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Field Assessment of Social Learning Approach to Teaching Adolescents About Alcohol and Driving

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16. Abstract

This report discusses the development and test of a comprehensive intervention program for teaching adolescents about alcohol and its effect on driving. It examines such influences on adolescent drinking as parents and peers, environmental factors, psychological variables, and adolescents' attitudes toward drinking, and elaborates on the consequences of adolescent problem drinking. The effectiveness of alcohol educational programs are discussed and rationales presented for the use of a proven educational technique entitled "Teams-Games-Tournaments" (TGT). The technique is based on the use of peers as teachers and reinforcers of appropriate behavior. The components of an alcohol educational program utilizing this technique are elucidated. Data suggest that the TGT intervention was successful in teaching adolescents about alcohol, a subject which is espoused to be of great importance but struggled with in terms of its presentation. Self-reports of TGT groups showed a lowered consumption of alcohol, a positive change in attitudes toward drinking and driving, and the acquisition of alternative behaviors for avoiding driving after drinking too much. One- and two-year follow-up data indicate that the TGT students maintained previous positive changes while the traditional and no instruction groups showed little or no change.

The report concludes with a discussion of the implementation and evaluation of the comprehensive program, and issues in the maintenance of knowledge are briefly elaborated.

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TECHNICAL SUMMARY

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Field Assessment of Social Learning Approach to Teaching Adolescents About Alcohol and Driving

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The focus of the research project is on the development of an educational package for use by school professionals in teaching adolescents (9th, 10th, and 11th graders) about alcohol and its effects on driving. The comprehensive package includes three components: education about alcohol, self-management skills related to alcohol use, and the maintenance of knowledge and behavior. The program is targeted to provide essential knowledge to adolescents about alcohol in such a manner as to be a rewarding peer group experience, thus increasing the likelihood of acquisition and maintenance of knowledge and behavior.

A relevant, concise curriculum through which to teach adolescents using the Teams-Games-Tournaments (TGT) technique has been developed. The TGT technique, developed at the Johns Hopkins University Center for Social Organization of Schools, is an innovative, small group teaching technique which has been used extensively in the past to teach science, mathematics and nutrition.

Following the development of the alcohol-based curriculum, ninth, tenth, and eleventh grade students in five schools were involved in the four-week educational program. Prior to the initiation of the educational program, baseline data were obtained from 1365 students. Five hundred seventy received TGT training, while 384 received traditional training and 411 received no training. These groups were used as comparisons to measure the TGT program's effectiveness. They were tested again at the completion of the course, after a twelve month interval, and two years following the implementation of the program. The inventories used measure students' knowledge of alcohol, self-reports of drinking behavior, attitudes, motivation and behavior associated with alcohol use and abuse, and individual levels of self-esteem.

Two different knowledge measures (e.g., Engs Questionnaire and an inventory containing TGT curriculum items) the TGT procedure helps students acquire knowledge about alcohol. Additionally, the Engs Questionnaire and items from the inventory used by Glickson, Smythe, Gorman and Rush (1980) indicated that students reported a substantial decrease in drinking behavior following implementation of the TGT procedure.

The Drinking and Driving Questionnaire assessed attitude changes regarding drinking and driving behavior (Vegega, 1983). Twenty-three (23) items contained on the questionnaire relate to the specific effects of drinking and driving. For the TGT group, a significant positive (16.48) attitude change occurred. For the traditional instruction group, the change was 2.68, and for the control group the change was .94. The TGT group was significantly different from the others ($F=12.88$, df 2, 1347; $p < .05$) in amount of change.

The survey of behavior inventory indicated that the experimental groups became less impulsive. The change was 10.64 as compared to the traditional groups which changed 1.33 and the no-instruction group with a 2.78 change. The changes for the TGT group as compared to traditional and no-instruction groups were statistically significant ($F=14.82$; df 2, 1347; $p < .05$).

Additionally, the TGT students reported statistically significant increases in their self-concepts, feelings of self-esteem, and their peer relations as compared to traditional and no-instruction groups. Since the TGT program addressed these aspects, the changes were expected. The TGT groups related no better to their families than did the traditional and no-instruction groups.

TGT Follow-Up

In all participating schools, students received either instruction according to the experimental TGT method, traditional instruction (one week course material developed by the State Department of Education and taught by regular school teachers or the highway patrol), or no instruction. Random assignment occurred at the class level. Statistical analysis comparing each class within each school reveal no difference on race, age, income level, or grade point average. In total for the first follow-up, 526 participated in the experimental TGT procedure, 361 in traditional instruction, and 384 in a control or no-treatment condition. Twenty-one percent (21%) were seniors, 49% juniors, and 27% sophomores. For the two-year follow-up, 389 participated in the experimental TGT procedure, 267 in traditional instruction, and 284 in a control or no-treatment condition. Forty-nine percent (49%) were seniors and 29% juniors. Due to graduation and other factors such as moves, we experienced an attrition rate of 11% of our total sample. Statistical tests revealed that our dropouts were not significantly different from our follow-up sample.

One- and two-year follow-up data indicate that the TGT students maintained previous positive changes while the traditional and no-instruction groups showed little or no change.

The TGT technique has been shown to be effective in educating adolescents in the areas of nutrition, math, social studies, English, and so forth, as well as in increasing the value attached by students to success in the classroom. Its use in the acquisition of knowledge about alcohol, however, had not heretofore been tested. These data suggest that the TGT technique is effective in teaching adolescents about alcohol, a subject which is espoused to be of great importance but struggled with in terms of its presentation. Moreover, self-reports of TGT groups showed a lowered consumption of alcohol, a change in attitudes toward drinking and driving, and the acquisition of alternative behaviors for avoiding driving after drinking too much.

The TGT program is conceptualized to be an effective, thorough, and easy-to-administer vehicle by which to educate youth about alcohol and its effect on driving behavior. Moreover, it is believed to contribute to the development of responsible attitudes toward the use of alcoholic beverages. There are substantial practical, educational and methodological gains from this study. The program's unique combination of the presentation of educational materials in a manner which encourages peer support and use of a group reward structure and participatory learning provide for the development of a new concept in teaching adolescents about alcohol. However, future research will have to assess the impact of the curriculum on DUIs and accidents with alcohol involvement.

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INTRODUCTION

Alcohol studies are not a new area of research. However, within the broad area of alcohol-related literature are relatively few reports of studies directed at alcohol abuse by adolescents. Moreover, the majority of studies reported are descriptive rather than analytic, and a large percentage of the data are conflictual and ambiguous (Horan & Strauss, 1987). Ironically, it is during the adolescent years that the issue of the role alcohol will play in one's life is initially confronted. There is a crucial need therefore for teenagers to have a broad foundation of accurate knowledge to draw upon when making the decisions of when and if to begin drinking, how much to drink, how often, with whom, and where. How best to approach adolescents about the subject of drinking and the effects of alcohol on driving remains to be determined.

To no one's surprise in our increasingly fast-paced world, adolescents are coming into contact with alcohol at earlier ages, and the use of alcohol has increased. According to the 1981 Report to the Congress on Alcohol and Health, a national survey of youths revealed that 87% of tenth through twelfth grade students had consumed alcohol (U.S. Department of Health and Human Services, 1981). It was also found that drinking increased substantially from ages 15 to 17, and that a substantial number of youths were heavy drinkers by age 15. Of the adolescents surveyed, 15% drank once per week (consuming five drinks or more), 31% experienced drunkenness six times or more per year, and 2% reported adverse consequences as a result of drinking excessively two times or more per year. Perhaps most alarming of all is that a startling 31.2% of those surveyed were classified as alcohol misusers (defined as consuming five drinks or more three times per week or more). It can be concluded from this report that youths are making decisions concerning the use of alcohol, and that many are finding themselves in a spiraling cycle of increased drinking that often results in negative consequences.

Other recent studies support these findings and point out that alcohol is the most widely used drug among American youths (Abelson, 1977; Johnson, 1977; Rachel, Maisto, Guess, & Hubbard, 1982; Wodarski, in press, a). For example, in the State of Georgia alone it is estimated that there are 45,000 teenage alcoholics and approximately the same number of young problem drinkers (Kalber, 1981).

Areas of Research

There are basically five areas of research that explore variables influencing adolescent drinking: (1) parental influence, (2) peer influence, (3) environmental influence, (4) psychological variables, and (5) adolescents' attitudes toward alcohol. It is recognized that the prevalence of alcohol consumption among high school students is the result of development through predictable channels of imitation, identification, and role modeling of significant others in the person's environment (U.S. Department of Health and Human Services, 1981; U.S. Department of Health, Education and Welfare, 1971, 1974). This report reviews these areas and substantially elaborates the rationale for the intervention model chosen to educate adolescents about alcohol and its effects on driving.

Parental Influence

Children are most likely to be introduced to alcohol by their parents; hence, parents are often the early shapers of attitudes and values concerning alcohol. In this sense, parental norms provide the springboard for adolescents' first encounters with alcohol (Maddox & McCall, 1964; Mitic, 1980; Trice & Beyer, 1977). One view of parental influence holds that it is not parents' drinking behavior itself but, rather, it is the parents' attitudes and behavior toward alcohol (as perceived by the child) that show the strongest correlation with a child's drinking (Biddle, Blank, & Marlin, 1980; Rachel et al., 1982; Segal & Sterling, 1975).

Peer Influence

Teenagers typically start to drink between the ages of 13 and 14. If a person is going to drink at all, it is very likely that the onset will occur before he or she graduates from high school (Demone & Wechsler, 1976). As an adolescent grows older, more drinking takes place outside of the home. Influences on drinking habits shift from parents to peers. The relationship between adolescent drinking and peer influence is especially strong when the adolescent is a member of a subgroup that condones drinking (Petersen & Hamburg, 1986). Regardless of parental attitudes toward drinking, adolescents who associate primarily with friends who drink are likely to imbibe more than those who do not (Alexander & Campbell, 1967; Biddle et al., 1980; Globetti, 1972; Johnson, 1977; Kane & Patterson, 1972; Prendergrast & Schaefer, 1974; Williams, DiCicco, & Unterberger, 1968). Further evidence indicates that adolescent drinking becomes more prevalent, frequent, heavier and problem-related as the extent of drinking among friends increases (Harford & Speigler, 1982; Maddox & McCall, 1964; Samuels & Samuels, 1975).

Environmental Influence

It was previously thought that a viable solution toward curbing the upsurge of adolescent drinking involved control of the adolescent environment. It was assumed that a protective environment would prevent exposure to alcohol and would instill norms of abstinence in the teen. However, it has been found that communities with strong norms of prohibition have fewer adolescents who drink, but those who do drink have a greater incidence of problem drinking (Globetti, 1973; Stacey & Davies, 1977; Trice & Beyer, 1977). Teens who choose to drink in an abstaining community bear the added psychological burden of being estranged from important socialization agents such as the family, the church, and the community (Globetti, 1972). Moreover, when one drinks in violation of community norms, feelings of subterfuge and secrecy are heightened. This promotes alcohol use as a deviant behavior and enhances the reinforcement of acts of bravado on the part of youths who do drink (Globetti, 1973; Stacey & Davies, 1977).

Psychological Variables

With regard to psychological variables, the literature indicates that youths oftentimes see drinking as a symbol of adulthood, and that the onset of drinking is predictable and related to changes in values and attitudes. As young people begin to drink, they move toward a pattern of greater independence, placing fewer values on academic achievement and showing less

involvement with religion. They express greater tolerance for deviance, become more oriented toward peers than parents, and engage in more general acts of deviance (Biddle et al., 1980; Jessor & Jessor, 1973; Johnson, 1977; Prendergrast & Schaefer, 1974). Thus interventions should be based on the involvement of peers as agents of change. As the continuum extends from non-problem drinking toward irresponsible use of alcohol, there is a linear positive association with an adolescent's feelings of alienation, and particularly of normlessness and powerlessness (Blane, Hill, & Brown, 1968; Braucht, 1982).

Adolescents' Attitudes Toward Alcohol

By late adolescence and early adulthood, youths have internalized the drinking norms to which they have been exposed. They no longer see other persons as significantly influencing factors. By college age, young adults typically associate with peers who have drinking norms and standards that are similar to their own, but they do not acknowledge that these have a bearing on their own behavior. Indeed, older adolescents' alcohol use revolves around their own internalized preferences and norms rather than the instrumentality of others (Biddle et al., 1980; Blane et al., 1968; Lange & Jakubowski, 1976). This internalization of norms is the final outcome of their various exposure to significant others' norms.

Valuable research has been done in the areas of norm quality and drinking behavior. Mulford and Miller have differentiated between "social effects" drinking (which results from the internalization of social norms) and "personal effects" drinking (which involves individualistic and idiosyncratic decisions about alcohol consumption) (Mulford & Miller, 1963; NIAAA, 1976). They describe the difference as one that manifests itself in the way a person learns to drink. Social effects drinkers imbibe primarily in group situations that involve family and friends with restrictive group norms (even when the latter can be described as "party norms"). Personal effects drinkers, however, most often encounter an absence of social norms in the situations where drinking takes place. The latter are more likely to begin their drinking at parties. However, they exceed party norms and thereafter drink alone or in places where there is relative freedom from intimate group restrictions. Studies have found that drinkers who focus on personal effects are more likely than others to be involved in problem drinking, that is, when the consumption of alcohol effects their daily functioning in terms of employment, school, family relationships and so forth (Chafetz, 1964; Cutter, 1964; Field, 1962; Mulford & Miller, 1960; Unterberger & DiCicco, 1968).

In summary, the social science literature indicates that a person is influenced by differing alcohol-use variables at different stages of the life cycle; namely, parental and environmental influences in the early stages, peer influence when drinking practices first take shape, and personality factors that lead to the internalization of norms and attitudes in the later adolescent years and early adult years. The literature clearly indicates that adolescents learn to drink at early ages and continue to drink regardless of legal sanctions. Adolescent problem drinking appears to be an integral part of an attempt at adaptation to self, to others, and to circumstances. It is seldom an isolated or capricious activity. Nor is it the outcome of random forces. Rather, adolescent problem drinking reflects an attempt to grow up in a manner that is approved by people who are important to the adolescent.

The most sensible approach toward a healthy relationship between youths and alcohol entails learning about safe and responsible drinking by means of a comprehensive program of education. The eradication of problem drinking requires changes in the social norms that pertain to drinking and to the process of becoming a drinker.

Consequences of Adolescent Problem Drinking

In attempting to evaluate the scope and breadth of adolescent problem drinking, it is important to note that adolescent and adult drinking cannot be judged by the same criteria. Not only does a given quantity of alcohol affect individuals at different maturational ages in various ways, but adolecents' drinking patterns are somewhat divergent from those of the adult population. Alcohol-related diseases, classical symptoms of alcohol dependence, and many of the adverse consequences that occur in adult problem drinkers are reported infrequently in adolescent populations. Moreover, the frequency of drinking among adolescents may not be as great a problem as the actual amount that is consumed on each drinking occasion. Young people drink less regularly than older adults but they tend to consume a larger amount of alcohol on each drinking occasion (Calahan & Room, 1974; Harford & Mills, 1978). In the 1978 nationwide Department of Health and Human Services survey, only 1.8% of those studied reported drinking daily, but the mean number of drinks per drinking occasion was six or greater for males, and four or greater for females (Wechsler & Thum, 1973). In the State of Georgia, 85% of 350 school principals stated in a 1981 report that drinking creates a problem in their schools; this figure is substantially higher than the 64% that was reported in 1976 (Kandel, Freeman, Faust, & Single, 1976).

