<u>Decision Making</u> The decision to drink or not should be made after thoughtful consideration.	The student will: 1) describe the decision-making model, 2) identify factors to consider in making a decision about alcohol, 3) analyze the social and media influence relative to alcohol use, and 4) apply the decision-making model to making responsible choices regarding personal use of alcoholic beverages.	Brainstorming - have students brainstorm a list of choices about drinking Handout - on decision-making model, have students apply it to the above choices Values clarification - have students define selves as abstainers or light, moderate, or heavy users of alcohol (results confidential) Affective education activities which promote high levels of self-esteem and self-empowerment to increase the student's confidence in his/her own decision-making skills	Seminar for officers of student organizations on responsible party hosting Creation of a policy that non-alcoholic beverages and food are to be served along with alcoholic beverages at school social functions Continued offering of a wide variety of extra-curricular activities (social, recreational) as alternatives to alcohol use.	Prevention plus(a plan for schools, parents, and communities) - decision-making model, p. 202 Alcohol Information Module by American Red Cross Software: Control Drinking Responsi-bility (Control Health Software, Tarzana, CA

conducted to determine the effectiveness of campus-wide activities derived from the framework. As more is learned about student responses to the activities prescribed by the curriculum framework and about the changing nature of the student body at LMU, the framework will be revised accordingly.

CHAPTER VII

THE STUDY IN RETROSPECT

Clearly, the greatest risk of premature death for college students and young adults is alcohol-related accidents. There has been a great increase in public awareness of the need to discourage early experimentation with alcohol, particularly in the area of drunk driving.

New issues have emerged relative to the danger of immoderate alcohol use, such as fetal alcohol syndrome, co-dependency, and the needs of adult children of alcoholics. Breakthroughs in research as to the possibility of chemical or inherited causes of alcoholism are on the horizon.

Despite increased awareness, society seems to give sporadic attention to education and prevention of alcohol abuse. Past attempts to discourage young people from alcohol-related risk-taking often have been failures. It has been learned that moralizing, scare-tactics, and giving "just the facts" simply do not work. Crash programs and band-wagon approaches in response to crises have been ineffective. Successful programming must be preceded by effective needs assessment. This chapter presents a discussion of the study in relation to previous studies. Speculation about trends in alcohol use with implications for future research and programming, are also included.

The study of the drinking patterns, problems, and alcohol knowledge of LMU students was intended to be descriptive in nature and was not intended to be a comparison with studies by Engs and others. As the findings unfolded, however, comparisons naturally occurred.

This study reported that the higher a student's grade point average, the less likely that student was to drink alcoholic beverages. This finding was consistent with Engs' 1977 study.

The results of this study also were not dissimilar to Engs' (1977, 1982) comparative studies in terms of generalized drinking patterns. For example, the results of this study found that 77 percent of those surveyed consumed alcohol at least once a year, and both of Engs' studies revealed that approximately 79 percent of the students surveyed drank alcoholic beverages at least once a year. ✓

The student enrollment at LMU was somewhat different from that at other colleges in that there was a higher proportion of females to males and a lower percentage of racial and religious minorities. These differences should be considered by anyone who contemplates adapting the LMU ✓ curriculum framework for use at any other school.

Of the students who participated in the study, 70 percent were female, and 30 percent were male. Studies have shown that males exhibit greater risk-taking behaviors than

females, and this fact may have been a factor in the differences found in percentages in the LMU study relative to such behavior. For example, it is expected that males would consume more alcohol and be more likely to drive and drink. The results of this research showed that 22 percent of those surveyed who consumed alcohol had driven a car after excessive drinking. Regarding the same problem, Engs' (1977) study showed that 31 percent of those students surveyed had experienced the problem. The rank order of alcohol-related problems experienced by LMU students, however, was similar to the findings of Engs' 1977 study in sequence and by percentages. This similarity was especially obvious with the most commonly experienced alcohol-related problems of hangovers and intoxication to the point of nausea. Findings of the LMU study indicated that males drank more beer and liquor than females, a finding which is not any different from Engs's 1977 findings. What is different between the two studies is that females in the LMU study drank more wine than males. Engs reported that males drank a significantly greater quantity of wine when compared to females.

