EFFECTS OF A VALUES-ORIENTED AND DECISION-MAKING CURRICULUM AS A STRATEGY FOR DRUG ABUSE PREVENTION

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by

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ABSTRACT

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Eight classroom groups of public school children participated in values clarification and decision-making exercises. Four of the classes were in junior high school and four in elementary school. An additional four junior high school classes and four elementary school classes served as control groups for this study which was conducted to discover if use of a specialized curriculum would be an effective approach to the prevention of drug abuse. Students in the experimental classes participated in six one-hour sessions of values clarification and decision-making exercises. Two different outcome measures were used for the junior high school classes: Carney's Risk-Taking Attitudes-Values Inventory (RTAVI) and Rotter's Internal-External Locus of Control Scale. Elementary school classes used only Carney's instrument. Students were given a pre-test
using the instrument(s) in order to assess any pre-experimental differences between groups. The results were analyzed in terms of grade, sex and condition (experimental vs. control). Students who participated in the exercises had significantly different scores on the Socially Disapproved Behavior (SDB) scale of the RTAVI, indicating attitude changes in the desired direction toward drug use and other high-risk behaviors. Junior high school students scored significantly higher on the SDB scale than elementary school students, indicating that a drug abuse prevention program such as this one should be started in early grades. Males scored higher than females on the RTAVI indicating that there was greater willingness on the part of males to engage in high-risk behavior than for females. There were not statistically significant results for Rotter's scale.
Chapter I
INTRODUCTION

Drug abuse among American youth is a well known problem. Less well known, however, is what kind of a program will effectively prevent drug abuse. Despite the proliferation of drug prevention programs in the last fifteen years, there have been little objective data available on these programs, and the data that are available are disheartening.

Most school-based drug prevention programs in the past focussed on drug education. Information about the legal and physiological or psychological results of drug use was disseminated to students. The underlying assumption of these programs was that people decide to use drugs in a rational manner, and therefore cognitive information would deter them from such usage.

This direct, educative approach to drug prevention has failed. In a comprehensive review of research on school-based drug education programs, Goodstadt (1974) concluded that very few programs had been evaluated adequately, and almost none had shown any significant improvements in attitudes of youth toward drug use.

In fact results have shown that drug education may produce a negative correlation between level of knowledge and attitudes toward drugs (de Haes, 1974; Swisher &
& Hoffman, 1975). The more knowledge a student has about drugs, the more positive an attitude toward the use of drugs a student is likely to have.

A common explanation of these results states that curiosity is a prime motivator for initial drug use, and that information increases curiosity. However Pomazal & Brown (1977) present differing explanations for these results, including their research which suggests that personal attitudes toward drug use is but one of three possible determinants of drug use motivation.

Counseling programs that focus directly on drug usage seem to fail also to prevent drug abuse. In two separate studies (Swisher, Warner & Herr, 1972; Swisher, Warner & Spence, 1973), four different drug prevention programs of education and behavioral counseling showed no significant differences in the attitudes of students toward drug usage.

The discouraging results of drug education programs have led to the development of another approach to drug prevention. It is now believed (Keniston, 1970; Schaps, Cohen & Resnik, 1975) that a drug prevention program must address the psychological and social needs of youth. A personal, indirect approach to the problems of this population will, according to many (de Haes, 1974; Dohner, 1972; Edwards, 1974; Irwin, 1973; Jaffe, 1974; Nowlis, 1976), serve to alter the attitudes of young people toward the use of drugs.
The Etiology of Drug Abuse

The difficulty inherent in the belief that a psychological/sociological approach, rather than educative, to the prevention of drug abuse will serve the needs of young people is that the etiology of drug abuse among adolescents is highly complex and only minimally understood. Most of the research indicates differences between adolescent drug abusers and non-drug abusers. However, none of the different personality correlates or social and cultural factors attributed to adolescent drug abusers can be said to cause drug abuse. In fact, one of the only predictive variables thoroughly researched in the field indicates that a person's intention to use drugs predicts actual usage (Goldstein, 1975; Pomazal & Brown, 1977). Drug usage can also be predicted from alcohol drinking and cigarette smoking behavior (Bogg, 1969; Goldstein, 1975; Goode, 1975; Gould, Berberian, Kasl, Thomas & Kleber, 1977; Smith, 1973; Smith & Fogg, 1975).

Winslow, Hankins, and Strachan (1972) and others (Brayer, 1976; Cohen, 1973) have identified underlying motives for drug abuse among adolescents. These motives include curiosity about drugs, peer group pressure, low self-esteem, search for identity and meaning, rebellion against authority and escape from problems.

Low self-esteem and drug abuse. One area of research shows promising potential in understanding the etiology of
drug abuse. Low self-esteem has consistently been found to be a personality characteristic of drug addicts (Mecca, 1976; Minnesota State, 1977; Norem-Heibeisin, 1975; Norem-Heibeisin & Ahlgren, 1977). In fact, low self-esteem has been described as "the single common denominator of many different personality types who become drug abusers" (Steffanhager, 1977, p. 53).

Until recently, however, the same problem inherent in all studies seeking to determine the etiology of drug abuse was the problem with research on self-concept. Most research fails to identify whether the personality characteristics are antecedents or consequences of drug abuse. Recently Lindblad (1977) completed a study of self-concept and drug abuse which sought to identify antecedent variables distinguishing addicts from non-addicts in middle class white people. Based on 31 variables identified as antecedents or indices of low self-esteem, Lindblad was able to conclude that low self-esteem was an antecedent to drug abuse in his sample.

Norem-Heibeisin & Ahlgren (1977) also completed a study measuring different patterns and levels of self-esteem in several different groups of dysfunctional youth. All of the adolescents were in life crises related to delinquency or drug abuse, were involved in institutional settings, and were negatively valued by society. Drug abusing adolescents were markedly lower in general self-
esteem than any other group, and the authors state that this could not be ascribed to their present difficulties.

The implications for primary prevention of drug abuse are important. Improving adolescents' self-attitudes may have an affect on the incidence of substance abuse.

**Peer pressure and drug abuse.** One of the strongest factors in a young person's decision to use drugs is susceptibility to peer pressure. Peer group approval or use of drugs has been overwhelmingly found to be a contributing factor in the decision to use drugs (Goldstein, 1975; Irwin, 1973; Keniston, 1970; Norem-Heibeisen, 1975; Nowlis, 1976; Stone, 1977; Traub, 1977; Warner & Swisher, 1971).

The connection between low self-esteem and susceptibility to peer group pressure is a strong one. Both those with low self-esteem and those with drug addictions move from group to group seeking acceptance while assuming a passive role in any group (Coopersmith, 1967; Lindblad, 1977; Rosenberg, 1972). In addition, attitude change theory has long determined that self-esteem is inversely related to persuasibility (Hovland & Janis, 1959).

Kandel (1978) found that next to four sociodemographic attributes (grade, sex, race and age) use of marijuana and other illicit drugs is what high school friends shared most in common.

In terms of prevention of drug abuse, research indicates that many young people become involved in drugs because it
is the drug-taking group that will accept those who feel isolated and lonely with the prerequisite that the individual begins to use drugs. The attraction to drug-taking groups is belonging to a subculture where acceptance is assured and in which the self-esteem of the individual may be satisfied (Keniston, 1970; Evans, 1971). In addition, the initiation and continuation of deviant behavior, such as drug use, need the support of a peer group (Kandel, 1978).

Adolescence, especially mid-adolescence, is a time of intense peer group involvement. It is also a time when young people are struggling with a tenuous sense of personal identity. Often, in order to accomplish a sense of identity young people will defy adult norms (Miller, 1972).

The connection to the use of drugs is important for two reasons. The first is that drug experimentation is often an initiation rite into adolescence (Cohen, 1973; Grizzle, 1973). During early adolescence the drugs of choice are usually "parental" drugs, such as alcohol and cigarettes, as young people strive to mimic adult norms (Miller, 1972). In mid-adolescence, however, the drugs of choice are those disapproved of by parents.

It can thus be seen that the behavior of parents is also an important variable in a young person's decision to use drugs. Studies have indicated that parents who use legal drugs have a higher chance of raising children who use illegal drugs (Goode, 1975) than parents who do not use legal
drugs, and that the proportion of adolescent drug users is
directly related to the perceived frequency of parental use
of drugs (Etting, 1973). Other studies have suggested that
a combination of peer group and parental approval or use of
drugs (including legal drugs) has predictive relevance to
adolescent drug use (Bentler & Eichberg, 1975; Jessor,

**High risk behavior and drug abuse.** The term "high risk
behavior" has been defined in several ways as a predictor
of drug abuse and in some cases includes behavior involving
the use of drugs. Often the term is used interchangeably
with sensation-seeking behavior and impulsive behavior. In
addition, it is sometimes referred to as socially undesir-
able behavior or unacceptable high risk behavior. High risk
behavior is a term that may have different interpretations
depending on the age, sex, religion or culture of a person.

Project Info (1976) is a program developed to work with
young people in an early intervention modality. The defi-
nition used in this program is unacceptable high risk beha-
voir, and is defined as behavior which brings an adolescent
in contact with the criminal justice system or the disci-
plinary branch of the school system. The definition also
includes behavior which is destructive to the individual
or to another person. The behaviors considered to be
high risk ones include drug use, as well as vandalism,
reckless driving, promiscuous sexual activity and thirteen
other such behaviors.