An area of great concern in the field of alcohol studies pertains to the interaction among youths, alcohol and automobiles. As adolescents mature and spend greater amounts of time away from home, more drinking takes place in and around cars, and prior to or while driving. National Safety Council data for 1978 reveal that drivers under age 20 were involved in 11,500 crashes with at least one fatality per crash. Of special concern is that adolescents become involved in fatal crashes at blood alcohol concentrations that are significantly lower than the ones found in adults who experience similar accidents (Carlson, 1972; Williams, 1965).

ALCOHOL EDUCATION

Alcohol education by no means represents a foreign concept to today's school administrators and teachers. Most would agree about the need to foster greater awareness among youths about alcohol and its effects. Consequently, many school systems require alcohol and drug education programs as an integral part of the curriculum. These effects range from didactic lectures to well-organized programs based on student participation.

Inherent in the concept of education is the prerequisite that the student be responsive. This is the basis of misfortune in unsuccessful alcohol education programs. The process of imparting knowledge and awareness must occur in such a way as to increase the likelihood of responsiveness on the part of the learner. The keys to establishing a successful alcohol education program seem to inhere in a combination of a progressive, well-organized and interest-catching method of presenting material and of ascertaining the right time in youths' lives to present such material. Moreover, if peers reward the learning there is likely to be increased commitment to the new norms that may be adopted regarding the consumption of alcohol.

Studies have shown that students are eager to learn about alcohol. Between 80% and 90% of high school students in one survey (totaling more than 25,000 students) wanted an opportunity to learn about the dysfunctional aspects of drinking and to acquire information that could help to make wiser decisions about drinking behavior. More than one-half of the students said that they had never discussed drinking with their parents or had any formal alcohol education (Globetti, 1971; Kilty, 1978). The end result of this lack of exposure to adequate information is that teens turn to peers for information and advice--peers who also may be ill-informed.

Yet, despite the need for adequate alcohol education, and the desire on the part of a majority of students to receive it, teachers often are uneasy about the responsibility for providing alcohol education because they are uncertain about the best means to do so. Unterberger and DiCicco (1968) suggest that teachers tend to avoid alcohol education because they implicitly assume that their function is to teach abstinence. They often experience a dilemma when they know that students begin to drink, but recognize also that mere statements about legal proscriptions are ineffectual (U.S. Department of Health, Education and Welfare, 1971). Prohibitions against alcohol use can be expected to generate feelings of guilt and anxiety among those who experiment, with the end result being a lack of program effectiveness (Globetti, 1971).

As characterized by Mizruchi and Perruci (1962), proscriptive norms require that a desired goal be viewed negatively. They recommend the use of a prescriptive norm approach that views desired goals positively and, therefore, as capable of attainment. Alcohol education should convey the message "You decide if and how you will drink and we'll help you with the decision and with adequate information." Such an approach offers an adolescent respect and a sense of individualization within the group. It does not constitute a "Thou shalt not" directive (Mulford & Miller, 1960). Hanson (1973) argues that the best educational approach is one that explains in a nonmoralizing and nonemotional manner the features and consequences of alcohol use, thus avoiding unnecessarily negative role concepts among users.

It is desirable to have well-organized and easy-to-understand methods of delivery for alcohol education. When educational packets have been provided for teachers, along with training about the best utilization of such materials, they have been receptive and eager to implement alcohol education as a part of their teaching. This has led to effective changes in students' knowledge and attitudes about alcohol use (Goodstadt & Sheppard, 1978; Steele & Southwick, 1985; Wodarski, 1981).

Effective and comprehensive methods of teaching youths about alcohol are imperative if adolescents are to make well-informed decisions about its use. The available data indicate that many adolescents drink heavily by age 15 (Wechsler & Thum, 1973). To achieve maximum impact on youths, therefore, the most critical phase of receptivity seems to be in the early adolescent years. This period follows the abatement of parental and home influence and coincides with the growth of peer influence. It usually begins at 12 or 13 years and, therefore, occurs most often in the 7th and 8th grades.

If the peer group successfully applies a sociocultural approach toward changing adolescent norms about drinking, youngsters may be able to make comfortable and longer lasting decisions about the use of alcohol. This capability is crucial for youths from this age group. Following the crystallization of peer pressures to begin drinking, there is little chance of reconstituting earlier peer norms. The peer group should be employed therefore, as a means of learning and to establish appropriate norms for the consumption of alcohol. This will encourage receptivity and assimilation of the pertinent information.

Since adolescents spend approximately 50% of their waking hours in the school, it stands to reason that the school might provide a viable conduit for relaying information about alcohol to adolescents. School composes the society of youth--a society in which parents are excluded, the rulers are peers, and teachers at best play the role of consultants. It is critical, however, that young adolescents are presented with alcohol education that is exciting, motivating, personalized, and nonjudgemental.

Teaching Methods

Traditional classroom methods employ individual task structures and require students to work alone in order to meet an objective. This leads to high competition for grades (Wodarski, Adelson, Tidball, & Wodarski, 1980). There is little learning that is "active" and participatory. With reference to alcohol education, this approach may lead to an undue emphasis on grades and, at worst, to classroom behaviors that reinforce resistance to learning about alcohol. Perhaps most unfortunate, many classes are split into high-performing students (by either teacher or student standards) and low-performing students who often are scorned by their peers.

When peer influences on drinking habits are at a peak, it is imperative to take advantage of the peer group experience to which youths are so responsive. An alternative to the traditional approach is one based on a behavioral group work perspective and encompassing peer support and group reward structures. Teams-Games-Tournaments (TGT) is an example of such an approach. TGT was developed through extensive research on games as teaching devices, using small groups as classroom work units, and emphasizing the task-and-reward structures

used in the traditional classroom. The TGT technique is an alternative teaching approach that fully utilizes structure emphasizing group, rather than individual, achievement (Feldman & Wodarski, 1975; Wodarski et al., 1980; Wodarski, 1981).

TGT is especially useful for teaching adolescents about alcohol and ways of making better decisions regarding its consumption. When TGT is used, all students have an equal opportunity to succeed because they compete against members of other teams who are at similar achievement levels. Points that are earned by low achievers are just as valuable to the overall team score as points earned by high achievers. This is in contrast to the typical instructional method that centers on each individual's achievement vis-a-vis the total class. Means of teaching low achievers are crucial, as low achievers are at greater risk than high achievers in regard to alcohol abuse (Wodarski & Hoffman, 1984a). Thus, TGT's unique characteristic of motivating low achieving students increases the probability that students at high risk for alcohol abuse will receive the knowledge and be involved in a group process which reduces this risk. Field studies have compared TGT with traditional teaching approaches in grades 3-12. They demonstrate that there is greater academic achievement among students who participate in TGT than among those who learn in traditional settings. Moreover, in many instances TGT has resulted in improved attitudes towards school, more peer tutoring, increased perceived probability of success, and greater value attached by students to success in the classroom (DeVries & Slavin, 1978; Wodarski et al., 1980). On the basis of this history of positive results, it was posited that TGT would be successful in teaching youths about alcohol and its effects on driving.

Group Reward Structure. For several reasons, the TGT method of using group reward is preferred over individual classroom instruction. First, the group learning situation most closely resembles the setting in which adolescents make their decisions about the use of alcohol, that is, among peers. Teaching procedures that help adolescents make constructive decisions about alcohol use are most likely to be effective when they take place in the group settings where actual drinking decisions occur. From a social learning perspective, if something is learned in a group context, it is likely to come under the control of group norms and beliefs. Therefore, it will be generalized more readily when the adolescent moves to other environments beyond the classroom. Since drinking often takes place in group settings, the knowledge that is acquired in such settings is more likely to be applied when the youth is in similar peer group situations (Allman, Taylor, & Nathan, 1972; Feldman & Wodarski, 1975).

Second, support occurs from team members when one learns facts about alcohol in order to enhance the team's score. This is likely to strengthen an individual's self-image or self-esteem and to encourage each person to maintain interest in learning pertinent facts and in remaining in the program until its completion (Buckholdt & Wodarski, 1978). Thus, TGT can be effective in increasing self-esteem, a high risk factor for adolescents who abuse alcohol.

There are further practice-oriented rationales for using a group instructional setting when working with adolescents. Groups provide realistic settings that closely resemble the adolescent's real world. Role models emerge with which

low-achieving youths can identify as they seek in-depth knowledge about alcohol (Feldman & Wodarski, 1975). The group method reaches youths in peer situations rather than as social isolates. This is crucial because many youths tend to view themselves as members of a group rather than as isolated individuals, especially in the early stages of youth development. Moreover, peers' evaluations of behavior are very significant when learning takes place (Feldman, Caplinger, & Wodarski, 1983; Zyleman, 1972).

From the perspective of the educator, the group method allows for a broader range of learning experiences. Students are not merely drilled by paper and pencil methods that draw little upon others' experiences. Instead, they learn while interacting with peers in a friendly and exciting manner. They also develop greater interdependence working to secure group rewards such as more group free time, a group activity such as a field trip, group recognition through a school newsletter, and so forth.

Perhaps one of the most important benefits of teaching about alcohol in a group setting pertains to the possibility that individual students will recognize that someone close to them has a drinking problem. Alcoholics oftentimes utilize denial as a defense mechanism (Alibrandi, 1978; Coleman, 1976). Persons with drinking problems frequently do not want to recognize it and will do everything in their power to avoid the facts about their drinking behavior. Much of preventive alcohol education focuses upon the development of skills and knowledge that enable one to recognize when a person has an alcohol problem and how to approach the person who needs help.

Our society traditionally stigmatizes the problem drinker. Consequently, young adults with drinking problems usually have poorer self-concepts and lower self-esteem than nondrinking peers. They also experience more psychological and social isolation (Mizruchi & Perrucci, 1962; Schlegal, Crawford, & Sarborn, 1977; Spivack & Shure, 1974; Ullman, 1960; Williams & Long, 1979). The TGT technique can help students to openly discuss alcohol issues in their peer group, thus reducing stigma. In turn, this can lead to a greater likelihood that students who are aware of their drinking problems will be less hesitant to seek help. Likewise, students who notice drinking problems among others will be more likely to offer assistance to persons in need. This shift in the nature of the social norms regarding alcohol use is a key outcome of the TGT technique and is a prerequisite for successful alcohol education.

The TGT program draws upon knowledge that has been gained from a substantial number of studies which indicate that group reward structures are effective means of achieving positive results in knowledge acquisition, norm alteration, and behavior change. Group reward structures create a learning situation in which the performance of each group member furthers the attainment of overall group goals. This increases individual members' support for group performance, strengthens performance under a variety of similar circumstances, and further enhances the attainment of group goals. Group reward structures capitalize on peer influence and peer reinforcement. These are considered to be some of the most potent variables in the acquisition, alteration, and maintenance of behavior among youths (Buckholdt & Wodarski, 1978).

EVALUATION

Adequate educational programs to equip adolescents with knowledge about alcohol are imperative (Mayer & Filstead, 1980). Many curricula exist on alcohol education for adolescents; however, virtually none have data to support that attitudes and knowledge change as a result of the interventions (Janvier, Guthman, & Catalano, 1980; Wodarski & Hoffman, 1984b). The demonstration of cognitive and attitudinal change is a requisite for evaluating any educational program's effectiveness.

This report focuses on the results of the program entitled "Teams, Games and Tournaments: A New Educational Means for Teaching Adolescents About Alcohol and Driving." The following section provides a brief overview of the alcohol educational program that has been tested throughout the State of Georgia. The overview is followed by a more detailed outline of key facets of the program including specific components, the dependent variables, and the evaluation procedures. The curriculum was initially developed over a three-year period by reviewing numerous published curricula centering on educating adolescents about the effects of alcohol. Educational activities were chosen by their relevancy to the project objectives. Specific activities relating the effect of alcohol and driving were developed after the initial test of the curriculum.

Prior to the implementation of the educational program, students complete the assessment instruments that compose the baseline data. These instruments are divided into three categories: (1) assessment of the student's knowledge of alcohol; (2) inventories designed to measure the student's attitudes about alcohol use, driving while under the influence, motivation and peer influence to drink, attitudes toward external control of alcohol consumption (such as legal or parental controls), knowledge of consequences of abuse, and discord in family relations; and (3) self-inventories designed to measure current problem drinking behavior by students.[1]

Five school systems, which were randomly chosen from a pool of ten, participated in the research. These school systems are located in metropolitan (1), semi-metropolitan (2), and rural (2) areas. Superintendents granted administrative approval for participation in the research and consent forms were obtained from all students. Each school provided approximately the same number of classrooms. TGT is a total classroom intervention, thus classrooms were randomly assigned to the TGT, traditional, or no instruction conditions. In over 80% of the classes, one teacher taught one condition. The participants underwent a four-week educational program that focused on alcohol information and the application of concepts to their own lives. The program emphasizes behavioral objectives through self-management skills that lead to responsible drinking practices.

TGT Procedure

A 200-item pool of knowledge test items was developed according to the content contained within the curriculum. From this pool, 50 questions were randomly selected for the pretest, posttest, and follow-up. The completion of the pretest of alcohol knowledge provided the basis for division of students into four-member teams within each experimental classroom. The teams were

organized into high achievers (those with a high level of knowledge concerning alcohol), middle achievers (those with moderate levels of knowledge), and low achievers (those most lacking in knowledge). Achievement scores for other areas of education were not used in compiling the team groups. The teams were heterogeneous, including one high achiever, two middle achievers, and one low achiever. Thus, the average achievement level was approximately equal across teams. The achievement levels of individual students were not revealed.

The alcohol education units were presented for fifty minutes each day for four weeks. In half of the classes, the curriculum was incorporated in health and driver education courses. The first three days of each week were devoted to learning alcohol concepts through discussions and various participatory activities. The fourth day focused on working in the TGT teams on worksheets in preparation for the tournament, which was held on the fifth day of each week.

The tournament games consisted of short-answer questions designed to assess and reinforce the knowledge gained in class. These were played by team members individually competing against other team members of comparable achievement levels. The team members were assigned to a tournament table where they competed against three students of comparable achievement levels from other teams. Scores were kept for each individual during the tournament games. At the end of the tournament, the top, middle, and low scorers at each table were awarded a fixed number of points for their teams.

The points earned by a student determined whether he or she stayed at the same tournament table or was to be moved to a table with higher or lower performing students for the next tournament. In this way, competitors changed regularly, and the competition was not skewed in favor of any group of achievers. The points earned by an individual were added to those earned by other team members to compose a total team score. Teachers tabulated individual and team scores at the end of each tournament, and scores were posted the next school day.

The program of comprehensive alcohol education was comprised of the following:[2]

Alcohol Education. The educational unit was in two parts. The first covered the biological, psychological, and sociocultural determinants of alcoholism. It was crucial that in learning about alcohol, participants became informed of the multiple factors that have been shown to contribute to irresponsible use of alcohol and to alcoholism. This served to assist them in making realistic judgments about their own present or possible future alcohol use and to inform them of the progression from responsible consumption, to problem usage, to alcoholism. This aspect of the program served not as a scare tactic but as a research-based approach to what is currently known about the determinants of alcoholism. The APPENDIX contains one week of the curriculum that was specifically devoted to alcohol and its effects on driving.