Across the nation, there are greater numbers of non-traditional students enrolling in institutions of higher education. In this study, 25 percent of the students were above the age of 25. It is logical to assume that a

freshman who is married, 32 years old with children would practice dissimilar drinking behavior from that of an 18-year-old living away from parents for the first time. The presence of a number of older students in the LMU sample may, in part, explain the mixed results for drinking patterns by year in school. Their presence also should be taken into consideration by anyone who contemplates adapting the LMU curriculum framework for use at another school.

Since the development of the Student Alcohol Questionnaire (SAQ), the information which needs to be known by an individual to make positive decisions about alcohol use has changed somewhat. Certain test items in the SAQ assessed knowledge section now would be superficial to one's decision making about alcohol use. For example, students are asked about the history of alcohol use in the United States and how particular alcoholic beverages are produced. Perhaps, instead of these questions, other factors that are more likely to influence experimentation should be assessed (e.g., self-esteem, decision-making skills, and refusal skills).

There has been a concerted effort in the last decade to improve society's awareness of the problem of drinking alcoholic beverages and driving and of the acceptance of alcohol as a drug which has a high potential for abuse.

Those efforts seem to have been successful with LMU students.

The SAQ collected data from students who were enrolled at LMU during the spring of 1987; therefore, a true percentage of students who had experienced alcohol-related problems could not be ascertained. Students who had been expelled for alcohol-related problems or students who had dropped out of college because of poor academic performance related to heavy alcohol use were not included in the study.

Neither the LMU study nor previous studies (unless replicated afterwards) could ascertain the impact that the 1983 change in legal drinking age has made in student drinking patterns. Hopefully, nationwide statistics will be made available which will demonstrate whether this legislation has made a difference in moderating alcohol use and abuse by college students.

As previously stated, the literature supports assessment of the needs of specific student populations and a comprehensive approach to their abuses of alcohol through education, environmental changes, and services for addressing those needs. Multiple factors influence alcohol decision-making; therefore, varied approaches must be taken to prevent alcohol problems and to intervene early when they occur. The framework developed for LMU uses a variety of approaches.

In conclusion, improper use of alcohol is a major threat to the health and well-being of college students. While program planning for alcohol education, prevention, and intervention in this dissertation was designed specifically with LMU students in mind, the curriculum framework developed may be of value to other colleges and universities.

Any other school contemplating making any use of this framework, however, should survey a sample of its student population and use the resulting profile of the student body to identify those concepts in the LMU curriculum framework which do or do not meet the needs of the students for whom they wish to provide an alcohol education, intervention, and prevention program.

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APPENDICES

APPENDIX A
PERMISSION LETTERS

Lincoln Memorial University

Harrogate, Tennessee 37752-0901

March 2, 1987

Dr. Bill C. Wallace
Department of Health, Leisure & Safety
University of Tennessee
Knoxville, Tennessee

Dear Dr. Wallace:

This letter is in support of Ms. Phyllis Noah, an Associate Professor of Education at Lincoln Memorial University, who is enrolled in graduate school at UT-K in pursuit of an Ed.D. Phyllis has served LMU admirably for a number of years and I am excited for her as she approaches her period of research and analyzation prior to the writing of the dissertation.

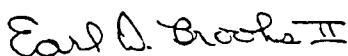
I am really excited about Phyllis's proposed topic and survey. LMU is trying to break the ice with a counseling center and to provide students with information on drugs, their use and effects, and health and fitness topics. To be honest, we are playing catch up in an area that is out of hand due largely to trends, our isolation, and a lack of education and treatment on our part. Phyllis's work excites me because it gives us an instrument to survey our student body and will help us to identify problem areas on the LMU campus. It will allow us an opportunity to analyze our situation without overreacting or taking on unnecessary steps or procedures.

Please know that I strongly support her efforts from our vantage point and will look to Phyllis in the future to direct drug education programs and eventually a wellness center on campus. The benefit to our students as a result of her study will be endless.

I appreciate all of your support and efforts to encourage Phyllis's study and please know that we support her efforts in this area and the use of her survey instrument on our campus for benefit of her program and our campus.

With warm regards from Lincoln Memorial University, I am

Sincerely,



Earl D. Brooks II
Vice President for Academic Affairs

EDB/cg



INDIANA UNIVERSITY

SCHOOL OF HEALTH, PHYSICAL
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March 12, 1987

Phyllis B. Noah
P.O. Box 1519
Lincoln Memorial University
Harrogate, TN 37752

Dear Ms. Noah:

You have permission to use The Student Alcohol Questionnaire and The Alcohol Attitude Questionnaire. Please be sure to give proper credit when using them.