Most of the research on risk-taking behavior has been done in the context of achievement motivation theory. It has been found that risk-taking behavior is high for those who have low achievement motivation (Atkinson, 1957) and for those who are anxious and defensive (Kogan & Wallach, 1967).

The literature on predicting adolescent drug abuse frequently suggests that both low achievement motivation and anxiety are predictive personality variables for drug abuse (Green, Blake, Carboy & Zenhausern, 1971; Jessor, Jessor & Finney, 1973; Sadava, 1973). Carney (1971) has also found a relationship between anxiety and a willingness to engage in high risk behavior. In addition he has found a relationship between high risk behavior and use of drugs.

Sensation seeking behavior, through high-risk impulsive actions, has also been identified as a predictor of drug abuse in adolescents (Segal, 1975; Smith & Fogg, 1975).

For most school-aged children, cigarette smoking and alcohol drinking are considered high-risk behaviors. The literature on these two behaviors as predictive of drug use and abuse is vast. Goode (1975) states that cigarettes and alcohol are precursors of marijuana, and the earlier the use of these substances, the more likelihood of
serious involvement with drugs. Bogg (1969) concludes his study of young people in Michigan by stating that marijuana users were more likely than non-users to smoke tobacco, and that virtually all marijuana smokers drank alcohol before involvement with marijuana.

In a study on the sequential pattern of multiple drug usage, it has been found that alcohol and cigarette use have a strong correlation with marijuana use (Gould, et al., 1977).

Values Development and Drug Abuse Prevention

Responding to low self-esteem or any of the other underlying motives for drug abuse is a difficult challenge. Adolescence is a time of struggling for identity, as well as seeking ways to fulfill basic needs. Drug abuse is often assumed to be symptomatic of these unmet needs (Carney, 1971; Irwin, 1973; Schaps, et al., 1975). Drug usage is seen as dysfunctional coping behavior directly related to the inability of the individual to reach valued goals by a more functional means (Brayer, 1976; Brayer & Carney, 1971; Keniston, 1970).

An indirect or alternative approach to drug abuse prevention is predicated upon recognition that an individual is a freely choosing decision-maker whose behavior will be influenced by his or her own value system and the ability to find and use alternatives to dysfunctional behavior in reaching goals and meeting needs. This
approach argues that students know the dangers of drugs, which makes the drug information approach superfluous, and that prevention must seek to "help the student confront the fact that in using drugs he is making a statement about how he wants to live his life" (Keniston, 1970, p. 448).

However, the adolescent's value system is a nebulous one, in a formative stage, and influenced greatly by peers. Values develop from the family environment, are modified by peer group influence, and then develop into a system that serves the individual's needs through everyday decision-making (Konopka, 1973).

Resistance to peer influences toward drug use can best be achieved by an individual's own value system and a sense of identity with the future (Kolb, 1961). In fact, the common cited factors correlating with lack of chemical use problems include clear and purposeful values and goals, self-confidence and stable, non-drug using peer groups (Minnesota State, 1977).

Intervention in this area involves working with young people to help them develop their own value systems which will guide their behavior and serve their needs. Rokeach (1968, 1971, 1973) has developed theories concerning the relations existing between values, attitudes and behavior, and his research suggests that becoming aware of one's values, and the inconsistencies between these values and one's behavior, will lead to change.
Faced with the decision to use or not use drugs, young people must become aware of alternatives to drug use for satisfying their needs, as well as the consequences of their choice to use drugs. A value system may be instrumental in this process since:

... the function of a person's value system is to help him choose between alternatives, and to resolve conflicts between alternatives in everyday life. (Rokeach, 1968, p. 551)

Rokeach also defined the difference between attitudes and values. Attitudes focus on specific objects and situations, while a value transcends these specific objects and situations. Secondly, Rokeach continues:

... a value, unlike an attitude, is a standard or yardstick guiding not only attitudes, but also actions, comparisons, evaluations, and justifications of self and other; third, a value, unlike an attitude, is a distinct preference for a specified mode of behavior or for a specified end state of existence. (Rokeach, 1968, pp. 550-551)

An interconnected value-attitude system was thus conceived by Rokeach:

Any change in any part of the value-attitude system will affect other parts; also, any change in the value-attitude system should lead to behavioral change. (Rokeach, 1968, p. 552)

Choices to abuse or use drugs will be influenced by an individual's values and attitudes about the pleasures and risks involved (Nowlis, 1976; Pearson, 1971). Attempting to change young people's attitude towards drug use must, therefore, involve their value system. This realiza-
tion is intrinsic in any indirect approach to drug abuse prevention, and has been philosophically stated as "the best deterrent to drug abuse is the individual's value system and his assessment of the consequences associated with drug involvement" (Levy, 1970, p. 1). Guidelines for drug abuse prevention programs incorporate this philosophy as a basic tenet of what drug education needs to involve (California State, 1976; Langer, 1970; National Institute of Mental Health, 1969; U.S. Government, 1971).

**Decision-making and Drug Abuse Prevention**

Cohen (1971, 1973) contends that young people use drugs because they want to use them. However, this simplistic statement is extended by Cohen when he writes:

> ... the behavior or drug use is produced by certain wants. Specifically, we might see behavior as determined by decisions, decisions as determined by goals, and goals as determined by values. (Cohen, 1973, p. 82)

The connection between values and decision-making has thus been succinctly condensed by Cohen.

If a values system serves as a deterrent to drug use, it will do so by the individual making increasingly informed decisions consistent with the developing system of values. Especially since adolescence is a time for a peak in values formation, and is considered a peak because for the first time decision-making is involved as a process of weighing and evaluating alternatives (Konopka, 1973), it would appear that a drug prevention program must include the
use of a decision-making process in its approach. This is strongly urged by those contributing to the field of drug abuse prevention (Cohen, 1973; Edwards, 1974; Schaps, et al., 1975).

In addition, theory suggests that the way in which one views one's decision-making ability might be considered an index of self-esteem (Coopersmith, 1967). In fact, Lindblad (1977) found that addicts when compared to non-addicts perceived that their decision-making abilities are not as adequate as most.

For a young person to seek alternatives to drugs for achieving his or her goal and meeting personal needs, the ability to make informed decisions is necessary.

American Culture and Drug Use

Adolescents have a difficult task in learning to make informed decisions. In itself adolescence is a developmental crisis with many major life decisions needing to be made. Young people have a large amount of stress to cope with and have not previously tested many of their coping and competency skills. Adolescence is a time of physical, social and emotional changes that produce stress while exposing young people to unpredictable events. Drugs may be used to cope with these changes and to control internal psychological states.

Though young people have been identified as the primary drug problem group, other groups of people (housewives,
doctors, the aged, truck drivers) seem to be abusing drugs to an equal extent as young people.

For the prevention of drug abuse the issue becomes a realization that drug use is a common response for anyone to make when under stress or in a vulnerable point in the life span. The use of drugs is a choice made in a period of personal and social conflicts (Dohner, 1972).

While the assumption has been made that drugs are used to solve the problems youth face in coping with the pressures and challenges of our complex society, and that these problems basically involve a confusion of or lack of values (Irwin, 1973; Keniston, 1970; Nowlis, 1974; Schaps, et al., 1975; Seeman, 1963), it would be remiss not to mention that current American society is a drug using culture, and one could even argue that drug use is a cultural norm.

Considering the discussion earlier about parental use of drugs and its influence on adolescent use, Keniston (1970) may be correct when he states that young people involved in drug usage may be acting on the values of their families.

Youth need to learn to live wisely in an environment where drugs are readily available, and in which people are constantly exposed to the "quick cure" and benefits of various chemical substances. While it may be true that personal and social problems or incompetencies are major contributors to drug abuse, they do not automatically lead
to it. However, these problems coupled with membership in a drug using society may easily lead to seeking solutions to these problems through substance use and abuse.

Again, values and decision-making abilities would seem essential in choosing alternatives to the use of substances to solve one's problems. Both of these processes serve to help young people assess the consequences of their behavior and to make informed decisions as they face choices in their behavior.

**Locus of Control and Drug Abuse**

Part of an assessment of the consequences of one's behavior involves the concept of locus of control. At its internal pole, locus of control refers to generalized expectancies that important reinforcements are contingent upon one's personal actions and attributes. The external pole of this construct attributes control over reinforcements to luck, chance, fate or powerful others. A belief in external locus of control has been associated with membership in relatively powerless groups such as minority groups, lower socio-economic classes, and maladjusted populations (Rotter, 1966).

Theoretically, it would seem that people involved in drug abuse would be externally oriented. However, the literature on locus of control and drug abuse is limited, and the available information is conflicting.

Plumb, D'Amanda & Taintor (1975) found that externa-
lity was associated with drug abuse, as did Davidson and Parsons (1973) and Coghlan and Gold (1974). Berzins and Ross (1973) concluded their study of 600 addicts compared with 800 college students (balanced for sex and race) by stating that drug addicts were more internal than the student controls. They postulated a theory of "pseudo-internity", a false sense of power that was drug-engendered. Smithyman, Plant and Southern (1974) confirmed that the group means for drug abusers were lower (more internal) than for non-drug abusing groups.

Others have contributed further conflicting evidence. For instance, Sadava (1973) found that students using drugs daily were more internally controlled than those who used drugs only moderately. Calicchia (1974) and Sadava (1973) both found a correlation between internality and length of time subjects were involved with drugs. The longer a person was involved with drugs, the more internally oriented the person tended to be.