The second and larger educational component consisted of basic knowledge about alcohol consumption and usage. Students learned the gamut of topics related to the use of alcohol, including how much alcohol a body can absorb in a given length of time, when an intoxicated person is in an emergency situation and

how to deal with such an occurrence, the physiological attributes of alcohol, the amount of alcohol in a variety of alcoholic beverages, and how to assess a drinking problem. Specific curriculum topics included are (1) Alcohol and Our Society, (2) What is Alcohol, (3) Short-Term Effects of Alcohol: Intoxication and Hangover, (4) Values Clarification and Drinking Behavior, (5) Drinking and Effects on Driving, (6) Alternatives to Drinking and Drinking-Driving in Our Society, (7) Long-Term Effects of Alcohol, and (8) Recognizing and Treating Drinking Problems.

Both divisions of the alcohol educational unit were taught via group discussion, participatory activities, and the TGT tournaments. All activities emphasized the use of peer support to enhance learning and the acceptance of responsible attitudes toward drinking.

Self-Management. From the perspective of the self-management of one's life-style, students were taught basic principles of social learning theory related to alcohol consumption. Emphasis was placed on the theory that all drinking patterns--whether intelligent, abusive, or alcoholic--are learned. An individual with a drinking problem can learn to drink differently, and the drinker who currently has no problem can control circumstances so that his or her drinking will remain within acceptable bounds (Williams & Long, 1979).

Social learning theorists emphasize that the abuse of alcohol is learned from the consequences that follow drinking. These most often include (1) stress reduction, (2) removal from an unpleasant situation, and (3) an excuse for otherwise unacceptable behavior. There are many potential reinforcers for alcohol abuse: peer pressure to drink and subsequent reinforcement by significant peers, having fun equated with how much one drinks, and the need to escape from thought of academic failure (Alibrandi, 1978).

A fundamental theme was that students could change or determine behavior by altering the environment, be it internal or external. The two major categories of environmental events that must be understood and manipulated to produce the desired outcome were events that precede and set the stage for particular behavior, and events that follow the behavior and make them more or less likely to occur (Williams & Long, 1979). Thus, one learning experience was to help students identify environmental events controlling behavior and then alter the ones necessary to produce the desired behavior. Examples of external environmental stimuli that cue drinking behavior are parties or peer statements. Examples of internal environmental events are emotional upset and loneliness. Students were instructed in how to remove or reduce stress-producing cues from the environment and how to engage in rewarding activities other than the consumption of alcohol.

A necessary aspect of self-management is learning to be assertive with others. Recent research has shown that young adult problem drinkers often feel dissatisfaction with their interpersonal relationships with others and perceive themselves as lacking in social skills. The students learned how to cope with the task of interacting with others in a meaningful and satisfying way. Facets of the program developed by Lange and Jakubowski (1976) were used, including conversational skills training, use of appropriate nonverbal communication, and development of assertive behavior in learning to decrease stress produced by inadequately met social needs. Specific elements

emphasized were: (1) how to introduce oneself, (2) how to initiate and continue conversations, (3) how to give and receive compliments, (4) how to enhance appearance, (5) how to make and refuse requests, (6) how to express feelings spontaneously, (7) how to use appropriate nonverbal behavior in enhancing sociability with others, (8) how to reward oneself for not drinking, and (9) how to have a helpful discussion with a significant other who has a drinking problem.

Role-play simulation exercises were used to help students practice refusing alcohol in a socially acceptable manner within normal peer contexts. This aspect of the program was modeled after the work of Foy and his associates (1976). General procedures were referred to as drink refusal training. The basic aim was to help students develop more effective ways of dealing with social pressures to consume alcohol. Specific situations were practiced in which individuals apply pressure to persuade others to consume excessive amounts of alcohol. Students practiced reactions to statements such as "One drink won't hurt you," "What kind of friend are you," or "Just have a little one, I'll make sure you won't have any more." Appropriate reactions were taught such as to (1) look directly at the pusher when responding, (2) speak in a firm, strong tone with appropriate facial expressions and body language, (3) offer an alternative suggestion such as "I don't care for a beer but I'd love a soft drink," (4) request that the pushers refrain from continued persuasion, or (5) change the subject. These areas of self-management skills were taught through group discussion and participatory activities and, when appropriate, were incorporated into the TGT tournaments.

Adolescents also may need training in terms of coping with daily academic and social problems. Recent data indicate alcohol reduces the adolescent's ability to process information accurately, thus a problem-solving approach may increase the ability to process knowledge about alcohol and its subsequent effect on driving (Steele & Southwick, 1985). In such cases they were taught a problem-solving approach based on the work of D'Zurilla and Goldfried (1971), Goldfried and Goldfried (1975), Sarason and Sarason (1981), and Spivack and Shure (1974). The general components of these programs emphasized: (1) how to generate information; (2) how to generate possible solutions; (3) how to evaluate possible courses of action; (4) how to choose and implement strategies; and (5) verification of the outcomes of selected courses of action. Problem-solving strategies included: (1) explanation of how certain consequences and stimuli can control problem-solving behavior; (2) isolation and definition of the behaviors to be changed; (3) use of stimulus control techniques to influence rates of problem-solving behavior; and (4) use of appropriate consequences to either increase or decrease a behavior.

Instructor Training. The sessions were led by the regular classroom teacher. The teachers were trained to talk comfortably with students about this sensitive issue, to be supportive of the group process, to have a sound knowledge base in social learning principles so as to help identify and analyze behavior, and to have complete and thorough knowledge of the TGT technique. Initially, teachers received pertinent reading materials on the TGT technique, alcohol and alcohol abuse, and behavioral and self-management techniques. They were then trained by the researchers in the use of the curriculum and behavioral techniques. After the initial 4-hour training workshop the author was available to the teachers as a consultant. Periodic

videotaping of the instructors leading a class was used to assure the proper level of competence in the implementation of the program.

Outcome Measures. The following scales and inventories were administered to all participants to provide baseline data on dependent variables. Subsequent measures of the phenomena were obtained at posttesting and follow-up.

1. TGT. Fifty-item knowledge test randomly derived from a pool of 200 items according to content within the curriculum.

2. Knowledge of alcohol. This scale is based on information and myths about alcohol from Eng's (1977) scale. It also provided a portion of the material used to make up the TGT tournament quizzes.

3. Stumphauzer's (1980) "Behavioral Analysis Questionnaire for Adolescent Drinkers" was used for self-reports of drinking behavior. This scale is a twenty-item questionnaire that has been used to study the social learning variables in adolescents' alcohol use.

4. "The Adolescent Alcohol Questionnaire" by Glikson and associates (1980) was used to measure attitudes, motivation, and behavior associated with adolescents' alcohol use and abuse.

5. The "Index of Self-Esteem" and the "Generalized Contentment Scale" were used to provide information on students' personality characteristics that could influence the tendency to drink (Hudson, 1977; Hudson & Proctor, 1977). Self-concepts and general satisfaction with life were assessed, which could be useful in future program planning.

6. The "Index of Family Relations" was used to measure the magnitude of problems that are found in family members' relationships (Hudson, Acklin, & Bartosh, 1980).

Through these self-inventories and assessment tools, it was determined if students lacked an awareness of alcohol issues. More importantly, those with a serious drinking problem were identified. When this occurred, the student was referred to the appropriate professional service outside the auspices of this program.

Follow-Up. Follow-up of the program participants was conducted for two years after completion of the educational program. The assessment scales used at pre and posttest was used at each follow-up interval to provide comparative data. In this way, maintenance of knowledge and behavior was determined.

Table 1 presents an outline of the program and related evaluative procedures.

TABLE 1

SEQUENCE & HIGHLIGHTS OF EDUCATIONAL PROGRAM

BASELINE	EDUCATIONAL COMPONENT	POST-TEST	FOLLOW-UP I	FOLLOW-UP II
Initial assessment measures 1. Knowledge of alcohol 2. Self-reports of drinking 3. Attitudes, motivation and behavior related to drinking and driving 4 Index of self-esteem 5. Generalized contentment scale 6. Index of family relations	50 minute sessions 5 days/week for 4 weeks <u>Objectives</u>: 1. Learn alcohol concepts and effects on driving 2. Learn self-management skills related to alcohol use 3. Learn assertiveness skills related to alcohol use <u>Method</u>: 1. Group discussion and participatory activities led by teachers 2. TGT techniques for worksheets and tournaments to reinforce knowledge and application of concepts	At completion of educational component <u>Objectives</u>: 1. To determine the increase in knowledge as a result of the educational component <u>Method</u>: Measures same as at baseline	1 year following completion of educational component <u>Objectives</u>: 1. To determine the short-term effectiveness of the alcohol education program in maintaining youths' knowledge of and responsible use of alcohol <u>Method</u>: Measures same as at baseline	2 years following completion of educational component <u>Objectives</u>: 1. To determine the long-range effectiveness of the alcohol education program in maintaining youths' knowledge of and responsible use of alcohol <u>Method</u>: Measures same as at baseline

RESULTS

In all participating schools, students received either instruction according to the experimental TGT method, traditional instruction, or no instruction. In total, 570 participated in the experimental TGT procedure, 384 in traditional instruction, and 411 in a control or no-treatment condition. Four percent were seniors, 21% were juniors, 49% sophomores, and 27% freshmen.

Description of Drinking Behaviors

In our sample, 72.2% indicated that they drank at least two ounces of alcohol each week. Sixty percent of the students who drank indicated that they started to drink because they liked the taste; 18.2% said they wanted to be like their friends; and 13.6% said that it helped them to feel less nervous and tense. They drink a variety of intoxicants--43.8% drink beer, 29.7% drink wine, 23.4% drink hard liquor, and 3.1% drink substitutes for alcohol such as cough medicine, mouth wash, and hair tonic. Of our student population, 21% received their drinks from parents or relatives, 54.5% from friends, 12.2% from their home without their parents' knowledge, and 9.8% from brothers or sisters. Only 2.4% buy liquor with false identification.

Of our sample, 10.9% had their first drink before the age of 10, 21.9% had the first drink between the ages of 10 and 13, and 19.7% between the ages of 14 and 15. Thus, by the age of 15, 51.5% of our sample had already taken its first drink. Almost half (49.3%) of our students indicated that the reason they had their first drink was curiosity, 23.1% because parents or relatives offered it, and 10.4% to get drunk or high. Fifty-two percent drink with friends their own age, while 13.8% drink with older friends. Thus peers are involved in drinking behaviors in about 66% of the situations, while only 21.5% drink with their parents.

The greatest effect from alcohol, it appears, is its ability to make the teenager feel loose and easy (52.2% response). In terms of ultimate effect, 16.8% get moderately high, 10.6% become drunk, 9.7% drink so heavily that they do not remember what happened the next day, 5.3% become ill, and the same percentage pass out. When asked, "What is the greatest effect that drinking has had on your life", 79.5% indicated no effect, 7.9% indicated that it has gotten them into trouble, 6.6% reported that it has interfered with having a good time and with school work, and 2.6% stated that it interfered with their relating with someone.

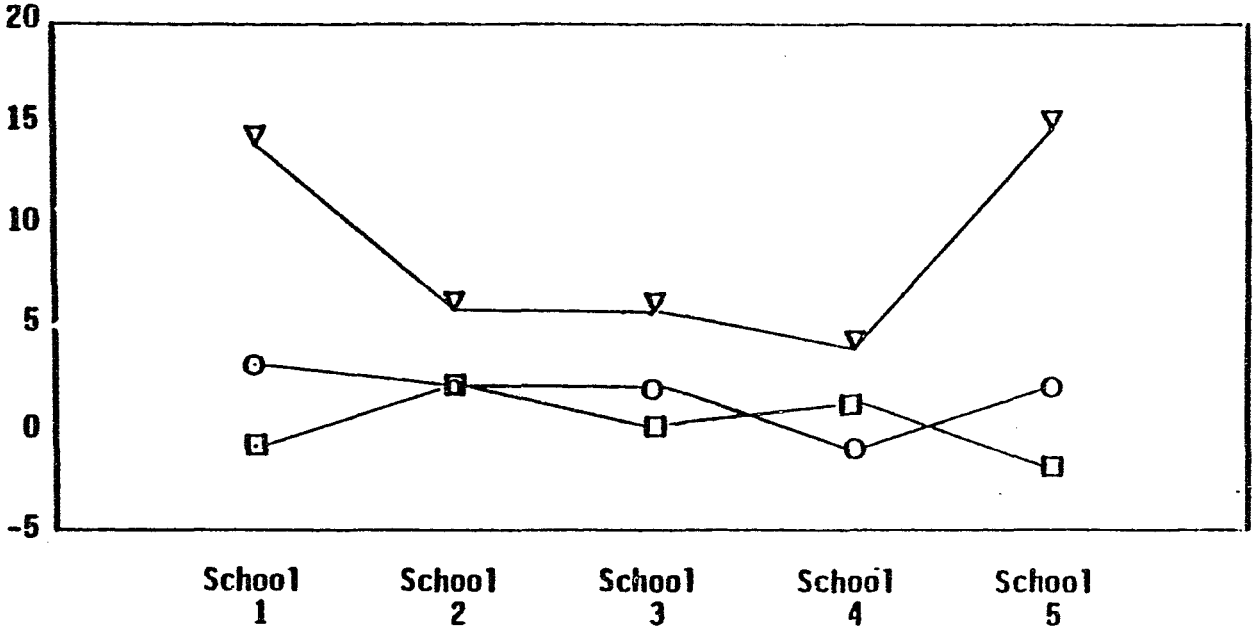
When asked how others see them, most teenagers (84.9%) related that others do not think that they have a problem, while 6.7% indicated that family or friends have advised them to control or to cut down on their drinking.

Out of a possible 19 reasons they could choose as reasons they drink they ranked the following highest: "to celebrate," "I like the taste," "it makes me feel good," "it helps me relax," "to liven up things when they are dull," and "to see how it will affect me."

Alcohol Knowledge

Data in Figure 1 compare the amount of learning according to each group. The assessment inventory consisted of 50 questions selected randomly from a 200-

Figure 1. Amount of learning according to TGT, traditional and no instruction groups and school.



TGT Group

Traditional Group

No Instruction Group

NOTE: Amount of learning calculated on the differences between pre and posttest of the assessment inventory which consisted of 50 items.

item pool of test questions developed according to the content contained within the TGT curriculum. The experimental classes had significant increases in knowledge about alcohol as compared to traditional and no instruction control groups ($F=7.21$; df 2, 1347; $p<.05$). School effects were not significant ($F=.59$; df 4, 1347; $p<.05$). Thus the data are not confounded by particular characteristics of a school system. The increases between pre and posttest were as follows for the experimental groups: E I, +14; E II, +6; E III, +6; E IV, +4; E V, +15; with the average nonweighted mean being 9. This can be compared with the changes in the traditional instructional groups: I, +3; II, +2; III, +2; IV, -1; V, +2; with the average nonweighted mean being 2.2. The changes in the no instructional groups were as follows: I, -1; II, +2; III, 0; IV, +1; V, -2; with the average nonweighted mean being 0. The data suggest that the TGT procedure helps students gain knowledge about alcohol and effects on driving behaviors.