Best wishes.

Sincerely,

*Ruth C. Engs by dj.*Ruth C. Engs
Associate Professor

RCE:dj

APPENDIX B
QUESTIONNAIRE

PRESENTATION OF RESEARCH PROJECT TO SUBJECTS

Research Project Title: Drinking Patterns and Alcohol Related Problems of College Students at a Small Private College in East Tennessee

Introduction of Research Project:

The purpose of this research is to determine alcohol knowledge, drinking patterns, and alcohol related problems of Lincoln Memorial University students. The data collected will be used to develop an alcohol education program suitable to the needs of LMU students. Your participation in the research would require completion of a questionnaire which will take approximately 25 minutes.

INFORMED CONSENT

1. Your participation in this research is voluntary.
2. DO NOT write your name on the questionnaire as I wish to retain your anonymity.
3. A completed questionnaire will indicate your informed consent to participate in this research.
4. If you are under 18 years of age, do not participate in the research, since that requires parental consent.
5. You may discontinue participation at any time without penalty.
6. Withdrawal from participation will not in any way affect your grade in the participating class.
7. Benefits to the subject - Subjects who participate in this research will provide the rationale for development of an alcohol education program to be designed for LMU students; therefore, no immediate benefits to the participant may be expected.
8. Risks of the study - There are no known risks of participating in this research.
9. There will be no monetary compensation, incentives or other rewards offered for participating in the research.
10. Data will be reported in such a manner that no participant can be identified.
11. Results of the study will be made available upon request.
12. If there are any questions, they should be addressed to Phyliss Noah, Education Division-LMU, 1-615-869-3611, Extension 247.

STUDENT ALCOHOL QUESTIONNAIRE^a

I am conducting a survey of college students alcohol knowledge drinking patterns and alcohol related problems and I hope that you will volunteer to complete this questionnaire. DO NOT write your name on this questionnaire.

FILL IN THE NUMBER WHICH APPLIES TO YOU IN THE BOX BESIDE THE QUESTION.

1	2
3	4
5	6
7	8
9	10

(OR USE)

Do you: 1. Commute 2. Live in a dorm

1. Your sex: 1. Male 2. Female

2. Your age: (write in)

3. Your major:

1. Social science 2. Arts and Humanities 3. Psychology 4. Pre-social work 5. Nursing
6. Pre-law 7. Education 8. Pre-med 9. Forensic studies 10. Health sciences/Education
11. Physical sciences 12. Physical education 13. Engineering 14. Religion
15. other _____
(write in)

4. Year in School:

1. Freshman 2. Sophomore 3. Junior 4. Senior 5. Graduate 6. other _____
(write in)

5. Average Grade Point Average:

- (4.0 = "A", 3.0 = "B", etc.) 1. 4.0 2. 3.5 3. 3.0 4. 2.5 5. 2.0 6. under 2.0

6. Race:

1. White or Caucasian 2. Black or Afro-American 3. Spanish American 4. Oriental or Asian American
5. Native American Indian 6. Foreign Student 7. Other _____
(write in)

7. What religion were you brought up in?

1. Roman Catholic 2. Jewish 3. Protestant (religion allows drinking of alcoholic beverages)
4. Protestant (religion does not allow drinking) 5. None or other _____
(write in)

8. How important is religion to you?

1. Very important 2. Moderately important 3. Mildly important 4. Not important

WE WOULD LIKE TO ASK YOU ABOUT YOUR DRINKING PATTERNS

9. Let's first take beer. How often, on the average, do you usually have a beer? (If you do not drink beer at all, go to question 11)

1. every day
2. at least once a week but not every day
3. at least once a month but less than once a week
4. more than once a year but less than once a month
5. once a year or less