Part of the problem in the above research is in defining the population being investigated. Drug experimenters differ from drug abusers or drug addicts, and none of the above studies carefully controlled the populations being investigated. Grizzle (1973) suggests three stages of drug usage: experimental, occasional or heavy. Others (Miller, 1974; Nowlis, 1971) suggest the use of experimental, social or recreational and habitual use.
Segal (1975) successfully used scores on Rotter's Internal-External Locus of Control scale as predictor variables for classification of students into three discrete categories: 1) those using alcohol only; 2) those using marijuana only; and 3) those not using either drug.

Drug use differs from drug abuse in that abuse involves using drugs at a hazardous level where physical, emotional or social impairment may result. Nowicki and Strickland (1973) found drug use to be associated with externality but their population was using, rather than abusing, drugs.

In terms of the prevention of drug abuse, it would seem that the relationship between drug use and external control is most relevant. External locus of control has been positively correlated with marijuana usage (Naditch, 1975; Nowicki & Strickland, 1973). At the state of possible drug experimentation, an individual who operates primarily through internal control mechanisms may be more resistant to some of the motivational factors which influence drug use and abuse. Alienation, powerlessness, low self-esteem and peer pressure relate to external control, and are motivational factors for drug use.

Self-esteem, in particular, has been correlated with internal locus of control (Lefcourt, 1977; Plumb, et al., 1975) and may be extremely important in order to develop resistance to the motivations for drug use. As an ante-
cedent to drug abuse, low self-esteem may cause the individual to be vulnerable to the pressures and stresses in life that make him or her feel powerless and alienated and would in this way be influenced toward drug abuse (Norem-Heibei-sin, 1975).

Purpose of the Study and Hypotheses

A primary prevention program was developed that would be an indirect approach to drug abuse prevention. The ultimate goal of this program was to prevent drug abuse. The objectives were to effect positive attitudinal and behavioral change in relation to drug use and other high risk behaviors through an opportunity to explore and clarify values, attitudes and decision-making processes.

It was believed that crucial to any prevention program was the development of a sense of responsibility in the individual for his or her own behavior (Schaps, et al., 1975), and the consequences of the behavior. Therefore, the basis of the program was to aid students in becoming aware of their values, clarifying these values, and developing interpersonal communication and decision-making skills consistent with these values.

It was believed that values influence behavior (Bills, 1975; Rokeach, 1968), and that students would modify their behavior in a manner that would meet their goals and needs if they became aware of alternatives for achieving goals and solving problems. The underlying assumption is that
the clarification of ones values would specifically affect behavior in the realm of drug use.

Furthermore, for the purpose of this study, it was assumed that to act on one's values would bring an increased sense of self-worth and power, and an increased sense of meaning and direction in an individual's life. The basic assumption was that if young people can find success, purpose and a sense of self without drugs, the chances of drug abuse would be diminished. "A greater sense of self-worth and purpose... are qualities that tend to work against the lure of chemical substitutes in place of more constructive activities." (California State, 1976, p. 19).

Values clarification strategies were determined to be the best means toward achieving the goals and objectives of this program. The work of Raths, Harmin and Simon (1966), Simon, Howe and Kirschenbaum (1972) and others was used. Values clarification strategies involve becoming aware of one's values, clarifying them, and acting on these values while building personal skills and resources in the areas of communication and decision-making. It was believed that students through participation in this program would come to understand the beliefs and values which make-up their personal attitudes toward using drugs.

It was predicted that this study would show that those students participating in the program would show attitu-
dinal change in a socially approved direction regarding
drug use and other high risk (socially disapproved) beha-
vior, and that there would be an increased sense of
personal power and control over their lives as perceived
by these individuals.
Subjects

The subjects were elementary (fifth and sixth grade) and junior high (seventh and eighth grade) students of the La Canada Unified School District. Sixteen classrooms were used, with approximately 30 students in each class. These students were considered an "at risk" population in terms of drug abuse. An at risk population is that group of individuals who are not yet using drugs or those who are experimenting with drugs (Subcommittee on Prevention, 1977). Since the steepest rate of increase for every drug type occurs between grades seven and nine (Grizzle, 1973; Taylor & Bride, 1977), it was believed that a drug abuse prevention program must begin at least with the fifth grade.

La Canada is a middle to upper middle class suburban community. Affluent communities have been identified as high risk for drug abuse (Brayer, 1976; Eichberg & Bentler, 1975; Goode, 1975; Jessor, et al., 1975; Hochhauser, 1977), especially when alcohol use is socially sanctioned as it is in La Canada (Stokely, 1977).

Dependent Measures

Risk-Taking Attitude-Values Inventory. Carney (1976) developed this instrument as a general purpose one for use
in gathering information about students' values and behaviors. The major use of the RTAVI has been in testing groups associated with drug abuse prevention programs. It is particularly effective as a pre and post-measurement to evaluate modifications in behaviors and attitudes.

Questions on the instrument ask how useful different behaviors are to the student (utility), how likely the student feels he or she will be successful in carrying out the behavior (expectancy) and how frequently the behavior has been or is being done (frequency). Behavior Potential Scores for each behavior are obtained by multiplying the utility score by the expectancy score and then adding the frequency score. Behavior Potential Scores are then combined into behavior style scales (Socially Disapproved Behavior style, SDB, or Socially Approved Behavior style, SAB). A person's subjective value of a behavior (utility) (Bem, 1971) and the actual frequency of that behavior determines the scores.

The Behavior Potential Score represents the likelihood that a given behavior will take place at some future date by combining the respondent's attitude toward the behavior with present or past behavior.

Socially Disapproved Behavior style scores correlate highly with marijuana use, \( r = .639, p \ll .001 \), with a mean score of 130 in a range from -38 to 326 (Carney, 1977). Socially Approved Behavior style scores range from 13 to
There are several different RTAVI forms from preschool level to adult level. The Elementary Level form was chosen for this research. It contains five drug-specific behaviors (including cigarette smoking and drinking alcohol) and three delinquent type behaviors. These behaviors compose the SDB scale when two Socially Approved Behaviors (working hard in school and doing things like art, music and dancing) are subtracted.

In addition, there is another scale on the RTAVI (Masculine Aggressive Behavior) which was not used for the purposes of this study.

There is also a Need score obtained from this instrument. This score is based on Laswell's eight "universal needs or values" (cf. Rucker, Arnsieger & Brodbeck, 1969). The values are actually descriptions of functions or outcomes which behavior serves (Carney & Carney, 1971). The importance of that need or value and the student's perception of how near he or she is to fulfillment of that need are multiplied. Total need score can range from 8 to 200. Higher need scores are related to greater tendency to engage in Socially Undesirable Behavior (Carney, 1977).

Rotter's Internal-External Locus of Control Scale.
Rotter (1966) developed this scale within the theoretical framework of social learning theory. This construct and the resulting locus of control scale is one of the most
widely researched personality constructs in recent years (cf. Lefcourt, 1976; Phares, 1976). Externality on this scale has been related to powerlessness and alienation (Seeman, 1959, 1963). Greater resistance to group or peer pressure has been seen on the part of internals (Phares, 1976). Low scores on this scale indicate internality, and high scores indicate externality. Scores range from 0 to 23. Internality is also associated with taking action to reach desired goals (Rotter, 1966).

Internal consistency reliability ranges from .65 to .79. The test-retest reliability is between .49 and .83 for one and two month intervals (Rotter, 1966).

Procedure

A curriculum of values clarification and decision-making exercises was developed as the strategy for drug abuse prevention. The curriculum consisted of six hours of classroom activities. Appendix A gives a more detailed description of the curriculum.

Sixteen classrooms were assigned at random to either participate in the exercises (experimental group) or not to participate (control group). All classroom teachers were oriented to the purpose of this program, and the types of exercises their students would be participating in during the six weeks. Teachers were invited to observe or not as they wished.
The Internal-External Locus of Control Scale and the Risk-Taking Attitudes-Values Inventory were administered to the four junior high experimental classes and the four junior high control classes one week before the first classroom session.

During that same week, the Risk-Taking Attitudes-Values Inventory was administered to the four elementary classes in the experimental condition, as well as the four elementary control classes. The instruments were administered by this examiner. Students were told that:

These questionnaires are being given to you so that we can better understand the attitudes of young people. We want to know how you honestly feel about different things, and how you behave. No one but myself will see these questionnaires, and I will take them with me in these envelopes when I leave. You do not have to put your names on the questionnaires, just whether you are a boy or a girl and your grade.

The instruments were distributed and the students were asked to read along as the examiner read the standard instructions. Students were asked if there were any questions, which were answered, and were then told to begin.

A week after the final (sixth) classroom session, students again answered the surveys. The only change in the instructions was an acknowledgement that they had taken these surveys before, and we wanted to see if there had been any changes in their attitudes. The post-testing was accomplished two months after pre-testing.

The school district volunteered to cooperate with this
program and study, and the school board approval was given for the use of both instruments.

Program Implementation

Two people were trained to implement the values and decision-making curriculum in the classrooms. Both were trained in values clarification approaches as developed by Harmin et al. (1973) and Raths et al. (1966). In addition they were trained in the Youth Effectiveness model (Gordon, 1970, 1974) in order to enhance their communication skills and guide them in teaching these skills to the students.

Both of these people were credentialed teachers, and this was a requirement of the school district in allowing these people into the classrooms. Training also consisted of a 12-hour orientation to drug abuse prevention (the philosophy of primary prevention, research on drug abuse and young people, and commonly used strategies in the field), as well as the components of decision-making and education in the decision-making process (cf. Evans, Branca & D'Augelli, 1976; Simon, Howe & Kirschenbaum, 1972).