Data from the 36-item, true/false Engs Alcohol Knowledge Test confirm our own measures of alcohol knowledge acquisition. Data in Table 2 show that our experimental groups increased 7 points, from a pre-test average of 17.6 to 24.6. Our regular instructional groups increased from 16.8 to 18.2, an increase of 1.4. Our control groups that received no instruction increased from 17.4 to 18.0. The differences between the experimental and both control groups (+.6) are significantly different ($F=10.91$; df 2, 1347; $p<.05$). Thus two different measures confirm the ability of the Teams-Games-Tournaments procedure to help students acquire knowledge about alcohol. To support this knowledge, data analyses were conducted to isolate whether the intensity of the instruction in the traditional method effected the two knowledge variables. Four levels of intensity were not significantly different for the TGT knowledge measure ($F=1.87$; df 3, 379; $p>.05$) and for the Engs ($F=.53$; df 3, 379; $p>.05$). Intensity was defined as the number of weeks of instruction, i.e., Level I = 1 week, Level II = 2 weeks, Level III = 3 weeks, and Level IV = 4 weeks.

Drinking Behavior

As indicated in Table 3, students showed a substantial decrease in drinking behavior for the experimental procedure. Of the 6 items (that are rated on a 6-point scale) of the Engs inventory which assess consumption, the experimental groups showed a 6.64 point change as compared to the .57 change in traditional instruction groups and a .49 change in the control groups. The results between the experimental and the two other groups are significantly different ($F=8.89$; df 2, 1347; $p<.05$).

Additional data gathered on the consumption of alcohol through The Adolescent Alcohol Questionnaire (Glikson et al., 1980) collaborates the data contained in Table 3. The amount of alcohol consumed also favored the experimental groups as compared to the traditional and no instruction groups. Change from pre- to posttest on the amount of reported drinking by students revealed that the experimental group decreased 12.7% while the traditional instructional group and the control groups showed no reduction. The experimental group also had a significant reduction in the amount of alcohol consumed at any one session. The experimental group reduced the amount consumed at any one session by about 40%, compared to almost no reduction for the traditional instructional group or the control procedure.

TABLE 2

Amount of learning according to TGT, traditional and no instruction groups, and school as measured by the Engs Alcohol Knowledge Inventory.

	Type of Group					
	TGT		Traditional		No Instruction	
School	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
1	18	25	19	21	17	17
2	16	22	16	15	15	16
3	19	26	15	17	20	21
4	17	23	17	18	18	17
5	18	27	17	20	17	19
	88	123	84	91	87	90
	17.6	24.6 + 7*	16.8	18.2 + 1.4	17.4	18 + .6

* p = <.05

NOTE: Amount of learning is calculated on the differences between pre and posttest of the 36 true/false items on the Engs Alcohol Knowledge Inventory.

TABLE 3

Amount of change in drinking patterns as assessed by the Engs Questionnaire according to the TGT, traditional and no instruction groups.

	Type of Group								
	TGT			Traditional			No Instructional		
School	Pre-test	Post-test	Change	Pre-test	Post-test	Change	Pre-test	Post-test	Change
1	1.48	2.58	+1.1	1.56	1.69	+.13	1.48	1.52	+.04
2	1.87	2.91	+1.04	1.77	1.89	+.12	1.57	1.59	+.02
3	1.63	2.73	+1.0	1.90	2.00	+.10	1.78	1.89	+.11
4	1.88	2.77	+ .89	1.72	1.89	+.17	1.67	1.72	+.05
5	1.55	2.97	+1.42	1.63	1.78	+.15	1.55	1.72	+.17
6	1.87	2.96	+1.09	1.92	1.82	-.10	1.81	1.91	+.10
	10.28	16.92	+6.64*	10.52	11.07	+.57	9.86	10.35	+.49

* p = <.05

NOTE: Higher scores indicate students are drinking less.

The experimental group increased almost 15 percentage points in regard to time elapsed from their last drink. Relatively no change occurred in the traditional and control groups. Students in the TGT group also showed changes in the time of day when they were drinking as compared to the traditional instruction group and the no instruction group. The most significant decrease for the TGT students occurred at night where they reportedly reduced their drinking by one-third. Our data also indicate that the TGT students increased in self-confidence about their drinking behavior as compared to our traditional instruction and control group.

In regard to the consequences of drinking, the Engs inventory revealed a significantly increased score (from 32.14 to 50.93 for the TGT groups; $F=14.11$; df 2, 1347; $p<.05$). The other two groups had relatively no change. The differences between TGT and the other two groups are significant. This indicates that students not only reduced the amount of alcohol they consumed but the consequences they suffered were reduced also (See Table 4).

TABLE 4

Amount of change in consequences from drinking behavior as assessed by the Engs Questionnaire according to TGT, traditional and no instruction groups.

Type of Group								
TGT			Traditional			No Instruction		
Pretest	Posttest	Change	Pretest	Posttest	Change	Pretest	Posttest	Change
32.14	50.93	+18.79*	31.38	32.43	+.89	32.43	34.11	+1.68

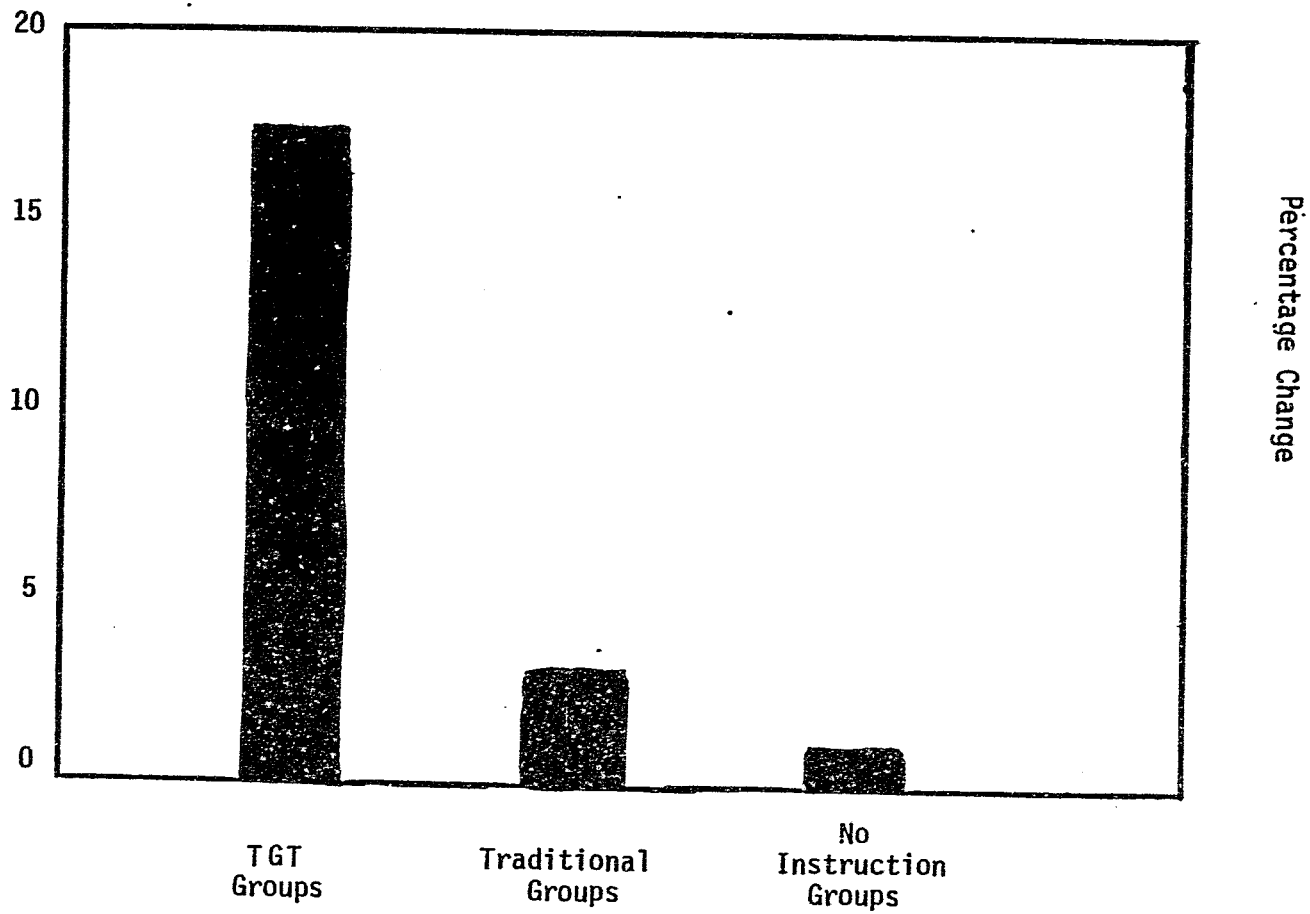
* $p < .05$

Attitude Changes Concerning Drinking and Driving

The Drinking and Driving Questionnaire assessed attitude changes regarding drinking and driving behavior (Vegega, 1983). Twenty-three (23) items contained on the questionnaire related to the specific effect of drinking and driving. For the experimental group, a significant positive (16.48) attitude change occurred. For the traditional instruction group the change was 2.68, and for the control group was .94. The TGT group was significantly different from the others ($F=12.88$; df 2, 1347; $p<.05$) (See Figure 2).

Nine items centered on the perception of being caught driving while drinking. The students in all groups believed that they had a one-in-two chance of being

Figure 2. Amount of Attitude Change According to TGT, Traditional, and No Instruction Groups for Drinking and Driving Behaviors as Measured by the Drinking and Driving Questionnaire..



police stopped them, the perceived chances of a negative consequence occurring were low--33 in 100. They believed that the probability of consequences would have to be at least 75 in 100 in order to deter them from drinking (See Figure 3). Thus, it is evident that the students perceived that the probability of being stopped by the police is low, and even if they are stopped by the police, the probability of subsequent application of negative consequences is also low (See Figure 4). Statistical analysis between groups indicates that TGT did not alter a youngster's perception of being caught and punished for alcohol-impaired driving.

Figure 3. Perception of Chances of Apprehension and Necessary Probability of Apprehension Necessary to Deter DWI.

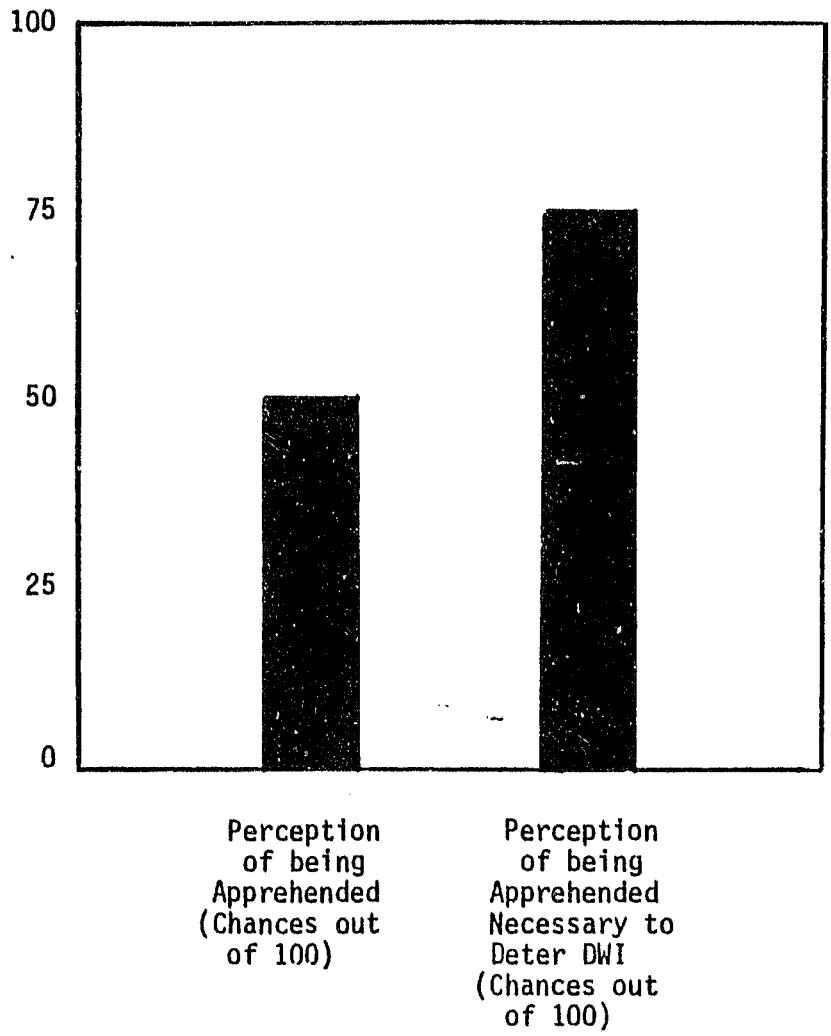
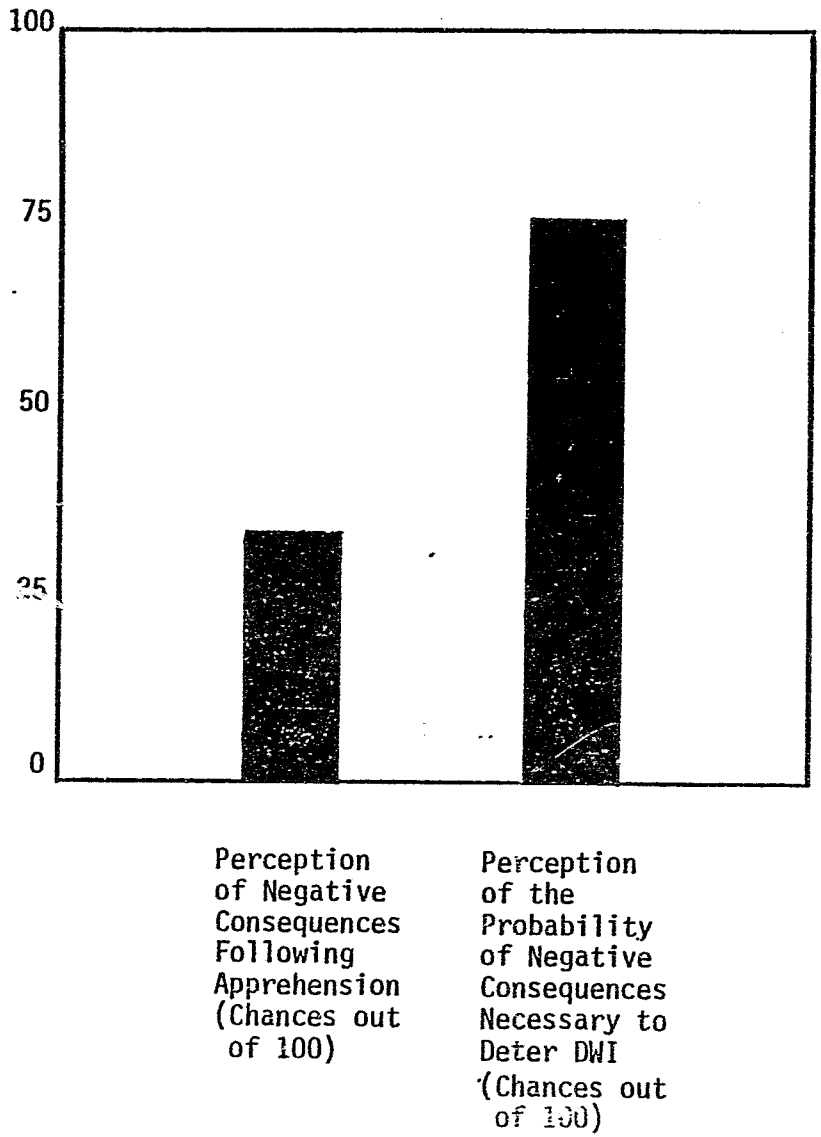


Figure 4. Perception of Negative Consequences and Probability of Negative Consequences Necessary to Deter DWI.