10. When you drink beer, how much, on the average, do you *usually* drink at any one time? ☐
1. more than 1 six pack (6 or more cans or tavern glasses)
 2. 5 or 6 cans of beer or tavern glasses
 3. 3 or 4 cans of beer or tavern glasses
 4. 1 or 2 cans of beer or tavern glasses
 5. less than 1 can of beer or tavern glass
11. Now let's look at table wine. If you do not drink wine at all, go to question 13. How often do you *usually* have wine? ☐
1. every day
 2. at least once a week but not every day
 3. at least once a month but less than once a week
 4. more than once a year but less than once a month
 5. once a year or less
12. When you drink wine how much, on the average, do you *usually* drink at any one time? ☐
1. over 6 wine glasses
 2. 5 or 6 wine glasses
 3. 3 or 4 wine glasses
 4. 1 or 2 wine glasses
 5. less than 1 wine glass of wine
13. Next we would like to ask you about liquor or spirits, (whiskey, gin, vodka, mixed drinks, etc.). If you do not drink liquor at all, skip question 13 and 14. How often do you *usually* have a drink of liquor? ☐
1. every day
 2. at least once a week but not every day
 3. at least once a month but less than once a week
 4. more than once a year but less than once a month
 5. once a year or less
14. When you drink liquor how many, on the average, drinks do you *usually* drink at any one time? ☐
1. over 6 drinks
 2. 5 or 6 drinks
 3. 3 or 4 drinks
 4. 1 or 2 drinks
 5. less than 1 drink

The following are common results of drinking that other students have reported. If you have never had a drink at all go to question 32. If you currently drink or have been drunk in the past put the number corresponding to the frequency of the occurrences in the box beside it.

1. at least once during the past two months and at least one additional time during the past year.
 2. at least once within the past two months but not during the rest of this past year.
 3. not during the past two months but at least once during the past year.
 4. has happened at least once in my life but not during the past year.
 5. has not happened to me.
- | | |
|--|--|
| 15. have had a hangover ☐ | 24. been criticized by someone you were dating because of your drinking ☐ |
| 16. have gotten nauseated and vomited from drinking ☐ | 25. trouble with the law because of drinking ☐ |
| 17. driven a car after having several drinks ☐ | 26. lost a job because of drinking ☐ |
| 18. driven a car when you know you have had too much to drink ☐ | 27. got a lower grade because of drinking too much ☐ |
| 19. drinking while driving a car ☐ | 28. gotten into trouble with the school administration because of behavior resulting from drinking too much ☐ |
| 20. come to class after having several drinks ☐ | 29. gotten into a fight after drinking ☐ |
| 21. "cut a class" after having several drinks ☐ | 30. thought you might have a problem with your drinking ☐ |
| 22. missed a class because of a hangover ☐ | 31. damaged property, pulled false fire alarm, or other such behavior after drinking ☐ |
| 23. arrested for DWI (Driving While Intoxicated) ☐ | |

WE WOULD NOW LIKE TO ASK YOU SOME INFORMATION ABOUT ALCOHOL

The questions will either be TRUE OR FALSE. If you do not know the answer to the question **DO NOT GUESS**. Mark a "0" in the box. If you think the answer is **TRUE**, write "1" for true.

If you think the answer is **FALSE**, write "2" for false.

If you **do not know** the answer write "0" in the box.

32. Drinking milk before drinking an alcoholic beverage will slow down the absorption of alcohol into the body. ☐
33. Wines are made by fermenting grains. ☐
34. Alcoholic beverages do not provide weight increasing calories. ☐
35. In America drinking is usually considered an important socializing custom in business, for relaxation and for improving interpersonal relationships. ☐
36. Gulping of alcoholic beverages is a commonly accepted drinking pattern in this country. ☐
37. Alcohol is usually classified as a stimulant. ☐
38. Alcohol is not a drug. ☐
39. A blood alcohol concentration of 0.1% is the legal definition of alcohol intoxication in most states in regards to driving. ☐
40. Approximately 10% of fatal highway accidents are alcohol related. ☐
41. Alcohol was used for centuries as a medicine in childbirth, sedation, and surgery. ☐
42. Table wines contain from 2-12% alcohol by volume. ☐
43. It is estimated that approximately 85% of the Adult Americans who drink misuse or abuse alcoholic beverages. ☐
44. Many people drink to escape from problems, loneliness and depression. ☐
45. Liquor mixed with soda pop will affect you faster than liquor drunk straight. ☐
46. The most commonly drunk alcoholic beverage in the United States are distilled liquors (whiskey, gin, vodka). ☐
47. A 150 pound person, to keep his blood alcohol concentration below the legally intoxicated level, means that he would have to drink less than 3 beers in an hour. ☐
48. A person cannot become an alcoholic by just drinking beer. ☐
49. To prevent getting a hangover one should sip his drink slowly, drink and eat at the same time, space drinks over a period of time, and don't over drink for your limit. ☐
50. Responsible drinking can result in relaxation, enhanced social interactions, and a feeling of well being. ☐
51. Distilled liquors (gin, whiskey, vodka, etc.) usually contain about 15-20% alcohol by volume. ☐
52. Moderate consumption of alcoholic beverages is generally *not* harmful to the body. ☐
53. It takes about as many hours as the number of beers drunk to completely burn up the alcohol ingested. ☐