Each person was assigned either to the elementary school classes or the junior high school classes depending on her prior teaching experience (i.e. whether they had taught fifth, sixth, seventh or eighth graders). Prior to the implementation of the program in the classrooms,
the curriculum was developed by these two people and the
program director and research director. The trained drug
abuse prevention workers conducted trial use of the curri-
culum in order to ensure uniformity of program delivery.
It was hoped that these training sessions would be benefi-
cial in reducing error variance attributable to teacher
differences.

Once a week for six weeks the drug abuse prevention
workers went into the classrooms and took over one period
(one hour) in order to implement the curriculum.
Chapter III
RESULTS

Preliminary Analyses

A series of one-way between subjects analysis of variance tests were performed on each pre-test dependent variable (SDB scores, SAB scores, Need Scores and Rotter's Internal-External Locus of Control Scale scores). Mean pre-test scores for classrooms were analyzed as a function of condition (experimental vs. control).

For Socially Disapproved Behavior (SDB) pre-test scores, the results indicate no statistically significant effect for condition, $F(1,30) = .024$, $p > .05$. Socially Approved Behavior (SAB) and Need pre-test scores also showed no significant effects for condition with $F(1,30) = .033$, $p > .05$ for SAB mean scores, and $F(1,30) = 1.38$, $p > .05$ for Need mean scores.

For Rotter's Internal-External Locus of Control Scale pre-test scores, no significant effects for condition were found, $F(1,14) = .207$, $p > .05$.

The results suggest that class membership was not a confounding variable at the time of pre-testing. Therefore, the omission of pre-test score information from the main analysis of the RTAVI and Rotter's Internal-External
Locus of Control Scale was felt to be justified. This was especially desirable since information on pre-test scores, anonymously derived, was associated only with class means, and not with individual students.

Main Analyses

A three way (2x2x2) between subjects multivariate analysis of variance was performed on the three dependent variables available from the RTAVI: SDB scores, SAB scores and Need scores. Mean scores for classrooms were analyzed as a function of grade (junior high or elementary school), sex, and condition (experimental or control).

As is shown in Table 1, the combination of dependent variables was significantly affected by all main effects: grade, approximate $F(3,22)=55.50$, $p<.001$; sex, approximate $F(3,22)=19.32$, $p<.001$; and condition, approximate $F(3,22)=10.74$, $p<.001$. The results indicate a strong relationship between grade and the combined dependent measures, $\eta^2=.88$, sex and the combined dependent measures, $\eta^2=.72$, and condition and the combined dependent measures, $\eta^2=.59$. This indicates that 59% of the variance in the linear combination of SDB, SAB and Need scores may be accounted for by assignment of classes to experimental or control group.

The interaction between grade and condition was also statistically significant for the combined dependent variables, approximate $F(3,22)=4.09$, $p<.05$, with $\eta^2=.36$. 
Table 1
Multivariate Analysis of Variance
of SDB, SAB and Need Scores

<table>
<thead>
<tr>
<th>Source</th>
<th>Log</th>
<th>U-Statistic</th>
<th>df</th>
<th>Approx. F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade (A)</td>
<td>24.47</td>
<td>.116718</td>
<td>3/22</td>
<td>55.50**</td>
</tr>
<tr>
<td>Sex (B)</td>
<td>23.63</td>
<td>.272033</td>
<td>3/22</td>
<td>19.62**</td>
</tr>
<tr>
<td>Condition (C)</td>
<td>23.22</td>
<td>.405833</td>
<td>3/22</td>
<td>10.74**</td>
</tr>
<tr>
<td><strong>Two-way Interactions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade x Sex (AB)</td>
<td>22.51</td>
<td>.831281</td>
<td>3/22</td>
<td>1.49</td>
</tr>
<tr>
<td>Grade x Condition (AC)</td>
<td>22.76</td>
<td>.641913</td>
<td>3/22</td>
<td>4.09*</td>
</tr>
<tr>
<td>Sex x Condition (BC)</td>
<td>22.39</td>
<td>.641913</td>
<td>3/22</td>
<td>.52</td>
</tr>
<tr>
<td><strong>Three-way Interactions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade x Sex x Cond.</td>
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<td>.918499</td>
<td>3/22</td>
<td>.65</td>
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<tr>
<td>Error</td>
<td>22.32</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05

**p < .001
Pearson product-moment correlation coefficients between the three dependent variables, SDB, SAB, and Need scores, revealed that the SDB and SAB mean scores correlated negatively, $r(30) = -0.52, p < .05$. Not surprisingly, when SDB scores become higher SAB scores become lower. The lower the SDB score, the less potential for socially disapproved behavior, and conversely the higher the SAB score, the more socially approved behavior potential. Intercorrelations among all three dependent variables are shown in Table 2.

### Table 2
Intercorrelations Among Three Dependent Variables from the RTAVI (N=32)

<table>
<thead>
<tr>
<th></th>
<th>SAB</th>
<th>Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDB</td>
<td>-.5159*</td>
<td>.0629</td>
</tr>
<tr>
<td>SAB</td>
<td></td>
<td>-.0661</td>
</tr>
</tbody>
</table>

*p < .05*
Further investigating the nature of the relationships among independent and dependent variables, a stepdown analysis was performed. The importance of the dependent variables were ordered with SDB mean scores having highest priority followed by SAB mean scores and then Need mean scores. Each dependent variable was analyzed with higher priority dependent variables serving as covariates. The highest priority dependent variable (SDB mean scores) was thus tested in an univariate analysis of variance. Results of this analysis are summarized in Table 3. As suggested by Tabachnick and Fidell (1978), an experiment-wise error rate of 5% was achieved by the apportionment of alpha as shown in the last column of Table 3 for each of the dependent variables.¹

Three statistically significant main effects were revealed by this analysis. Junior high school students scored higher on the SDB scale (mean SDB score = 28.08) than elementary school students (mean SDB score = -7.89), stepdown $F(1,24)=177.61$, $p < .01$. The strength of the relationship between grade and SDB scores was $\omega^2 = .87$, estimating that 87% of the variance in SDB scores may be accounted for by grade level in the population. The strength of association coefficients are based on error and treatment variance, rather than total variance.²

The second significant effect was sex with males showing higher SDB scores (mean SDB score = 20.78) than
Table 3

Univariate and Stepdown Analyses of Three Dependent Variables from the RTAVI
In Order of Priority

<table>
<thead>
<tr>
<th>D.V.</th>
<th>Effect</th>
<th>Univariate</th>
<th>Stepdown</th>
<th>Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>F df</td>
<td>F df</td>
<td>F</td>
</tr>
<tr>
<td>SDB</td>
<td>Grade (A)</td>
<td>177.61 1/24</td>
<td>177.61* 1/24</td>
<td>7.82 .01</td>
</tr>
<tr>
<td></td>
<td>Sex (B)</td>
<td>62.65 1/24</td>
<td>62.65* 1/24</td>
<td>7.82 .01</td>
</tr>
<tr>
<td></td>
<td>Condition(C)</td>
<td>28.60 1/24</td>
<td>28.60* 1/24</td>
<td>7.82 .01</td>
</tr>
<tr>
<td></td>
<td>A x B</td>
<td>3.61 1/24</td>
<td>3.61 1/24</td>
<td>7.82 .01</td>
</tr>
<tr>
<td></td>
<td>A x C</td>
<td>2.48 1/24</td>
<td>2.48 1/24</td>
<td>7.82 .01</td>
</tr>
<tr>
<td></td>
<td>B x C</td>
<td>.70 1/24</td>
<td>.70 1/24</td>
<td>7.82 .01</td>
</tr>
<tr>
<td></td>
<td>A x B x C</td>
<td>.83 1/24</td>
<td>.83 1/24</td>
<td>7.82 .01</td>
</tr>
<tr>
<td>SAB</td>
<td>Grade (A)</td>
<td>3.89 1/24</td>
<td>.01 1/23</td>
<td>7.88 .01</td>
</tr>
<tr>
<td></td>
<td>Sex (B)</td>
<td>1.15 1/24</td>
<td>.03 1/23</td>
<td>7.88 .01</td>
</tr>
<tr>
<td></td>
<td>Condition(C)</td>
<td>8.34 1/24</td>
<td>1.72 1/23</td>
<td>7.88 .01</td>
</tr>
<tr>
<td></td>
<td>A x B</td>
<td>1.97 1/24</td>
<td>.99 1/23</td>
<td>7.88 .01</td>
</tr>
<tr>
<td></td>
<td>A x C</td>
<td>3.07 1/24</td>
<td>1.95 1/23</td>
<td>7.88 .01</td>
</tr>
<tr>
<td></td>
<td>B x C</td>
<td>.62 1/24</td>
<td>.83 1/23</td>
<td>7.88 .01</td>
</tr>
<tr>
<td></td>
<td>A x B x C</td>
<td>.18 1/24</td>
<td>.33 1/23</td>
<td>7.88 .01</td>
</tr>
<tr>
<td>Need</td>
<td>Grade (A)</td>
<td>.91 1/24</td>
<td>.42 1/22</td>
<td>7.94 .01</td>
</tr>
<tr>
<td></td>
<td>Sex (B)</td>
<td>.34 1/24</td>
<td>.38 1/22</td>
<td>7.94 .01</td>
</tr>
<tr>
<td></td>
<td>Condition (C)</td>
<td>1.56 1/24</td>
<td>1.01 1/22</td>
<td>7.94 .01</td>
</tr>
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<td></td>
<td>A x B</td>
<td>.24 1/24</td>
<td>.06 1/22</td>
<td>7.94 .01</td>
</tr>
<tr>
<td></td>
<td>A x C</td>
<td>5.92 1/24</td>
<td>6.63 1/22</td>
<td>7.94 .01</td>
</tr>
<tr>
<td></td>
<td>B x C</td>
<td>.44 1/24</td>
<td>.10 1/22</td>
<td>7.94 .01</td>
</tr>
<tr>
<td></td>
<td>A x B x C</td>
<td>.47 1/24</td>
<td>.83 1/22</td>
<td>7.94 .01</td>
</tr>
</tbody>
</table>

* P <.01
females (mean SDB score = -.59), stepdown $F(1,24)=62.65$, $p<.01$. Again using $\omega^2$, sex accounts for 70% of the variance in SDB scores.