Thirteen items dealt with how to modify behavior in order to deal with being too intoxicated. On these items, eight significant differences occurred for the experimental group as compared to the traditional and no instruction group. Thus, the data indicate that TGT did have an effect on students' cognitive acquisition of behavioral options (See Table 5).

TABLE 5

Significant and non-significant differences between experimental and traditional and no instruction control groups in perceived means of avoiding driving after drinking too much.

Item	
Significant	Non-Significant
1. Limiting my alcohol level by scheduling my drinks (e.g., every other drink non-alcoholic, drink more slowly).	1. Having host-hostesses watch and schedule the drinking of guests.
2. Limiting my alcohol level by stopping my drinking at a pre-determined time.	2. Testing myself for my alcohol level (e.g., using a breath device, doing dexterity test).
3. After I stop drinking, I wait until my alcohol level is "safe" for driving.	3. Do not drink alcoholic beverages when I have to drive.
4. Asking someone else for a ride home.	4. Call a taxi so that a friend/ guest will not drive after drinking too much.
5. Having one person volunteer not to drink in order to drive others home.	5. Plan to stay overnight somewhere.
6. Offering to drive friends/guests home.	
7. Avoid situations where I know I tend to drive after drinking.	
8. Intervene to stop a person from driving after drinking too much.	

Related Assessment Techniques

The Survey of Behavior inventory indicated that the experimental groups became less impulsive. The change was 10.64 as compared to the traditional groups which changed 1.33 and the no instruction group with a 2.78 change. The changes for the TGT groups as compared to traditional and no instruction groups are statistically significant ($F=14.87$; df 2, 1347; $p<.05$). Additionally, the TGT students experienced statistically significant increases in their self-concepts, feelings of self-esteem, and their peer relations as compared to traditional and no instruction groups (See Table 6). Since our program addressed these aspects, the changes were expected. The TGT groups related no better to their families than did the traditional and no instruction groups.

TABLE 6

Amount of self-reported change in impulsive behavior according to TGT, traditional and no instruction groups

Type of Group								
TGT			Traditional			No Instruction		
Pretest	Posttest	Change	Pretest	Posttest	Change	Pretest	Posttest	Change
58.21	47.57	+10.64*	59.11	57.78	+1.33	56.17	53.39	+2.78

$p = <.05$

Teacher Evaluations

Teachers basically liked the total curriculum and plan to use it next year according to the evaluation instrument contained within the TGT manual (Wodarski & Lenhart, 1982). Moreover, they expressed interest in expanding the TGT method to other subjects, particularly drugs. The major factor contributing to success appeared to be the self-contained nature of the curriculum guide. After implementation of the 4-week program, teachers realized that far too little time had been devoted previously to the topic.

Student Evaluations

Data was provided by the student evaluation instrument contained within the TGT manual. The students enjoyed the TGT procedure compared to the traditional instruction and no instruction control groups. In particular, they liked working together in groups, the worksheets, and the tournaments. The majority (56%) of students in the TGT groups believed that they learned a

lot about alcohol, compared with 30% in the traditional group and 29% in the control groups. More important, 86% of the TGT students believed that what they learned would affect how they drink in the future, compared to 60% in the traditional instruction and 55% in the no instruction groups. Ninety-six percent (96%) of the TGT students felt they knew what responsible drinking is after the completion of the TGT method, compared to only 67% of those in the traditional method and 30% in the control condition.

Additionally, students in the experimental group underwent a significant attitude change toward providing more alcohol education in the schools. Ideas mentioned included that programs should provide methods to resist peer pressure and alternatives to drinking, that alcohol education should occur early in the school experience, that alcohol education will influence their drinking habits, that the police should enforce DUI laws, and that advertisers should not link sex with drinking.

Follow-Up

The data suggest that the TGT technique is effective in teaching adolescents about alcohol, a subject which is espoused to be of great importance but struggled with in terms of its presentation. Moreover, self-reports of TGT groups showed a lowered consumption of alcohol, a change in attitudes toward drinking and driving, and the acquisition of alternative behaviors for avoiding driving after drinking too much (Wodarski, in press, b).

Another requisite for evaluating the adequacy of an educational program is to determine how long the effects are maintained after the intervention (Wodarski, 1981, Wodarski et al., 1979). This section of the report describes a one- and two-year follow-up of students who underwent TGT instruction, traditional instruction, and no instruction in alcohol education.

The first follow-up of the program participants was conducted one year after completion of the educational program. The second follow-up was conducted two years after the conclusion of the intervention. The assessment scales used at pre and posttest were used at follow-up to provide comparative data. In this way, maintenance of knowledge and behavior were determined.

In all participating schools, students received either instruction according to the experimental TGT method, traditional instruction, or no instruction. In total for the first follow-up, 526 participated in the experimental TGT procedure, 361 in traditional instruction, and 384 in a control or no-treatment condition. Twenty-one percent were seniors, 49% juniors, and 27% sophomores. Due to graduation and other factors, such as moves, we experienced an attrition rate of 6%. Four percent were seniors who graduated. In total for the two-year follow-up, 389 participated in the experimental TGT procedure, 267 in traditional instruction, and 284 in a control or no-treatment condition. Forty-nine percent were seniors and 29% juniors. Due to graduation and other factors such as moves, we experienced an attrition rate of 11% of our total sample. Statistical tests revealed that our dropouts were not significantly different from our follow-up sample.

Alcohol Knowledge. Data in Figure 5 compare the amount of learning from pre to posttest with the subsequent maintenance. In previously reported data the TGT groups increased an average of 9 points from pre to posttest. The traditional groups increased 2.2, and the no instruction group 0 points. Respectively, when one-year follow-up scores (FI) and second-year follow-up scores (FII) are subtracted from pretest scores, the TGT groups attained a mean of 8.27 (FI) and 7.75 (FII), the traditional groups a mean of 1.80 (FI) and 1.50 (FII), and the no-instruction groups .24 (FI) and .28 (FII). Contrasting data for the two follow-up periods indicates that the TGT procedure helps students maintain knowledge about alcohol and its effects on driving behaviors. School effects were not significant. Thus the data are not confounded by particular characteristics of a school system. The data suggest that virtually no learning took place for the traditional and no-instructional groups.

Previously reported data from the 36-item Engs Alcohol Knowledge Test confirm our own measures of alcohol knowledge acquisition. Data show that our experimental groups increased seven points, from a pretest average of 17.6 to a posttest score of 24.6. Our regular instructional groups increased from 16.8 to 18.2, an increase of 1.4. Our control groups that received no instruction increased from 17.4 to 18.0. Data provided in Figure 6 indicate that all groups had slight increases at the first-year follow-up: the TGT group .2, the traditional 1.1, and no-instruction .4. For the second-year follow-up all groups experienced a decrease: the TGT group -.3, the traditional -.8, and no instruction -.1. The data indicate that the TGT group maintained its former substantial increase.

Drinking Behavior

Of the 6 items of the Engs inventory which assess consumption, previous data from TGT groups showed a 6.64 point change from pre to posttest as compared to the .57 change in traditional instruction groups and a .49 change in the control groups. The results between the experimental and the two other groups are significantly different ($F=8.89$; df 2, 1347; $p<.05$). Data in Figure 7 show that all three groups decreased maintenance; however, the decrease for the TGT group was the smallest at .39 (FI) and .47 (FII). For the traditional groups it decreased by 1.30 (FI) and 1.45 (FII), and for the no-instruction groups it fell by 1.32 (FI) and 1.55 (FII). The difference between the TGT groups and the traditional and no-instruction groups is significant for both follow-up periods.

In regard to the consequences of drinking, previous data from the Engs inventory revealed a significantly increased score from 32.14 to 50.93 for the TGT groups ($F=14.11$; df 2, 1347; $p<.05$). The other two groups had relatively no change. The differences between TGT and the other two groups are significant. These data indicate that students not only reduced the amount of alcohol they consumed but the consequences they suffered were reduced also. Follow-up data in Figure 8 indicate the changes were maintained for all three groups as compared to the posttest score: TGT +1.09 (FI) and +.55 (FII); traditional +.55 (FI) and +.25 (FII); and no-instruction +.87 (FI) and +.46 (FII). (See Figure 8)

Figure 5. Average amount of maintenance of learning according to TGT, traditional and no instruction groups for five schools for a one and two year follow-up.

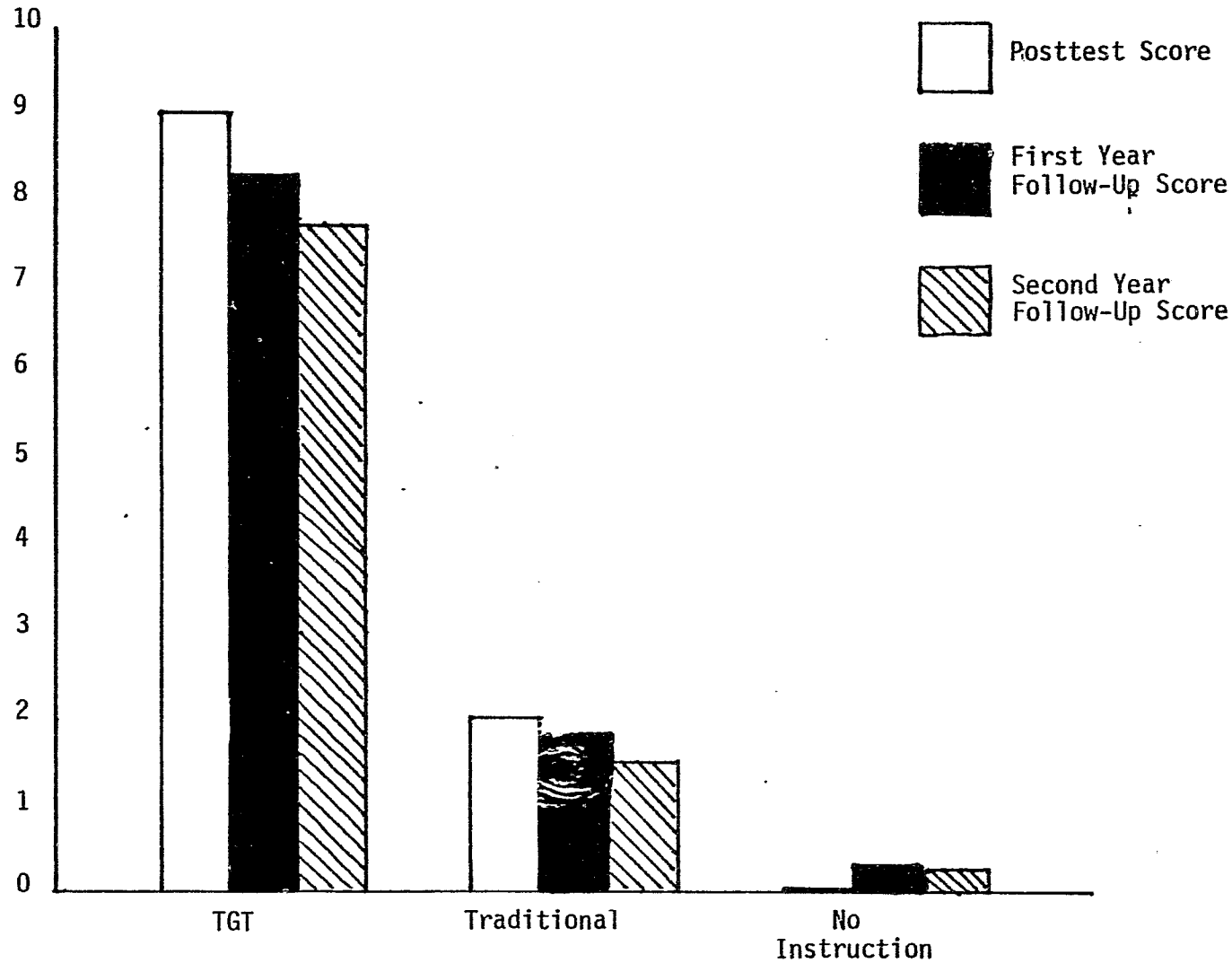


Figure 6. Amount of maintenance according to TGT, traditional and no instruction groups and school according to the Engs Alcohol Knowledge Inventory for five schools for a one and two year follow-up.

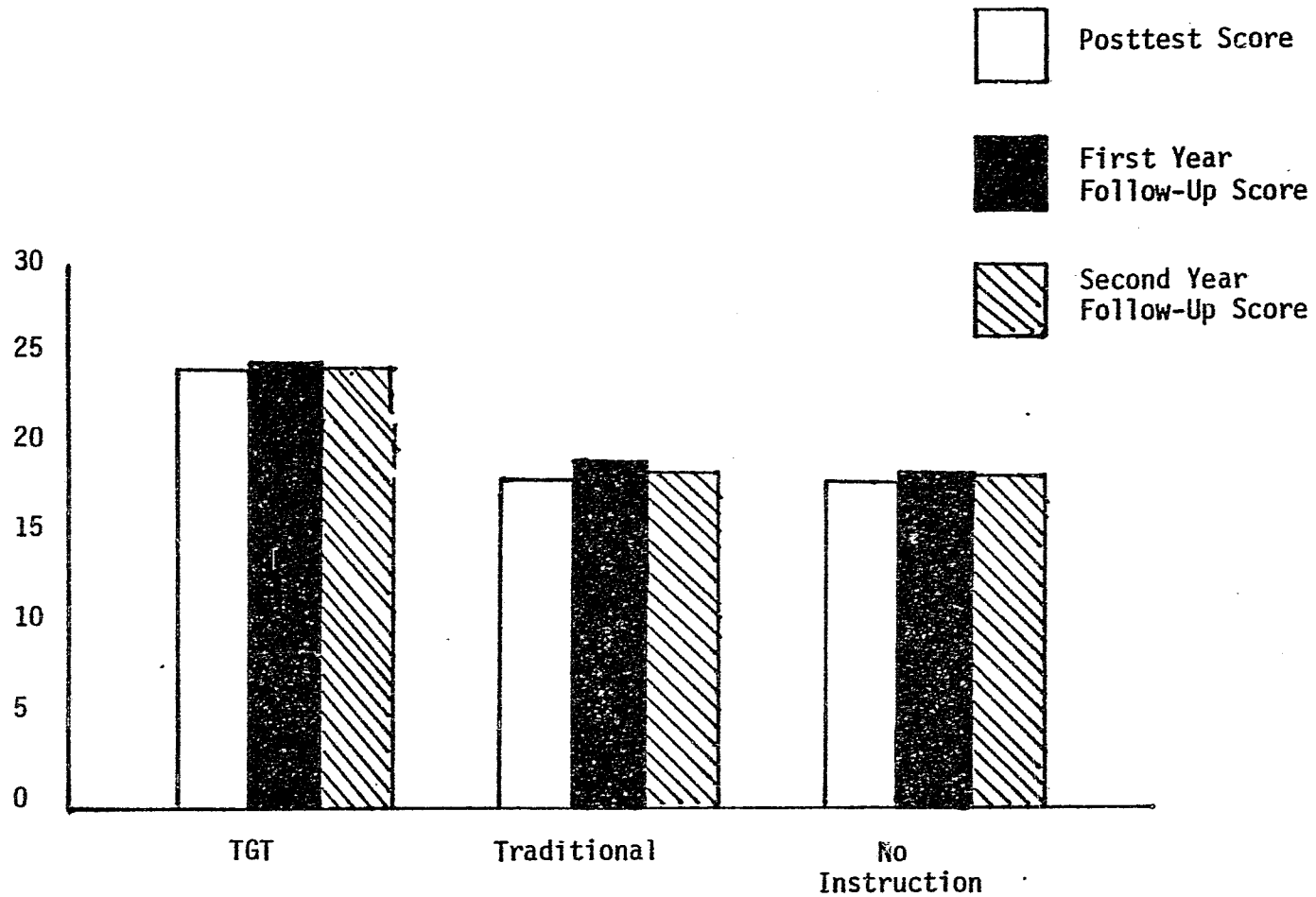


Figure 7. Amount of change and maintenance in drinking patterns as assessed by the Engs Questionnaire according the the TGT, traditional and no instruction groups for a one and two year follow-up.