- 54. An ounce of whiskey contains about 60 calories ☐
- 55. Many people drink for social acceptance, because of peer group pressures, and to gain adult status ☐
- 56. A blood alcohol concentration of .02 causes a person to be in a stupor ☐
- 57. Liquors such as gin, scotch, and whiskies are usually distilled from mashies made from fermenting grains ☐
- 58. Proof on a bottle of liquor represents half the per cent of alcohol contained in the bottle ☐
- 59. The United States lacks a national consensus on what constitutes the responsible use of alcoholic beverages ☐
- 60. There is usually more alcoholism in a society which accepts drunken behavior than in a society which frowns on drunkenness ☐
- 61. Beer usually contains from 2-12% alcohol by volume ☐
- 62. Eating while drinking will have no effect on slowing down the absorption of alcohol in the body ☐
- 63. Drinking coffee or taking a cold shower can be an effective way of sobering up ☐
- 64. Wines throughout history have been commonly drunk at religious ceremonies and family gatherings ☐
- 65. Drinking of alcoholic beverages has been common in the U.S.A. since the Puritans first settled here ☐
- 66. Alcohol has only been used in a very few societies throughout history ☐
- 67. Liquor taken straight will affect you faster than liquor mixed with water ☐

APPENDIX C
DATA COLLECTION CLASSES

DATA COLLECTION CLASSES

<u>COURSE</u>	<u>TITLE</u>
Acct. 333	Intermediate Accounting III
Art. 111	Introduction to Visual Art
Art. 231	Basic Photography
Beoa. 322	Business Communications
Biol. 123	General Biology III
Cais. 200	Introduction Computer Science
Educ. 222	Introduction to Education
Educ. 480	Student Teaching Elementary
Educ. 480	Student Teaching Secondary
Engl. 113	Composition III
Engl. 113	Composition III
Engl. 113	Composition III
Engl. 113	Composition III
Engl. 113	Composition III
Engl. 113	Composition III
Engl. 113	Composition III
Engl. 113	Composition III
Engl. 343	Short Story
Engl. 412	Survey of English Literature II
Geog. 101	Introduction Geography
Hist. 123	US History III
Hist. 123	US History III
Hist. 123	US History III
Hist. 123	US History III
Hist. 372	History of Tennessee
Math. 113	Introduction Algebra III
Math. 113	Introduction Algebra III
Math. 113	Introduction Algebra III
Math. 123	Fundamentals of Math III
Math. 123	Fundamentals of Math III
Math. 123	Fundamentals of Math III
Math. 123	Fundamentals of Math III
Math. 123	Fundamentals of Math III
Math. 123	Fundamentals of Math III
Math. 123	Fundamentals of Math III
Math. 123	Fundamentals of Math III
Math. 123	Fundamentals of Math III
Math. 123	Fundamentals of Math III
Mgmt. 375	Organizational Behavior
Nurs. 213	Physical/Mental Health III
Socw. 493	Internship/Seminar
Spch. 221	Fundamentals/Public Address
Spch. 221	Fundamentals/Public Address
Spch 231	Oral Interpretation of Literature

VITA

Phyliss B. Noah was born in Middlesboro, Kentucky, on October 9, 1945. She grew up in Lee County, Virginia, with her parents, Hubert and Mary Bailey. In 1963 she entered Hiwassee Junior College and graduated in 1965 with an Associate of Arts degree in Health and Physical Education. In 1965 she continued her education at Tennessee Wesleyan College and graduated in 1967 with a Bachelor of Science degree in Health and Physical Education.

In the fall of 1967, she began a teaching career in Lee County Public Schools as a secondary teacher of health and physical education. She began graduate studies at Union College in 1969 and graduated with a Master Of Arts degree in the spring of 1971.

In the fall of 1971, she was employed by Lincoln Memorial University where she is currently an associate professor of health and physical education, has teaching responsibilities in the Education Division, and is Coordinator of Student Teaching for health and physical education majors.