The main effect of condition produced significantly different SDB scores with experimental groups scoring lower (mean SDB score=2.88) than control groups (mean SDB score=17.31), stepdown $F(1,24)=28.60$, $p<.01$. Condition accounts for 51% ($\omega^2=.51$) of the variance in SDB scores. Table 4 summarizes these mean scores and standard deviations.

The grade by condition interaction failed to reach statistical significance on any dependent variable by stepdown criteria. A glance at Table 3, however, reveals that Need scores provide the strongest influence on the significant multivariate interaction. Figure 1 graphically depicts this two-way interaction.

A two-way between subjects (2x2) analysis of variance was performed for the mean scores on Rotter's Internal-External Locus of Control Scale as a function of sex and condition (experimental vs. control). Summaries of the analysis for Rotter's are shown in Table 5. There were no statistically significant results for junior high classes.

Post Hoc Analyses

After finding significant multivariate effects for SDB scores on the RTAVI, further analyses were performed on the scores. These analyses were performed as an investigation
Table 4
Means and Standard Deviations for SDB Scores as a Function of Main Effects

<table>
<thead>
<tr>
<th>Group(^a)</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>20.78</td>
<td>23.66</td>
</tr>
<tr>
<td>Females</td>
<td>-.59</td>
<td>19.08</td>
</tr>
<tr>
<td>Junior High</td>
<td>28.08</td>
<td>18.39</td>
</tr>
<tr>
<td>Elementary</td>
<td>-7.89</td>
<td>11.80</td>
</tr>
<tr>
<td>Treatment</td>
<td>2.88</td>
<td>18.35</td>
</tr>
<tr>
<td>Control</td>
<td>17.31</td>
<td>22.82</td>
</tr>
</tbody>
</table>

\(^a\)\(n = 16\) for each group
Figure 1. Mean Scores on the Need Scale as a Function of the Interaction Between Grade and Condition
Table 5
Analysis of Variance Table for Post-test Mean Scores on Rotter's Internal-External Locus of Control Scale

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex (A)</td>
<td>1</td>
<td>.06</td>
<td>.036</td>
</tr>
<tr>
<td>Condition (B)</td>
<td>1</td>
<td>1.70</td>
<td>1.012</td>
</tr>
<tr>
<td>Sex x Condition (AB)</td>
<td>1</td>
<td>.19</td>
<td>.11</td>
</tr>
<tr>
<td>Error</td>
<td>12</td>
<td>1.68</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>1.47</td>
<td></td>
</tr>
</tbody>
</table>

into the distinguishing reasons for the significant results.

Specifically, further analysis was felt to be important in order to elicit more drug-specific (rather than socially disapproved) behavior information. These post hoc comparisons were accomplished to determine whether the behavior potential for illegal drugs (marijuana, pills and glue sniffing), cigarette smoking and alcohol drinking, or delinquent-type behavior (stealing, cheating and fighting) were the behaviors comprising the differences between groups in total SDB scores. Scores on each of these dependent variables can range from 6 to 90 for illegal drugs and delinquent-type behavior, and from 4 to 60 for cigarette smoking/alcohol drinking.

A three-way (2x2x2) between subjects multivariate
analysis of variance was performed on the three clusters of scores comprising the SDB score. Mean scores for classrooms were analyzed as a function of grade (junior high or elementary school), sex, and condition (experimental or control classes).

As is shown in Table 6, the combination of dependent variables was significantly affected by all main effects: grade, approximate $F(3,22) = 66.95$, $p < .001$; sex, approximate $F(3,22) = 6.73$, $p < .01$; and condition, approximate $F(3,22) = 5.24$, $p < .01$. The results indicate a strong relationship between grade and the combined dependent measures, $\eta^2 = .90$, sex and the combined dependent measures, $\eta^2 = .48$, and condition and the combined dependent measures, $\eta^2 = .42$. This indicates that 42% of the variance in the linear combination of Illegal Drugs, Cigarettes and Alcohol, and Delinquency Behavior Potential Scores may be accounted for by assignment of classes to experimental or control group.

Further investigating the nature of the relationships among independent and dependent variables, a stepdown analysis was performed. The importance of the dependent variables were ordered with Illegal Drug Behavior Potential mean scores having the highest priority followed by Cigarette and Alcohol Behavior Potential mean scores and then Delinquency Behavior Potential mean scores. Each dependent variable was analyzed with higher priority dependent
Table 6

Multivariate Analysis of Variance of Illegal Drug, Cigarette and Alcohol, and Delinquency Behavior Potential Scores

<table>
<thead>
<tr>
<th>Source</th>
<th>Log</th>
<th>U-Statistic</th>
<th>df</th>
<th>Approx. F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade (A)</td>
<td>18.29</td>
<td>.098721</td>
<td>3/22</td>
<td>66.95**</td>
</tr>
<tr>
<td>Sex (B)</td>
<td>16.63</td>
<td>.521287</td>
<td>3/22</td>
<td>6.73*</td>
</tr>
<tr>
<td>Condition (C)</td>
<td>16.52</td>
<td>.583142</td>
<td>3/22</td>
<td>5.24*</td>
</tr>
<tr>
<td><strong>Two-way Interactions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade x Sex (AB)</td>
<td>16.12</td>
<td>.864378</td>
<td>3/22</td>
<td>1.15</td>
</tr>
<tr>
<td>Grade x Cond. (AC)</td>
<td>16.27</td>
<td>.743719</td>
<td>3/22</td>
<td>2.53</td>
</tr>
<tr>
<td>Sex x Cond. (BC)</td>
<td>16.11</td>
<td>.878260</td>
<td>3/22</td>
<td>1.02</td>
</tr>
<tr>
<td><strong>Three-way Interactions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade x Sex x Cond.</td>
<td>16.05</td>
<td>.929335</td>
<td>3/22</td>
<td>.56</td>
</tr>
<tr>
<td><strong>Error</strong></td>
<td>15.98</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*P < .01

**P < .001
variables serving as covariates. The results of this analysis are summarized in Table 7. An experimentwise error rate of 5% was achieved by the apportionment of alpha as shown in the last column of Table 7 for each of the dependent variables.

Three statistically significant main effects were revealed by this analysis. Junior high students scored higher on the Illegal Drug scale (mean ID score = 14.21) than elementary school students (mean ID score = 8.81), stepdown $F(1,24) = 31.53, p < .01$. The strength of the relationship between grade and ID scores was $\omega^2 = .54$, estimating that 54% of the variance in Illegal Drug scores may be accounted for by grade level in the population.

The main effect of condition produced significantly different Illegal Drug scores with experimental groups scoring lower (mean ID score = 9.80) than control groups (mean ID score = 13.23), stepdown $F(1,24) = 12.73, p < .01$. Condition accounts for 31% of the variance ($\omega^2 = .31$) in Illegal Drug scores.

Grade significantly affected Cigarette and Alcohol Behavior Potential scores, even after partialling out Illegal Drug scores, with junior high students scoring higher (mean C-A score = 16.06) than elementary school students (mean C-A score = 6.58), stepdown $F(1,23) = 70.23, p < .01$. The strength of the relationship between grade and Cigarette-Alcohol Behavior Potential score was $\omega^2 = .73$,
Table 7

Univariate and Stepdown Analyses of Three Dependent Variables from Total SDB Scores on the RTAVI In Order of Priority