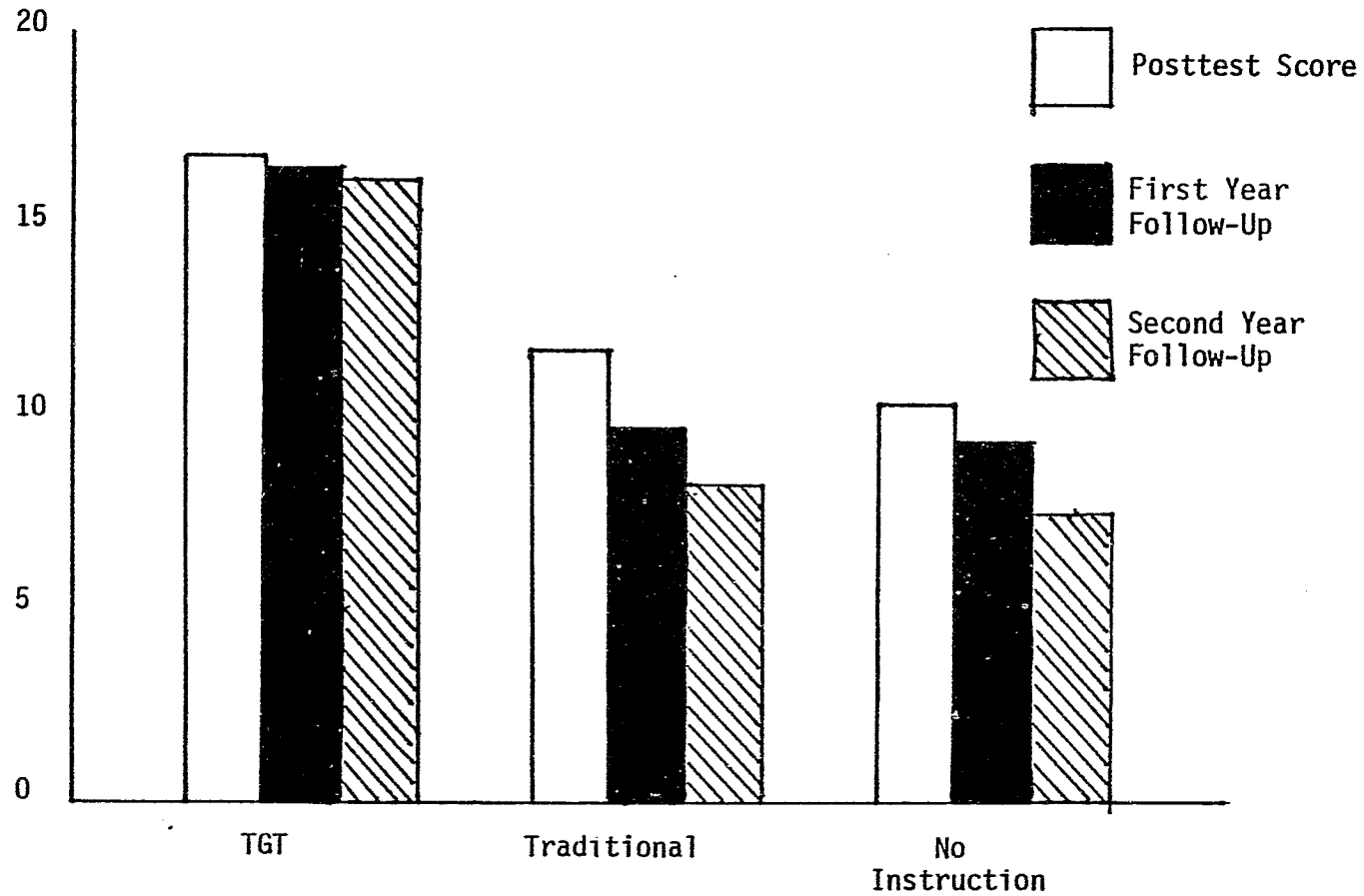
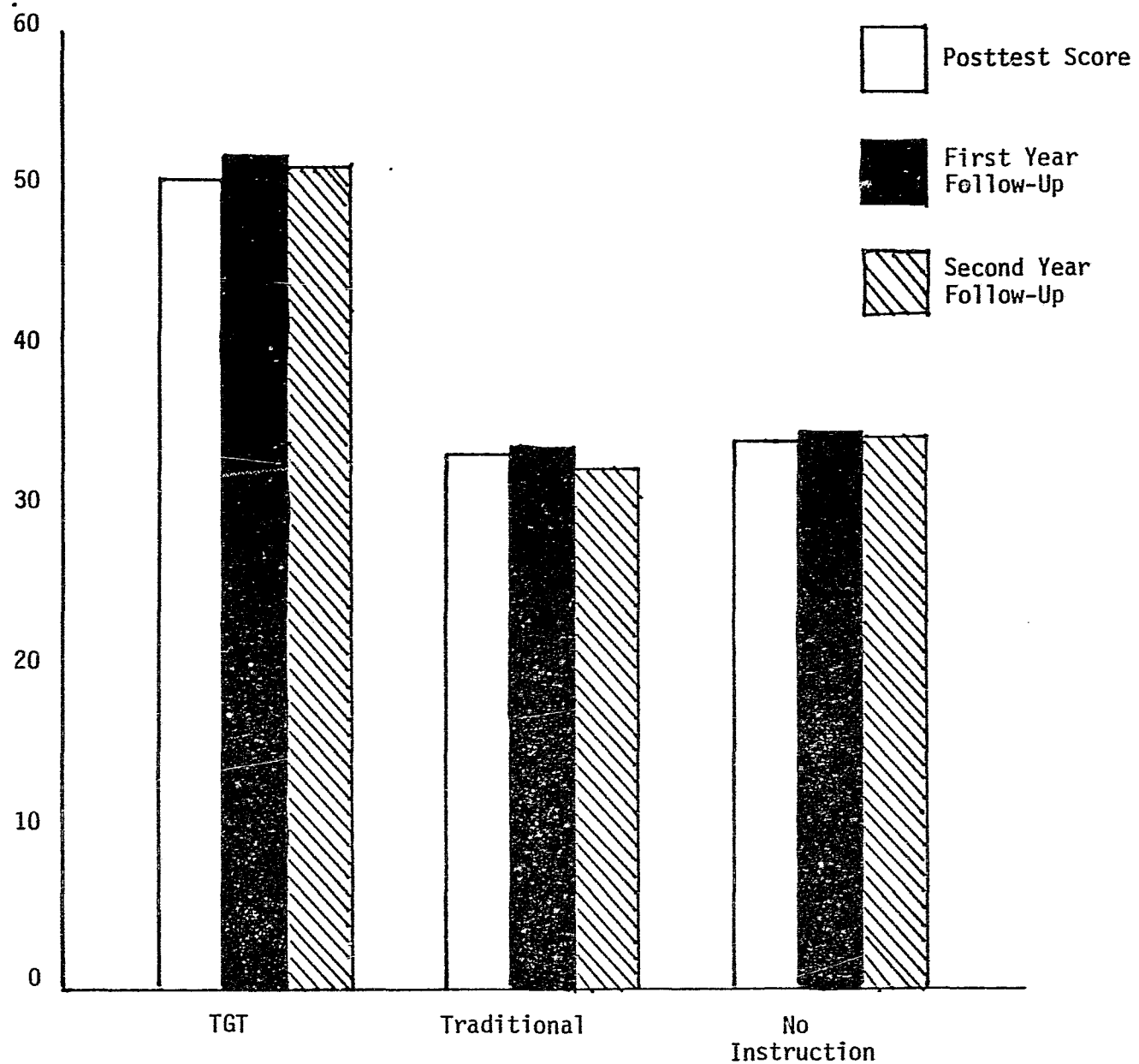


Figure 8. Maintenance of change in consequences from drinking behavior as assessed by the Engs Questionnaire according to TGT, traditional and no instruction groups for a one and two year follow-up.



Attitude Changes Concerning Drinking and Driving

The Drinking and Driving Questionnaire assessed attitude changes regarding drinking and driving behavior (Vegega, 1983). Twenty-three (23) items contained on the questionnaire related to the specific effects of drinking and driving. For the experimental group, a significant positive (16.48) attitude change occurred. For the traditional instruction group, the change was 2.68, and for the control group the change was .94. The TGT group was significantly different from the others ($F=12.88$; df 2, 1347; $p<.05$). The TGT group was significantly different from the others for both follow-up periods. Data in Figure 9 indicate that these attitude changes were maintained with TGT at 16.97 (FI) and 16.22 (FII); traditional instruction 2.74 (FI) and 2.33 (FII); and no-instruction at .98 (FI) and .69 (FII).

Nine items centered on the perception of being caught driving while drinking. The students believed that they had a one-in-two chance of being caught after drinking too much, and they felt that this was not high enough to deter them. They indicated that if the chances were 75-out-of-100 of getting caught, it would deter and/or stop them. They indicated that even if the police stopped them, the perceived chances of a negative consequences occurring were low--33 in 100. They believed that the probability of consequences would have to be at least 75 in 100 in order to deter them from drinking. These data did change significantly for the two follow-up periods. Thus, it is evident that the students perceived that the probability of being stopped by the police is low, and even if they are stopped by the police, the probability of subsequent application of negative consequences is also low.

Impulsive Behavior

Previous data indicated that the experimental groups became less impulsive. The change was 10.64 as compared to the traditional groups which changed 1.33 and the no-instruction group with a 2.78 change. The changes for the TGT groups as compared to the traditional and no-instruction groups are statistically significant ($F=14.87$; df 2, 1347; $p<.05$). Data in Figure 10 indicate that the TGT group, as compared to the posttest score, increased 1.33 (FI) and 1.19 (FII), the traditional instruction group increased by 1.03 (FI) and 1.23 (FII), and the no-instruction group increased .59 (FI) and .89 (FII). Thus, the data indicate that all groups maintained similar gains. The most important finding is the substantial initial change for TGT and its slight increase at follow-up. (See Figure 10)

Adequate educational programs to equip adolescents with knowledge about alcohol are imperative (Mayer & Filstead, 1980). Many curricula exist on alcohol education for adolescents; however, virtually none have data to support that attitudes and knowledge change as a result of the interventions (Janvier, Guthman, & Catalano, 1980; Wodarski & Hoffman, 1984). The demonstration of cognitive and attitudinal change is a requisite for evaluating any educational program's effectiveness. The TGT method has demonstrated initial and subsequent maintenance of knowledge, the effects on drinking and driving, and its effect on drinking behavior.

Figure 9. Amount of attitude change concerning drinking and driving and its subsequent maintenance according to TGT, traditional and no instruction groups for five schools for a one and two year follow-up.

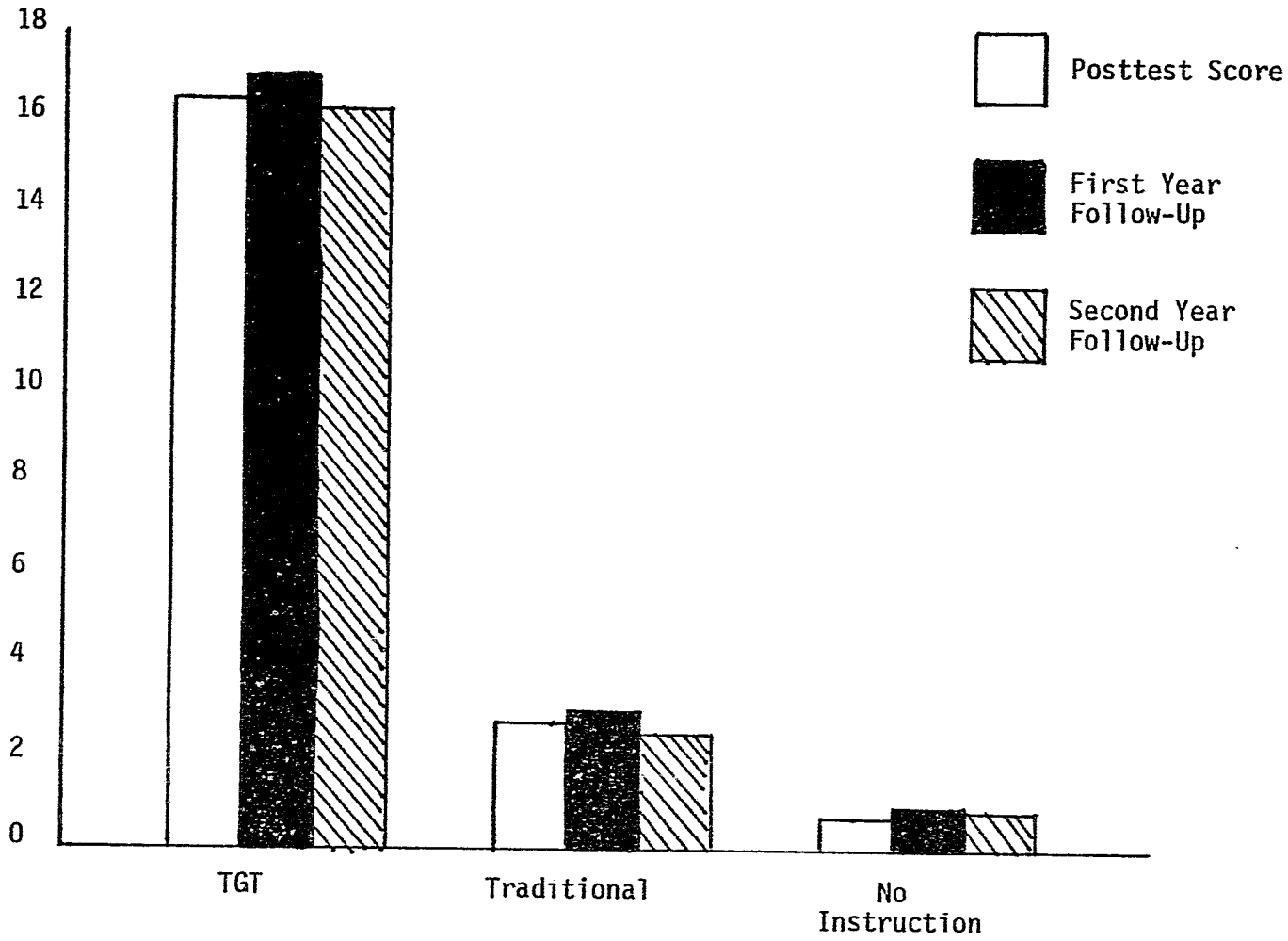
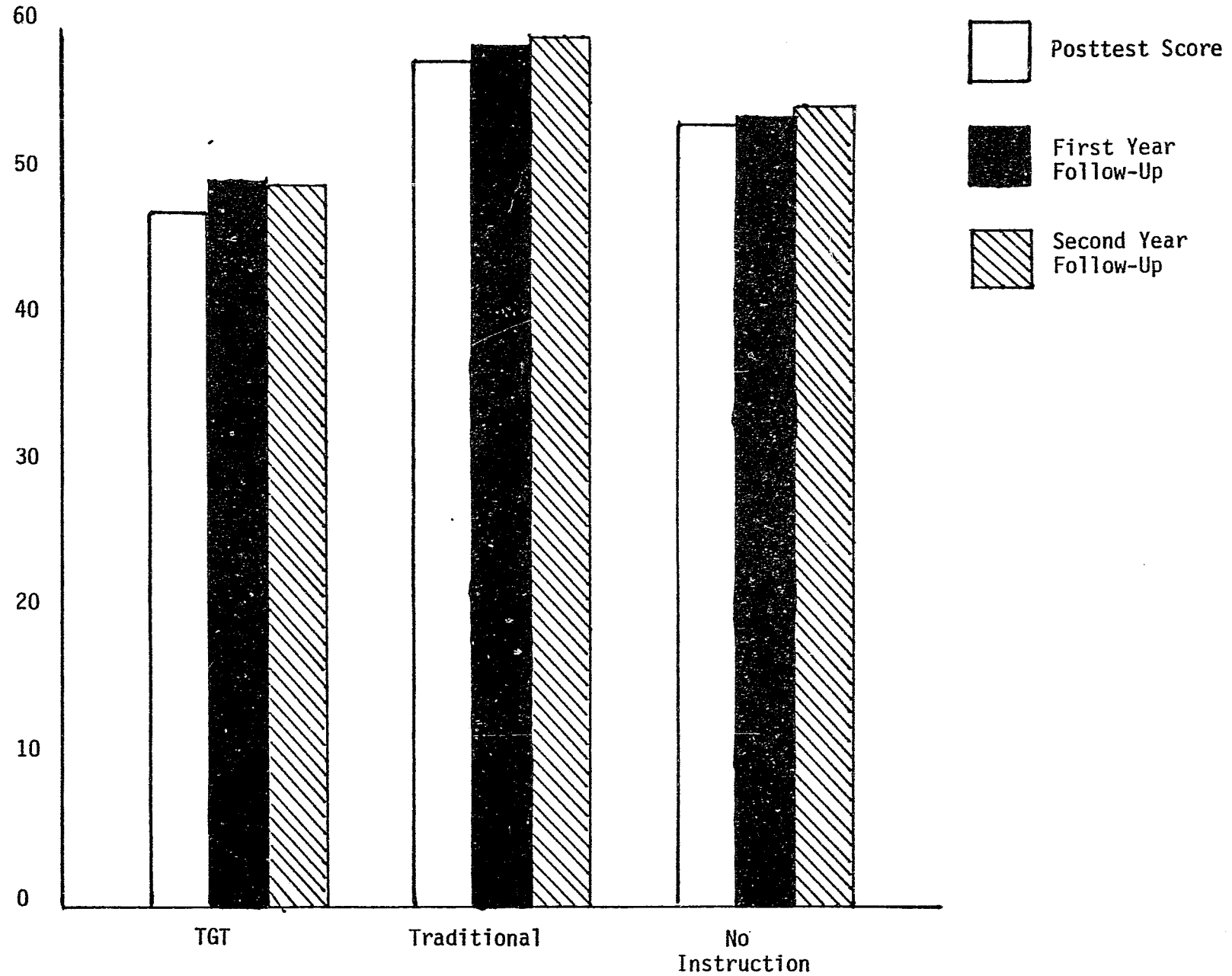


Figure 10. Maintenance of self-reported change in impulsive behavior according to TGT, traditional and no instruction groups for a one and two year follow-up.



SIGNIFICANCE

The TGT program is conceptualized to be an effective, thorough, and easy-to-administer vehicle by which to educate youth about alcohol and its effects on driving behavior. Moreover, it is believed to contribute to the development of responsible attitudes toward the use of alcoholic beverages. There are substantial practical, educational and methodological gains from this study. The program's unique combination of the presentation of educational materials in a manner which encourages peer support, and using a group reward structure and participatory learning, provide for the development of a new concept in teaching adolescents about alcohol.

The TGT technique has been shown to be effective in educating adolescents in the areas of nutrition, math, social studies, English, and so forth, as well as in increasing the value attached by students to success in the classroom. Its use in the acquisition of knowledge about alcohol, however, had not heretofore been tested. These data suggest that the TGT technique is effective in teaching adolescents about alcohol, a subject which is espoused to be of great importance but struggled with in terms of its presentation. Moreover, self-reports of TGT groups showed a lowered consumption of alcohol, a change in attitudes toward drinking and driving, and the acquisition of alternative behaviors for avoiding driving after drinking too much.

Of the most outstanding gains from this project is the development of an alcohol education program, complete with curriculum and explanation of educational techniques, that may be given to teachers who in turn can incorporate the units in their teaching with minimal additional training. Thus, in addition to providing valuable and essential descriptive data about adolescents' use and views about alcohol, and data reflective of effective methods to teach youth about alcohol, the project provides a complete educational package for further use by teachers and/or school professionals. This allows teachers without formal training to easily implement an alcohol education unit.

It is widely agreed among experts in the area of alcoholism that the use of alcohol by adolescents has reached proportions of alarming concern. Unless effective programs are developed and implemented to assist youth in acquiring knowledge about alcohol and consequences of usage, the number of problem drinkers will continue to rise. Students and teachers alike have expressed need and interest in receiving training and education in this area. Yet, despite the widespread concern over the physical, social, and emotional consequences of adolescent alcohol abuse, there have been very few scientifically supported alcohol education programs (Reed, 1981).

The continued development and implementation of the program described here will provide an educational tool for increasing the likelihood of responsible decisions about alcohol use, especially as it relates to driving behavior. This is accomplished through the use of peer support, group rewards, knowledge, and practice of requisite behaviors for reducing consumption of alcohol.

The data pose several implications for teaching adolescents about alcohol and driving. First, the TGT method which utilizes peers seems to be a viable vehicle for changing students' knowledge and attitudes about alcohol and

driving. The two follow-up investigations indicate that the substantial changes that occurred through the intervention were maintained. Second, students and teachers informally told the principal investigator two years later that they liked the method. This was rewarding in light of the observation that very few teachers or students usually remember a teaching technique. Thus, this result adds to the efficacy of using TGT to teach adolescents about alcohol and driving. Third, the fact that students' perceptions of being caught by the police and consequences that they would receive did not change during the follow-up period poses an interesting dilemma. Students are gaining knowledge about the effects of driving and alcohol. However, they are not perceiving that appropriate consequences will be enforced following driving under the influence. This issue needs to be addressed if we expect to see a reduction in driving while intoxicated.

The TGT technique has been shown to be effective in educating adolescents in the areas of nutrition, math, social studies, English, and so forth, as well as in increasing the value attached by students to success in the classroom. Its use in the acquisition of knowledge about alcohol, however, had not heretofore been tested. Results of this and our previous investigations indicate that an adequate teaching technique is now available. However, two critical questions remain. First, why did the TGT method produce substantial initial effects and subsequent maintenance? Peers act as significant influencing agents in providing reinforcement for deviant or prosocial behavior (Feldman & Wodarski, 1975; Rose, 1972, 1977; Wahler, 1969; Wodarski, Feldman, & Flax, 1974). Even though this idea is well established, it is very difficult to develop procedures to modify the normative reinforcement structure under which peers operate. It appears, however, that TGT may be one of the most appropriate procedures for modifying the manner in which peers dispense reinforcers to each other. It likewise is an educational technique that supports prosocial norms.

Our research did not evaluate the effects of the curriculum on DUI and the incidence of accidents with alcohol involvement. Future research should isolate these since data support the effectiveness of the curriculum.

The final critical question is what other avenues must be explored in order to reduce the number of people who are driving while intoxicated (Reed, 1981; Ross, 1984; Wodarski & Fisher, 1986)? Previously, we have mentioned that this will take an all-out community effort involving families and communities, as well as the schools. This hypothesis remains to be tested.

APPENDIX

TGT Alcohol Education Unit

WEEK C

DRINKING AND DRIVING

Week C - Day 1

Activity 11

Drinking and Driving Questionnaire

Focus	Method	Time	Capsule Description
Drinking and driving	Questionnaire/ Discussion	1/2 period	Students answer questions about drinking and driving and discuss the answers.

Break the class into pairs. Have the pairs complete the questionnaire at the end of this activity. Tell them not to write their names on their papers. Tabulate the results on the blackboard and then provide the correct answers, with explanations. Conclude the activity by asking the class to discuss ways in which drinking too much may impair driving ability, such as the following:

* performing normal driving tasks more slowly, including braking, turning, signalling, stopping
* passing on curves and hills
* weaving
* driving too slow or fast
* running through stop signs and stop lights
* late responses to unexpected occurrences, such as children running into the road or curves
* crossing the double line and driving out the lane

Answers to Questionnaire:

1) a
2) c
3) c
4) c
5) d
6) c
7) true

QUESTIONS ON DRINKING AND DRIVING

1. In most states a 150 lb. person is presumed to be under the influence of alcohol when he or she has had how many beers, glasses of wine or average mixed drinks with hard liquor in two hours?

   a) 1-2 b) 3 c) 4 d) 5 e) 6 f) over 6

2. How much more likely is it that the average drinker who has four average drinks an hour beforedriving will get into a car accident than someone who had nothing to drink?

   a) no more likely
   b) 6 times more likely
   c) 25 times more likely
   d) no one knows

3. What percentage of fatal traffic accidents involved someone who was drinking?

   a) 1% b) 10% c) 50% d) nearly all e) no one knows

4. On the average how many people in the United States are killed each day in car accidents in which alcohol is involved?

   a) 3 b) 10 c) 70 d) 200 e) no one knows

5. Which one of the following most affects the amount of alcohol in the blood?

   a) stomach content
   b) weight
   c) drinking experience
   d) time passed

6. Teenagers make up 22% of all drivers and they make up _____% of the accidents involving alcohol.

   a) 10%
   b) 24%
   c) 44%
   d) 71%

7. In 1980, more than 75 percent of all youths 15 to 24 years old killed in motor vehicle accidents were males. True or False?

Week C - Day 1

Activity 12

Responsibility for Others' Drinking Behavior

Focus	Method	Time	Capsule Description
Interpersonal responsibilities, Values clarification	Discussion	1/2 period	Students engage in small group discussion revolving around issues of responsibility for other people's drinking behavior.

At the end of this activity are scenarios that you can use as take-off points for discussing what a person's responsibilities are or should be toward other people who may be drinking abusively. Have the class break into small groups and discuss each scenario, arriving at a consensus solution to the problem. You may want to ask the groups to focus their discussions on such issues as:

1) In the scenario, does the individual have a responsibility to the person who is drinking abusively? Why or why not? If so, what is his or her responsibility to the drinker?

2) In each scenario, what alternative actions could the person exercising responsibility take with regard to the drinker? Where does the responsible person's responsibility stop or end--how many attempts and what kind of attempts to help the abusive drinker should he or she engage in before deciding to stop trying? Should he or she even stop trying? Why or why not?

3) What makes some people reluctant to exercise responsibility for other people who abuse alcohol? Can anything be done to encourage greater responsibility? Should something be done? Why or why not?

4) In the instances in which if we do not take responsibility for someone else who is abusing alcohol and something bad happens (for example, he or she drives home drunk and gets into an accident), are we to blame for what happens?

5) Should bartenders be legally responsible if a customer is allowed to drink too much and gets into an accident and kills

or injures another driver or a pedestrian? Why or why not?

6) Should a host be legally responsible if he or she allows a guest to drink too much and the guest injures someone driving home?

When groups have completed the task, have them present their solutions and open the floor for class discussion. You may find that the specific issues bloom into a more global issue of whether we have a responsibility in general to other people who engage in self-destructive behavior or behavior that can endanger others. This value clarification is very important and useful. However, you can improve the quality of the discussion if you require your students to return to specific situations in which a person must choose to exercise or not exercise responsibility for someone else's behavior so that the debate does not dwell too long on simple generalities.

SAMPLE SCENARIOS:

1) You are 18 years old. Your best friend is 17 and wants you buy a case of beer for his 15-year old younger brother who plans to go drinking in the park with some friends. Will you buy it? Why or why not?

2) You are 19 and your younger sister (16) has asked you to buy a bottle of champagne for her so she can celebrate her boyfriend's birthday. Will you buy it? Why or why not?

3) A 22-year old man is accused of having illegally bought a six pack of beer for a 13-year old boy who had asked him to do it as a favor. The boy got drunk and went swimming at midnight and drowned. The man was a friend of the boy's father and felt he was just doing the kid a favor. You are the judge in the case. What do you decide?

4) Your 17-year old sister has a date with her boyfriend. You just let him in the door, and he has obviously drunk since he knocked over a lamp trying to sit down and cannot speak very clearly. You go upstairs and tell your sister he is drunk, and she tells you to mind your own business. You know they are going in his car to a party on the other side of town. Your parents are next door with friends. What, if anything, would you do? Why? What, if anything <u>should</u> you do? Why?

5. You are the host of a party for several friends after a football game. You have served beer and whiskey. It is the end of the evening and Susan and Steve are about to drive home.

You do not know how much they have had to drink but Susan seems a little unsteady. They live about four miles away. Steve comes up to you and says "I do not think Susan can drive us home tonight. And I cannot drive because I do not have my license yet and Susan's Dad would be furious if he knew anyone besides Susan drove his car. What should we do?" What do you say? What, if anything, should you say? Why?

6) Your best friend is pretty drunk and is ready to drive his girl home. You feel he is in no condition to drive and even if he doesn't hurt himself, his girl, or someone else, he's liable to get arrested and lose his license. But you know you're going to have a tough time convincing him not to drive when he's with his girl. She'd like him not to drive but is afraid to say so. In addition, he has no money to take a taxi and there are no buses around this neighborhood.

7) You are with your girlfriend at a party and have had quite a bit to drink, but you're not about to admit to her you're too drunk to drive her home--that you can't hold your liquor. Besides, she lives only four miles away and the roads should be pretty empty at 2:00 a.m.

Week C - Day 2

Activity 13

Drinking and Driving Dilemmas

Focus	Method	Time	Capsule Description
Drinking and driving	Story Completion/ Discussion	1 period	Students complete a story involving drinking and driving and discuss whether and how they can tell if someone is too impaired to drive safely.