<table>
<thead>
<tr>
<th>D.V.</th>
<th>Effect</th>
<th>Univariate F</th>
<th>df</th>
<th>Stepdown F</th>
<th>df</th>
<th>Critical F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ill. Drug</td>
<td>Grade (A)</td>
<td>31.53</td>
<td>1/24</td>
<td>31.53*</td>
<td>1/24</td>
<td>7.82</td>
</tr>
<tr>
<td></td>
<td>Sex (B)</td>
<td>3.66</td>
<td>1/24</td>
<td>3.66</td>
<td>1/24</td>
<td>7.82</td>
</tr>
<tr>
<td></td>
<td>Condition (C)</td>
<td>12.73</td>
<td>1/24</td>
<td>12.73*</td>
<td>1/24</td>
<td>7.82</td>
</tr>
<tr>
<td></td>
<td>A x B</td>
<td>2.04</td>
<td>1/24</td>
<td>2.04</td>
<td>1/24</td>
<td>7.82</td>
</tr>
<tr>
<td></td>
<td>A x C</td>
<td>1.47</td>
<td>1/24</td>
<td>1.47</td>
<td>1/24</td>
<td>7.82</td>
</tr>
<tr>
<td></td>
<td>B x C</td>
<td>1.91</td>
<td>1/24</td>
<td>1.91</td>
<td>1/24</td>
<td>7.82</td>
</tr>
<tr>
<td></td>
<td>A x B x C</td>
<td>.95</td>
<td>1/24</td>
<td>.95</td>
<td>1/24</td>
<td>7.82</td>
</tr>
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<td>Cig. &amp; Alcoh.</td>
<td>Grade (A)</td>
<td>156.44</td>
<td>1/24</td>
<td>70.23*</td>
<td>1/23</td>
<td>7.88</td>
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<td>Sex (B)</td>
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<td>1/23</td>
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<td>Condition (C)</td>
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<td>2.06</td>
<td>1/23</td>
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<td>.00</td>
<td>1/23</td>
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<td>A x C</td>
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<td>6.02</td>
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<tr>
<td></td>
<td>B x C</td>
<td>1.10</td>
<td>1/24</td>
<td>.78</td>
<td>1/23</td>
<td>7.88</td>
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<tr>
<td></td>
<td>A x B x C</td>
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<td>1/24</td>
<td>.17</td>
<td>1/23</td>
<td>7.88</td>
</tr>
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<td>Delinq.</td>
<td>Grade (A)</td>
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<td>1/24</td>
<td>1.76</td>
<td>1/22</td>
<td>7.95</td>
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<td>1/24</td>
<td>7.87</td>
<td>1/22</td>
<td>7.95</td>
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<td>1/24</td>
<td>.62</td>
<td>1/22</td>
<td>7.95</td>
</tr>
<tr>
<td></td>
<td>A x B</td>
<td>1.45</td>
<td>1/24</td>
<td>1.46</td>
<td>1/22</td>
<td>7.95</td>
</tr>
<tr>
<td></td>
<td>A x C</td>
<td>.32</td>
<td>1/24</td>
<td>.09</td>
<td>1/22</td>
<td>7.95</td>
</tr>
<tr>
<td></td>
<td>B x C</td>
<td>.46</td>
<td>1/24</td>
<td>.45</td>
<td>1/22</td>
<td>7.95</td>
</tr>
<tr>
<td></td>
<td>A x B x C</td>
<td>.60</td>
<td>1/24</td>
<td>.61</td>
<td>1/22</td>
<td>7.95</td>
</tr>
</tbody>
</table>

*p < .01
estimating that grade accounted for 73% of the variance in C-A scores. Tables 8 and 9 summarize these mean scores and standard deviations.

The main effect of sex failed to surmount stepdown criteria for any of the dependent variables, but Table 7 suggests that Delinquency Scores were most highly influential in producing the significant multivariate main effect. Scores on this variable suggest that males (mean Delinquency score = 19.92) may be more likely to engage in delinquent-type behavior than females (mean Delinquency score = 14.19).
Table 8
Means and Standard Deviations for Illegal Drug Scores as a Function of Main Effects

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>12.43</td>
<td>4.24</td>
</tr>
<tr>
<td>Females</td>
<td>10.59</td>
<td>4.34</td>
</tr>
<tr>
<td>Junior High</td>
<td>14.21</td>
<td>3.69</td>
</tr>
<tr>
<td>Elementary</td>
<td>8.81</td>
<td>3.06</td>
</tr>
<tr>
<td>Experimental</td>
<td>9.80</td>
<td>3.11</td>
</tr>
<tr>
<td>Control</td>
<td>13.23</td>
<td>4.81</td>
</tr>
</tbody>
</table>

\(^a\text{n = 16 for each group}\)

Table 9
Means and Standard Deviations for Cigarette-Alcohol Scores as a Function of Grade

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior High</td>
<td>16.06</td>
<td>2.85</td>
</tr>
<tr>
<td>Elementary</td>
<td>6.58</td>
<td>1.96</td>
</tr>
</tbody>
</table>

\(^a\text{n = 16 for each group}\)
Chapter IV
DISCUSSION

Risk-Taking Attitudes-Value Inventory

The findings of the present study lend support to the hypothesis that a values clarification and decision-making curriculum may be an effective approach to drug abuse prevention. Classes participating in the program showed significantly lower scores on the Socially Disapproved Behavior scale of the RTAVI than control classrooms.

Considering that this scale is comprised of a student's perception of the risks involved in a given behavior to reach a valued goal (utility), and the self-reported use of drugs as well as the frequency of engagement in other behaviors, these results may indicate that students in the program perceived less gain or "pay-off" from engaging in various socially undesirable behaviors, and/or that the frequency of their behaviors changed.

In a recent study sampling over 18,000 high school students throughout the United States, the prevalence of drug use among seniors was shown to increase from year to year and to involve more than the use of marijuana only. What is even more important in terms of this study is that students' perceptions of the degree of risk involved in drug usage have decreased over the years for all drugs except cigarettes (Johnston, Bachman & O'Malley, 1978).
For the students in the present program to perceive the risks for drug use as being greater than the control groups' perceptions of the risks suggests that the curriculum is beneficial in helping students make decisions about the use of drugs.

Males scored higher on the SDB scale than females. This is consistent with Slovic's (1966) research indicating that between the ages of 11 and 16 boys show greater risk-taking than girls. It may also be indicative of males starting to use drugs, and being more likely to use drugs, earlier than females (Eichberg & Bentlter, 1975).

Junior high school students scored higher on the SDB scale than elementary school students. Grade of the class was significant as a variable in determining the effectiveness of this approach to drug abuse prevention. This suggests that values clarification and decision-making exercises may be more effective as a strategy for prevention of drug abuse when begun in early grades. Considering that the steepest rate of increase for all drug use occurs between grades seven and nine (Grizzle, 1973), it is not unlikely that prior to this program students in the junior high school were already experimenting with or using drugs.

Efforts at the primary prevention of drug abuse must contend with an "at risk" population, working with the group as a whole even though some individuals may already
be engaged in the use of drugs. However, further study might include the variable of level of drug use prior to implementation of the program to further assess the benefits of this approach to the prevention of drug abuse, rather than drug use. It is unrealistic, given current society and the availability of drugs, that young people will avoid any experimentation with drugs. A more practical objective for a prevention program might be the prevention of drug abuse rather than drug use.

In a program of this nature decision-making exercises and processes might be used to help young people decide how often, in what situations, and at what dosage level they will use drugs, and even which drugs they will choose to experiment with. Drug experimentation is almost inevitable among American youth, and this realization must be taken into consideration in planning effective programs for the prevention of drug abuse.

Another explanation for the differences in scores for grade and sex, but not for experimental vs. control condition, has been offered by Carney: "Young children (especially girls) frequently give 'good' answers to nearly all RTAVI items." (Carney, 1976, p. A-31).

The post-hoc analyses revealed that participation in this program produced statistically significant results regarding the Behavior Potential for illegal drug use. This gives more drug-specific information regarding the
behaviors comprising the lower SDB scores for experimental groups. Students participating in the program showed less behavior potential for using illegal drugs as measured by the RTAVI than those students not participating in the program.

Again, junior high school classes scored higher on the illegal drug behavior potential scale than elementary school students, indicating that there is support for the interpretation that these students may already be experimenting with drugs.

Junior high school students also scored higher on the cigarette smoking and drinking alcohol behavior potential scales than elementary school students.

One of the variables in predicting adolescent drug abuse is availability of drugs (Norem-Heibeisin, 1975). This variable is taken into consideration in the RTAVI through the expectancy score. Since this score comprises a portion of the total SDB score, and the Behavior Potential scores for different behaviors, another explanation for the results of this study may include the possibility that younger students have less access to drugs.

If the RTAVI is indeed predictive of behavior as Carney's research indicates (1971, 1977), then the results of this study suggest that students participating in the values clarification and decision-making curriculum may be less likely to engage in drug use or abuse in the future.
In a study of approximately 400 students, Scott (1972) found that "getting little or no pay-off" was the reason cited by ex-drug users for stopping their use of drugs. Non-drug users cited this same reason for not engaging in the use of drugs. In light of these results, and others' research indicating that drugs serve a need and that young people will not stop using drugs until alternatives are available to them for fulfilling their needs (Cohen, 1971, 1973; Irwin, 1973; Jenkins, 1974), the results of the present study are encouraging in suggesting that development of values systems and decision-making abilities may provide young people with the awareness of alternatives to the use of drugs.

Numerous researchers in the past have made reference to the fact that traditional drug education and information approaches have failed (cf. Goodstadt, 1974). Although information is one factor in any discussion of values or risk-taking behavior, and is certainly an important factor in decision-making processes, information about drugs is incidental to the personal and social needs of young people. In the drug prevention program involved in this study, it was believed that any information about drugs given to the students would be in response to specific questions asked by them. This situation did occur in the course of role-playing and values ranking exercises, and at those times it was essential that the information being
given was presented in a credible, accurate and direct manner, without the use of any "scare tactics".

The present study suggests that where drug information and education programs failed, an affective and indirect program for the prevention of drug abuse may succeed. With appropriate values clarification and decision-making procedures, a person may come to understand the beliefs and values which comprise one's personal attitude toward drug use, with a resultant change in attitudes about drugs. Further study is needed to confirm the results of the present study, and it is advisable that research in the future include a drug education or information group which could then be measured using the RTAVI. If it is the affective approach to the prevention of drug abuse that related to these results then the drug education groups will not show statistically significant changes on the RTAVI.