Have your students write endings to the story provided at the end of the activity. Then break the class into small groups and instruct the groups to read the completions written by other members of the group. Instruct the groups to try to agree on how people can tell if someone has had too much to drink to drive safely.

When the groups have completed their work, have a reporter from each group explain its conclusions to the class and list its signs of impairment on the blackboard. For example:

* sleepiness, yawniness
* slurred speech
* unstable walk
* unusual clumsiness
* silly behavior
* boasting
* violence, more aggressiveness than usual
* more sexual agressiveness

Conclude the activity by pointing out 3 major problems involved in identifying people who are too impaired to drive:

1) Many drinkers who are impaired <u>seem</u> relatively sober to others in terms of how they walk, talk or even drive. Many people claim to drive "better after drinking than when sober because I am extra careful". However, while such drinkers may have learned how to compensate for <u>some</u> of alcohol's effects, an emergency situation such as a flat tire or pedestrian suddenly appearing would leave them unable to react quickly.

2) The <u>more</u> alcohol people drink, the <u>less</u> capable they are of <u>judging</u> whether they themselves are too drunk to drive. Many people who have had several drinks really believe and <u>feel</u> they are perfectly capable of driving safely. A solution to this problem is

to accept the opinion of a trusted friend on whether they are too drunk to drive or have someone else keep track of how many ounces of alcohol they have had.

3) A driver's underlying attitudes toward driving can become unexpectedly more pronounced after drinking too much. Some drivers become more cautious, others more reckless.

STORY BEGINNING

This is the beginning of the story. Write how it ends. There is no "right" answer. There are a lot of ways it could end. Be as creative as you like.

The party had been going full blast for over four hours. Everyone had been having a good time--talking, joking. A lot of people had been drinking the fantastic rum punch, but there was also beer and hard liquor. Richard and his girlfriend, Susan, and Darroll and his girlfriend, Amy, had come to the party together and spent most of the evening talking to each other.

Richard was having an especially good time. He had been drinking beer all night, one right after the other, it seemed. Susan was getting a little nervous because after the last party they went to, Richard had a little too much to drink. When he drove her home he wandered over the center line and ran through a red light. So Susan had decided to check on Richard during this party to see if he could drive. But it is difficult at a party to have a tood time and also keep track of how much your boyfriend is drinking. But Susan had spotted several clear signs that Richard was not sober enough to drive, and she had talked to

Paula in the ladies' room about Richard. Paula, in fact, agreed to stick up for her if she needed help in persuading Richard not to drive, because Paula had also noticed some signs that Richard should not be driving. About an hour later, Darroll suggested they all go home. But as Richard pulled out the keys to his car, Susan took him aside and said:

WRITE HOW THE STORY ENDS

Week C - Day 3

Activity 14

Drinking, Driving, and the Law

Focus	Method	Time	Capsule Description
Legal Aspects of Drinking and Driving	Small Group Discussions	1 period	Students engage in small group discussions about the legal consequences of drinking and driving.

This activity consists of one initial exercise and several possible follow-up exercises.

Ask your students to divide into groups of four. Give each group one of the following scenarios about people arrested for DUI. Make sure that each scenario goes to at least two groups. Ask each group to discuss the case from the point of view of the judge who will take action (or perhaps not take action) on the case and to reach a consensus on what the action will be. After fifteen minutes or so, ask a group reporter to read the group's case and report on their decision. Each reporter will also give the rationale for the group's decision for comparison and discussion.

1) Marci is a 16-year old cheerleader from a respectable family. During her first home football game, her boyfriend, a senior, kept offering Marci sips of a soft drink to which he had added rum. By the end of the game, Marci was giggly and a little unsteady on her feet but decided to drive her boyfriend to a party in her car. On the way, she was arrested for DUI.

2) Melvin is a middle-aged divorcee. He often has a drink after work and frequently goes bar hopping. Since his own car was in the shop, Melvin had borrowed a car from a buddy. On the way to return the car to its owner, Melvin was arrested for DUI when he drove down the middle of the street. As it turned out, Melvin didn't have a driver's license because it had been suspended earlier in the year.

3) John, a college student, was arrested for DUI following a football game during which his team won the national championship. He had already been arrested earlier in the year on the same charge.

4) Dave, a junior in high school, is well-liked by both students and teachers. He is a passenger in a car in which the driver, a friend, has had a couple of beers. When the friend sees the blue light behind them, he pulls over on the side of the road and changes places with Dave. Dave is arrested for DUI.

As a follow-up to this activity, or as a substitute for it, your students can engage in one of the following exercises:

1) Students interview police officers about how they handle public drunkenness offenses and other offenses such as drunk driving. The scenarios which the students discussed in small groups could form the basis for the discussion. Other questions the students might ask follow.

* What are the laws about drinking and driving?
* In what kinds of situations do you usually find people drinking and driving?
* What kinds of alcohol offenses do juveniles commit?
* How do you handle them?
* What happens to them?
* What are the penalties for illegal drinking and driving?

2) Students evaluate possible solutions to the problem of drinking and driving in their community. Begin the activity by asking students to brainstorm about every idea they think would cut down on drunken driving, no matter how far-fetched the idea might be. Then ask for comments on how many of the ideas might really work, and what would have to be done to put them into operation. Sample ideas might be as follows:

* Publish names of people arrested for DUI in the newspaper.

* Take a person's license away on the first offense.

* Legislate a two-drink limit at every bar.

Week C - Day 4

Team Practice Session

Focus	Method	Time	Capsule Description
Preparation for TGT tournament	Worksheets	1 period	The students work in their TGT teams on specially prepared worksheets in preparation for the TGT tournament.

Divide the class into their TGT teams and let them work the worksheets in these small groups. Instruct the class to discuss each question as a group, coming to a consensus answer for each question. Circulate through the class to check the groups' progress and answer any questions. When all groups are finished with the worksheets, go over them as a class and privide them with correct answers so that they may study if they like for the tournament tomorrow.

TEAM WORKSHEET C

Drinking and Driving

1. True-False: An average drinker who has had four average drinks an hour before driving is 50 times more likely to get in an accident than someone who had nothing to drink.

2. True-False: Thirty percent of all fatal accidents involve someone who was drinking.

3. True-False: On the average 200 people a day are killed in the U.S. in car accidents in which alcohol is involved.

4. True-False: How much a person weighs is the largest factor in determining the amount of alcohol in the blood.

5. True-False: In most states, a person weighing 150 lbs. is presumed to be under the influence of alcohol when he or she has had 4 glasses of beer in two hours.

6. Name two signs that would clue you that a person was too drunk to drive.

7. Name one instance in which an intoxicated person who is driving, even though being extra careful, would not be able to compensate for alcohol's effects.

8. The _____people drink, the _____capable they are of judging whether they are too drunk to drive.

9. What is one way a person can find out objectively if he or she is capable of driving after a night of drinking at a party?

10. True-False: When a person gets drunk and drives, it is human nature that the person will become more cautious than normal.

11. True-False: If a person begins acting strange after having several drinks (becoming different than usual) it would be a good idea to let the person drive him/herself home, because unusual behavior is not a sign of impairment in driving.

12. After how many arrests for DUI in Georgia does a person become a "habitual offender" and lose his/her license?

13. A _____is a machine used to determine a person's BAC level.

14. Underline the correct answer:

    A person may or may not refuse to have his/her breath analyzed and may have a blood test done instead.

15. ____% BAC is the legal definition of intoxication in Georgia.

16. Why is public drunkenness not as serious an offense as driving under the influence?

17. Circle the correct answer:

    A drunk person who is being very careful is more or less likely to see a dog about to dart into the street.

18. If you were a host at a party confronted with a guest who is too drunk to drive home, what are 2 options you would have to get him/her home?

19. Name 1 reason why some people would be reluctant to exercise responsibility for other people who abuse alcohol.

20. True-False: A person should never admit to a girlfriend/boyfriend that he/she cannot drive because of drinking too much--it is more important to be able to "hold your liquor".

21. Name 2 options you would have if your boyfriend/girlfriend got too drunk to drive you home at a party but you had to get home by your curfew at 11:00 p.m.

22. Name 1 reason why a bartender either should or should not be declared legally responsible if a person overdrinks at his/her establishment and later injures someone with a gun.

23. Name 1 reason why a host either should or should not be declared legally responsible if a person overdrinks at his/her party and later injures someone in a car accident.

24. Name one instance in which if you did not take responsibility for someone else who is abusing alcohol, something bad would happen.

25. True-False: Passing on curves and hills and weaving are two ways a drunk person might drive that are different than most sober drivers.

26. True-False: Although teenagers make up less than one quarter of all drivers, they make up almost 45% of accidents by alcohol.

27. A person sixteen years old or younger arrested for DUI would:

    a) be on probation until he/she turned 18

    b) be released to his/her parents

    c) be adjudicated in juvenile court

    d) be suspended from school

ANSWERS TO TEAM WORKSHEET C

1. False
2. False
3. False
4. False
5. True
6. Example answers: slurred speech, sleepiness, slower movements, clumsniness, excessive talking, lack of concentration on the topic of conversation, silly behavior
7. Possible answers: when confronted by a sudden unexpected happening such as a car pulling out, a sharp curve, children running into the street; not seeing obstacles soon enough such as pedestrians, animals.
8. more, less
9. Example answers: ask a friend, have someone else keep track of the number of drinks she/he has had.
10. False
11. False
12. 3
13. breathalyzer
14. may
15. .10
16. It does not involve a moving vehicle and a person who is driving when drunk could injure someone else easier than a person who is drunk in a public place but is not driving.
17. less likely
18. Example answers: call a taxi, have him/her go with someone else capable of driving, drive him/her home yourself after all other guests had left, call his/her parents to come and get him/her.
19. Example answers: not wanting to get involved, afraid of other person's reaction
20. False

21. Example answers:

    get someone else to drive you home, ride a bus, call a taxi call your parents, ask the host to drive you home

22. Example answers:

    Should: he/she knows if the person is getting drunk when selling them liquor and can prevent their drunkenness

    Should not: a bar is established for profit, not to monitor others' behavior.

23. Example answers:

    Should: the host is responsible for the party and should stop others from overdrinking or find them other ways home

    Should not: the host cannot force someone not to drink, he/she can only not invite the excessive drinker to another party

24. Example answers:

    an angry drunk person with a gun, a drunk person boasting he/she will race anyone in a drag race, a drunk person about to hit another person, an intoxicated person trying to force another person to ride in a car with him/her

25. True

26. True

27. c

Week C - Day 5

Tournament

Focus	Method	Time	Capsule Description
Summarizing, integrating week's activities	Game	1 period	Students, in their TGT teams, compete for points by correctly answering questions based on the week's activities.

Divide the class into the tournament tables. Go over the rules of play again and the "GIGS" if the students need reminding. Pass out Game C, Game C Answer Sheet and Game Score Sheet to each team. Answer any questions. At the end of the tournament, fill out the Team Summary Sheet, Tournament Score Sheet, and publicize the results. Then devise new tournament tables according to the "bumping" procedure.

GAME C

Drinking and Driving

In most states, a 150 lb. person is presumed to be under the influence of alcohol when he/she has had how many beers in two hours? C-1	True-False: On the average, 70 people in the U.S. are killed each day in car accidents in which alcohol is involved. C-5
What percentage of fatal traffic accidents involve someone who was drinking? C-2	True-False: The more people drink the less capable they are of judging whether they should drive or not. C-6
How much more likely is it that the average drinker who has four drinks an hour before driving will get into a car accident than someone who has had nothing to drink? C-3	Name one way a person can objectively find out if he/she is capable of driving after a party. C-7
True-False: A person's drinking experience is the largest factor in determining the amount of alcohol in the blood. C-4	Name two signs that would clue you that a person was too drunk to drive. C-8

True-False: Teenagers are more often involved in car crashes than adults because they have less driving experience and expertise. C-9	The Golden Rule in determining whether it is safe to drive is: Do not drive if you have had _____ drinks or more within an hour. (1 drink = 1 ounce of alcohol) C-13
Would an intoxicated person likely be able to avoid hitting a pedestrian who stepped in the road suddenly? Why or why not? C-10	A person is termed an habitual offender in Georgia when he/she has had ____ DUI arrests, and will lose the privilege of driving. C-14
True-False: After drinking heavily some drivers become more cautious and others become more reckless. C-11	True-False: Public drunkenness is not considered as serious a crime in Georgia as DUI because people usually don't drink in public places as often as they drive after drinking. C-15
Can you always tell how intoxicated a person is by watching their behavior (how they walk, talk)? Why or why not? C-12	Name two options you would have as a host of a party, for getting an intoxicated guest home. C-16

How would you get home from a party if your date was too drunk to drive? C-17	True-False: Lack of concentration on conversation and unusual silence are two signs of impairment that a person should not drive. C-21
Name one reason why a host should be legally responsible if a person overdrinks at his/her party and later injures someone in a car crash. C-18	Name one reason why a person should take responsibility for helping an abusive drinker. C-22
Name one reason why a bartender should not be held legally responsible if a person overdrinks at his/her bar and later injures someone with a gun. C-19	Name one reason why you should try to help someone who wanted to drive home after having a fight with her parents and later drinking 4 beers in 1½ hours. C-23
True-False: It is more important to be able to "hold your liquor" than to admit to a friend you are too drunk to drive home. C-20	If a person does not want to have his/her breath examined in a breathalyzer, is there another option available without being arrested for DUI? If so, what is it? C-24

What is the legal definition of intoxication in Georgia? C-25	
What happens to a person, aged 15, if that person is arrrested for DUI? C-26	
True-False: Teenagers account for a disproportionate number of accidents involving alcohol. C-27	

GAME C - Answer Sheet

Drinking and Driving

1. 2

2. 50%

3. 25 times

4. False

5. True

6. True

7. Example answers:

   slurred speech, sleepiness, slower movements, clumsiness, excessive talking, lack of concentration on the topic of conversation, silly behavior

9. True

10. No - because the person would not be able to react quickly and stop

11. True

12. No - some people learn to compensate for drinking effects and you cannot tell by watching them how intoxicated they are.

13. 2

14. 3

15. False

16. Examples: call a taxi, have him/her go with someone else capable of driving, drive him/her home yourself after all other guests had left, call his/her parents to come and get him/her

17. Example answers: get someone else to drive you home, ride a bus, call a taxi, call your parents, ask the host to drive you home

18. Example answers:

    Should: the host is responsible for the party and should stop others from overdrinking or find them other ways home

    Should not: the host cannot force someone not to drink, he/she can only not invite the excessive drinker to another party

19. Example answers:

    Should: he/she knows if the person is getting drunk when selling them liquor and can prevent their drunkenness.

    Should not: a bar is established for profit, not to monitor others' behavior.

20. False

21. True

22. To keep the person from hurting him/herself or others while drunk

23. She would be legally intoxicated, her reactions would not be quick enough, if she was still angry she would not be attentive while driving.

24. Yes, take a blood test at the local hospital.

25. .10% BAC

26. His/her case will go to juvenile court

27. True

REFERENCE NOTES

1. The inventories are available upon request from the author.

2. A comprehensive manual entitled Alcohol Education by the Teams-Games-Tournaments Method contains all of the teaching procedures, lectures, and related material needed to implement the method. It is available upon request from the author.

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