Locus of Control Scale

Research on Rotter's Internal-External Locus of Control Scale in the past few years presents evidence regarding the use of this instrument that is inconclusive and conflicting (cf. Lefcourt, 1976; Phares, 1976). This is particularly true regarding research on drug abuse using Rotter's scale. The present study adds to the available, and still conflicting, evidence on the use of
Rotter's scale in measuring change. There were no statistically significant results found by this study as measured by Rotter's I-E Scale. There are several possible explanations for these results which may be important in any decision to use this scale in future research on drug abuse or drug abuse prevention.

Rotter's is a norm-referenced instrument, and such instruments rarely show change over a short period of time. There is a high test-retest reliability for Rotter's scale, .83 for two-month intervals (Rotter, 1966), and since the post-test using the Internal-External Locus of Control Scale was given two months after the pre-test, the lack of change is not surprising. Perhaps the lapse of more time between the program and re-testing with this instrument some change would have become apparent.

Lefcourt (1976) suggests that since this scale is measuring one's perceptions of locus of control, it may be important to use an internal-external locus of control scale that is modified for the criterion of interest. For example, Lefcourt states that adding "of what" after perception of control is particularly advantageous when one seeks to use perception of control as a predictor.

Lefcourt further suggests that unless one's age or environment has changed or there have been natural changes in one's status, one's perceptions of locus of control may not change. This program did not directly attempt to
change the school environment, and the program did not last long enough for students' ages to change.

Kaufman (1978) in her development of a matrix for use of instruments in various drug prevention program modalities, suggests that Rotter's scale be used for programs that consist of community organization and/or social policy change and development. According to her research, the use of Rotter's was inappropriate for this program. Carney's RTAVI was appropriately used, according to Kaufman, since she suggests it be used for education programs and especially those programs that include values clarification approaches and decision-making approaches.

It is also highly possible that Rotter's scale was a poor choice for seventh and eighth grade students in particular. Although Phares (1976) states that Rotter's scale is appropriate for use with junior high students, and further indicates that internality increases to a maximum at about eighth grade, no other research was found that confirmed these statements.

Many of the statements on Rotter's scale deal with political and social actions. These may have been irrelevant to junior high students, and of little importance in terms of how they currently perceive their own power.

It is also, of course, highly possible that the program did not affect students' sense of powerlessness or alienation in the short span of six weeks. Especially
given the unique position of young people in actually having little power to direct their own lives in most homes, this is a plausible explanation for the results.

Since locus of control is a meaningful construct, and considering that research using the I-E scale is still conflicting, it would seem important to conduct further research using this scale, or one specifically designed for children (cf. Nowicki & Strickland, 1973). In regard to the prevention of drug abuse, it still seems very important to reduce people's sense of alienation and powerlessness, especially since these feelings are common to people taking drugs.

Berzins & Ross (1973) discovered through their research with drug addicts that the norms for Rotter's scale had risen in the years between Rotter's original research (1966) and their research. External locus of control was a more common finding, and the means on Rotter's scale had risen from 8 to between 11 and 13 in the general population. Lefcourt (1976) states that a feeling of external control is still rising in the general population.

**Further Implications of the Current Study**

There has been relatively little research done on the development of an adolescent's value system. One study conducted by Jenkins (1974) using Rokeach's Value
Survey indicated a difference in the value characteristics of adolescent drug users compared to non-drug users. Jenkins found that values differences increased from seventh to ninth grade.

Carney's RTAVI is measuring the risks and gains that people perceive of behaviors as they relate to values. For the purpose of understanding the current study, the differences between junior high and elementary school students in the SDB scale scores may have some relationship to differences between the values of these two groups. This is further suggested by the difference, though not statistically significant by stepdown criteria, in Need scores between junior high and elementary school students in the experimental condition. High Need scores indicate unmet needs. This may be due to a low assessment of the importance of the eight values or goals, or a high importance but a feeling of being far from reaching these goals.

Further research is needed in the development of pre-adolescent and adolescent values. However, given the results of this study, it would seem important that a values clarification approach be implemented in the earliest possible grade.

The connection between values and self-esteem is an intrinsic one. Self-esteem in a cognitive mode involves the assessment of a person about his or her physical image, intellectual abilities, social roles, etc. (Coopersmith,
1967). Rokeach states (1973) that values involve cognitions about oneself, and relate to self-concept since the innermost core of a person's total belief system can be represented as one's self-concept. All other beliefs, attitudes and values will be conceived of and organized around this innermost core.

Self-esteem in the affective mode is related to how a person values what he or she does or thinks (Coopersmith, 1967). Helping students to clarify their values may give them a foundation for self-identity and a thoughtful appraisal of themselves. If students then behave in ways that are consistent with their values, and find positive outcomes from these actions, the basis for feelings of self-worth may be stimulated.

It thus seems that values may serve to maintain and enhance one's total self-concept, and that if an adolescent has a poor self-concept, his or her value system may not be meeting the needs of that individual (Rokeach, 1973). A common result is to turn to drugs to meet those needs. Therefore, helping young people to develop a value system may, again, be instrumental in preventing drug abuse.

Values formation, however, involves constant decision-making since values are continually changing and developing throughout an individual's life (Rokeach, 1968). Thus, teaching young people decision-making processes within a values-oriented way of thinking may result in a maximizing
of either approach.

The pressures among young people are great in American society. The media is a persuasive and permeating source of pressure, as well as the usual pressures from peers, parents, legal systems, moral and social systems. These various sources of information and instruction often contradict one another, confusing young people even more. For instance, the contradiction between alcohol being a legal drug and marijuana being an illegal drug is often perceived by young people as hypocrisy on the part of adults. A decision-making and values clarification procedure may give young people needed skills in order to sift through the contradictory information and opinions in society, and help them to arrive at an identification of the beliefs, values and feelings that are their own. These factors may then help them in making decisions regarding many different issues consistent with their self-concepts and values.

In terms of drug abuse, all drugs involve risks or benefits at some dosage level, in some people and in some circumstances. The real question, as Nowlis phrased it, is: "How much risk should be tolerated for what benefit and who should decide? This is a question of values, not of drugs." (Nowlis, 1971, p. 21)
Limitations of the Study

Although reasonable confidence can be given to self-reports concerning drug use (cf. Schlegel, 1977), especially when anonymously derived, students' responses in test situations are complex and make it difficult for a straightforward interpretation of the results to be made.

Attitudes reflect situationally determined behavior which may very well diverge in "real life" settings. The use of inventories is an intrusive method, and ideally, actual behavior indicators should be sought. An attempt was made to obtain such unobtrusive data for this program. Absenteeism rates, disciplinary actions, vandalism incidents and citizenship grades were some of the data which were gathered. However, for a variety of reasons including poor record-keeping at the schools, changes in disciplinary action policies, and a flu epidemic, it was believed that the value of these data was low.

Outcomes obtained shortly after implementation of a program might be deceptive indices of program effects since they do not always relate to long-term gains. Rokeach (1971) and Grizzle (1974) both found that changes in attitudes or psychological states may not be expected in a short period of time.

This study indicates that changes in attitudes were discernible in the short period of two months, and though the immediate results of the program leave little doubt as
to the effectiveness of the program, there is a need for caution based on one great unknown: whether these changes reflect a lasting attitude change at some deep level or not.

The stimulus to change that was experienced in six weeks may very likely be swamped out by negative reinforcements in the environment. Especially if there is no institutional change, the skills that these young people have gained in thinking in a values-oriented manner and making decisions consistent with these values, may become extinct if there is no opportunity for them to implement these changes in their school, home, and community environments.

Institutional resources are necessary to help young people live successfully in today's world. Any drug prevention program needs to involve social and institutional change in order to maximize the impact of the program. A drug abuse prevention program may have an advantage in serving as an intervention in a social system. Because the program deals with the prevention of a specific problem of great concern, it may indirectly and in a relatively non-threatening manner, change the school environment itself, especially if the program seeks to involve teachers and administrators.

The nature of the independent variable in this study may more aptly be described as a set of events. It is therefore difficult to isolate the independent variable. Guttentag & Struening (1975) suggest that a process
evaluation is needed to identify the relationships between components of a social intervention program and observed outcomes. Schlegel (1977) suggests that a process evaluation serves as a manipulation check in a program of this nature.

The present program is certainly a complex one, with many intervening variables depending on the nature of the discussions and responses to exercises on the part of students. A process evaluation is available from the author to those wanting it.

Schaps, Churgin & Palley (1978) in a review of over 120 drug abuse prevention programs throughout the nation, found that only six programs showed positive effects on drug-specific indicators. They considered three types of drug-specific information necessary for a thorough evaluation of a drug prevention program: reports of drug use, intentions to use drugs, and attitudes toward drug use. Schlegel (1977) and Pomazal and Brown (1977) mention these three drug-specific criteria also.

Carney's RTAVI measures utility and expectancy of success of a given behavior, and is thus measuring one's attitudes toward drug use through the student's perception of the risks and gains attributable to drug-taking behaviors. This is consonant with the belief that the choice to abuse drugs will be influenced by values and beliefs about the pleasures and risks involved in such behavior

However, a far better researched model of behavior prediction is that of Fishbein and Ajzen's (1975), and is the model used by Pomazal and Brown (1977) and Schlegel (1977) to apply to drug use motivation. This model suggests that in order to predict a person's behavior, a comprehensive approach includes the fact that a person's behavior is a function of his or her intention to perform the behavior. The behavior intention is comprised of one's attitude toward the behavior, others' expectations that the individual will perform the behavior (parental, peer, moral or social pressure) and the motivation to comply with these expectations.

Carney's instrument fails to establish a relationship between the attitude, self-reported behavior and intention to behave in some way. What it succeeds in doing is assessing the high risk (socially disapproved behavior) behavior potential of a person, and Carney (1971), as well as Green, et al. (1971), has found a relationship between high risk behavior and the use of drugs.

Further research is necessary, however, in the relationship of high risk behavior and drug use behavior. In addition, further research is needed in the area of values development with adolescents and the connection between
value systems and high risk behavior.

An assumption was made in this study that in clarifying one's values, making decisions consistent with these values, and acting on them one's sense of self-worth or self-esteem would be improved. In order to explore this assumption a values clarification and decision-making program could be implemented and a self-esteem scale could be used as the measurement tool. Further study might also explore the relationship between high risk behavior and self-esteem.

In a program such as the present one there is always the danger of a "Hawthorne effect" since a person who is not a member of the school system comes into the classroom to do the program and the students may regard the experience as extraordinary, raising their interest unnecessarily (Campbell & Stanley, 1963; Schlegel, 1977).

Though randomization was done by classrooms as a unit and, as suggested by Campbell and Stanley (1963, p. 22), experimental and control groups were constructed of classrooms by random assignment to either condition, in order to further minimize any reactive effects, the inclusion of another condition would be important for further research. This group, ideally, should be one in which classrooms of students are exposed to a drug education (information) curriculum.

Another alternative would be to implement the values
clarification curriculum into the basic class curriculum. This program can be easily implemented in a school system, and even modified to conform to subject matter. It is important that in a program of this nature, teachers be trained to incorporate these values clarification and decision-making exercises within their classroom curricula, and that testing of the effects of such a curriculum be incorporated within a regularly scheduled objective examination in the class.\(^3\)

In a study of this nature, the use of a pre-test may have served as a reactive measure "sensitizing" the students to change in their attitudes (Underwood & Shaughnessy, 1975). Especially in attitude-change studies, it is likely that a pre-test threatens external validity (Campbell & Stanley, 1963). Therefore, until further research is done the ability to generalize the results of this study are limited.

In addition, if the use of values clarification exercises and decision-making processes are to be generalized to all "at risk" (in terms of drug abuse) populations, research must be done in different and varying schools. Perhaps in an innercity school this approach to the prevention of drug abuse will be totally ineffective. Further research must be done to determine if income level, intelligence (particularly verbal abilities), cultural and religious affiliations influence the effectiveness of
this approach.

While the selection and training of the drug abuse prevention teachers in this program were designed to minimize differing effects, there was no objective assessment of their impact on students. Differential effects (general appearance, rapport with students, skill ability) may have been involved, and until the program is replicated, caution is advised.

Evaluations of drug abuse prevention programs are relatively new. Schaps, et al. (1978) found that 80% of them were done within the last five years, and that 1968 was the earliest date of publication for any primary prevention of drug abuse program evaluation. Despite this, it is essential that longitudinal studies be done in the field of drug abuse prevention. Only through careful studies of this nature will people working in the field be able to assess if they are actually preventing what they hope to.

Especially since the incidence of drug use and abuse begins at a relatively early age, it seems possible to implement a program of this nature during elementary school and then during the first year or two of high school, these students could be assessed in terms of their attitudes toward the use of drugs, intentions to use drugs, and actual drug use behavior. For the purposes of this study, a follow-up study should be conducted in a year or two
to assess if the attitude change suggested by this research was a long-term one, and also to assess if the incidence of drug abuse decreased in the community.
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Footnotes

This program was developed under a Prevention and Education Grant funded by the National Institute on Drug Abuse and administered through the County of Los Angeles, Drug Abuse Program Office. The program is being conducted under the auspices of the Glendale Guidance Clinic, Glendale, California.

1Tabachnick and Fidell (1978) state that the resolution to problems of inflated Type I error rate and non-independence of univariate F-tests is provided by the procedures of stepdown analysis. They suggest using
\[ \alpha = 1-(1-\alpha_1)(1-\alpha_2)\ldots(1-\alpha_p) \]
for the apportionment of alpha.

2As suggested by Keppel (1973, p. 553) for multifactor between subjects designs, \( \omega^2 \) is defined as the ratio of the treatment component to the sum of only two components (treatment and error term) rather than to the sum of all variance components.

3Teacher training and parent training are currently being done as additional components of this program. Results of the effectiveness of these components will be available at a later date.
APPENDIX A

EXERCISES FROM THE VALUES CLARIFICATION AND DECISION-MAKING CURRICULUM

Many of the exercises used in the present program involve a Values Grid or Values Inventory (cf. Simon, et al., 1972). Explanation for the use of those forms are provided in Simon's book.

**Values Hunt Exercise.** Purpose: To help students identify and prioritize personal values, as well as become aware of other people's values. To focus an abstract concept (values) on specific objects.

Activities: 1) Discuss the concept of values with students. How many in this room have values? Who can tell me one of his or her values? Does anyone else have the same value?

2) Introduce the Values Hunt exercise. On each students worksheet six values are listed (beauty, love, peace, etc...). Ask the students to choose the picture that best represents each of the values listed on the worksheet. (The ten pictures are posted around the room and numbered) Ask the students to record the number of the picture in the second column of the worksheet, and their reasons for choosing it in the third column.

3) When they have completed the above, ask them to circle the value which they feel is most important.

4) Tally the class choices of pictures selected for each value listed. Then tally which value students chose as the most important one. Discuss differences between the choices.

**Magic Box.** Purpose: To help students think about what they value.

Activities: The teacher tells students about a magic box which is very special. It is capable of making itself very small or very large. Best of all, it can contain anything that the student wants it to contain. The
then asks students: "If you came home from school today and found the magic box waiting for you to open, what would be in it? Remember it can have anything you want in it, tangible or intangible." Students then write down their answers. Other questions may be asked such as the following:

1. What would you want in the magic box for your mother? father?
2. What would you want from your best friend in the magic box?
3. What is the smallest thing you would want?
4. What is the largest thing you would want?

**Rank Order Exercise.** Purpose: To give students practice in choosing from alternatives, publicly affirming their choices, and explaining or defending their choices.

**Activities:**
1) With entire class, instructor reads a questions, writes the choices on the board, and then calls on 8 to 10 students to give their order of choices (first, second and third).

2) Class discussion follows with any student giving her or his reason for the choice.

3) Other questions and choices may be elicited from students. A question may be posed to them as follows: "What else would you rather have than your first rank choice?"

**Examples:** If you were born with a great gift, which would you prefer? A beautiful singing voice, great artistic ability, or skill with your hands?

What makes you happiest? Getting all A's and B's on your report card, taking a trip out of town, having a week off school?

What makes you most angry? A teacher who treats you without respect, a friend who won't listen to your side of the argument, your parents telling you what to do?

**Hike for Hunger.** Purpose: For students to become aware of choices, alternatives and the consequences of their decisions.
Activities: Read the following situation to the students as they follow (each student has a copy).

You are a participant in the Hike for Hunger -- a 25 mile march to help feed the hungry people of the world. Your sponsors have agreed to pay to the relief fund an amount ranging from 25 cents to two dollars for each mile you walk.

On the day of the march you meet your best friend. You agree together that you will walk the entire 25 miles. After ten miles your friend collapses from heat exhaustion and is taken to the first aid station. You have no other friends among the marchers. After 20 miles your feet are numb and you ache all over. The relief truck pulls up and the driver asks if anyone wants to quit. Several people climb aboard and the driver punches their cards to show how far they walked. Just as the truck is pulling away, you climb aboard. The driver doesn't know you are there and the other people are too tired to care. You sit quietly and do not talk to anyone.

Focus: Do you tell the driver that you quit at 20 miles (first alternative) or do you claim that you walked the entire 25 miles (second alternative).

Discussion: How many chose the first alternative? What are your reasons? What are your consequences?

How many chose the second alternative? What are your reasons? What are your consequences?

Pushers. Purpose: To discuss the issue of drugs in a non-traditional way. To help students look at drugs in a different way than usual, and to help them prioritize their feelings about a variety of drugs and people who "push" them.

Activities: Each student is given a sheet with the following information on it:

This page concerns chemicals in general, not just what people usually call "drugs". Chemicals include alcohol, food preservatives, nicotine found in cigarettes, caffeine in coffee and tea, THC in marijuana, etc. We tend to think of the "pusher" as someone who sells heroin, but many
other people are involved in selling or providing chemicals to us. Some are listed below. Rank them according to your feelings about them, i.e. Who do you think is the least harmful "pusher"? Give that person a "1". The most harmful person give an "11" next to the description.

___ a doctor whose job it is to provide certain patients with sleeping pills, stimulants or tranquilizers

___ a druggist whose job it is to fill drug prescriptions

___ a cigarette company salesperson

___ a person who gives a cocktail party

___ a parent who gives a child with a headache aspirin

___ a farmer who injects cattle with hormones to speed up their growth

___ a grocer who sells the injected beef as well as a host of food preservatives and food colorings

___ the executive of a corporation which puts pollutants into the air we breathe

___ a doctor who prescribes diet pills for an overweight patient

___ parents who give their teenagers beer because they are afraid they will start using "drugs"

___ someone who gives marijuana to friends

Discussion: List on the blackboard students choices for the worst and the least harmful "pusher". Have students defend their choices or explain them. Usually the same ones that are given a number 11 are also given a number 1 by other students. Discuss the difference in values of different people.

Note: These are just a few selected exercises from the curriculum. A complete copy of the curriculum will be available in June, 1979.