

INTERACTIONAL INSTRUCTION IN
THE TEACHING OF DRIVER EDUCATION

by

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A Report Prepared by the Virginia Highway Research Council
Under the Sponsorship of the Highway Safety Division of Virginia

(The opinions, findings, and conclusions expressed in this report are those of the
author and not necessarily those of the sponsoring agencies.)

Virginia Highway Research Council
(A Cooperative Organization Sponsored Jointly by the Virginia
Department of Highways and the University of Virginia)

Charlottesville, Virginia

September 1972
VHRC 72-R6

ACKNOWLEDGEMENTS

The writer expresses appreciation to the following individuals and organizations for their time, effort, and cooperation during the initiation and experimental phases of the study.

The Albemarle County, Virginia public school system, Clarence S. McClure, superintendent, made available its physical facilities and student population. William H. Raines, coordinator for driver education and physical education, served as the liaison between the researcher and the county department of education, the high school, and the driver education teachers. Ben F. Hurt, principal; Ralph A. Harrison, director of driver education facilities; and Leonard J. Hrica and Frances L. Hensley, the classroom instructors, participated in the program.

Also, acknowledged is the cooperation of the students, who through their participation made the project possible. And finally, thanks are given to Harold R. Sherry of the Research Council, who performed the necessary programming and ran the statistical tests of significance.

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ABSTRACT

This project was designed to test both the short-term (through the use of standardized tests) and long-term (by an analysis of subsequent driving records) effects of small group interaction sessions on the driving attitudes and behavior of high school students learning to drive.

Two classes of high school students were randomly selected. Each was split and matched according to school grades, ability test scores, achievement test scores, social status, and age. This procedure produced two experimental and two control groups, one each was female and one each male. The McGuire Safe Driver Scale, the Henderson & Cole Cartoon Reaction Scale, and a Behavior Grid were administered to all four groups in both pre-tests and post-tests.

The short term-results, control vs. experimental group, and pre- vs. post-test results, did not indicate that the experimental approach to driver education was superior to the traditional method of teaching driver education. The results of t tests showed no statistically significant differences in the scores of the experimental and the control groups on the McGuire and the Cartoon Scales. There also were no significant differences between the pre- and post-test scores on these scales.

A correlation study was performed between the McGuire and Cartoon Scales for each of the samples included in the study. It should be noted that there does not appear to be a significant positive correlation between the scores from these two tests.

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INTRODUCTION

Federal and state highway safety officials have espoused high school driver education as one cure for the accidents and fatalities among the nation's drivers. The Highway Safety Act of 1966 has elevated these feelings into a federal mandate.

Educational experiences, beyond those necessary for the safe manipulation of a vehicle in traffic, are necessary to aid drivers to successfully cope with modern highways, other drivers, and accident situations. Investigators have studied the role of attitudes, group methods, and driver education as applied to the operation of a motor vehicle, because each plays a part in total driving behavior.

"Good" drivers are deemed to have a socially acceptable set of attitudes while "bad" drivers are considered to be deviant from this norm. "There is agreement among researchers about some of the traits that make up good driver attitudes. These traits include a willingness to assume responsibility, a conservative outlook toward driving, a recognition of one's physical limitations and the limitations imposed by natural forces, and a spirit of cooperation." ^{1/}

Social psychologists and sociologists have developed a teaching method known as the group discussion decision technique. This method has been successful in helping students acquire knowledge and attitudes consistent with the goals of driver education programs. "Studies have shown that a systematic attempt to improve attitudes yields a definite shift toward a desirable outcome. This research indicates that [group discussion] techniques are appropriate for the driver education curriculum of high school students." ^{2/}

^{1/} M. K. Strasser, J. R. Eales, and J. E. Aaron, Driver Education (River Forest, Illinois: Laidlaw Brothers, 1969), p. 40.

^{2/} A. R. Lauer, The Psychology of Driving (Springfield, Illinois: Charles C. Thomas, 1960), p. 85.

Highways crashes are sometimes caused by mechanical failures; others are the result of ignorance or lack of skill; others have a physical cause. Experts in traffic safety have concluded that a large number of collisions are psychological in origin. Each driver should be able to recognize the emotional states and mental attitudes that may set in motion a chain of events leading to an automobile accident.^{3/}

New students enrolling in a course of high school driver education usually have one major objective in mind. This objective is to learn little more than how to pass the state driver's test so that they might be able to obtain an operator's license. A feeling of security and expertise seems to come over these individuals once they have succeeded in their objective of securing a license.

The problem that arises is how to influence the behavior of an individual before and after becoming a licensed vehicle operator. Each driver is a complex package of mental, emotional, and physical components shaped by his environment, and thus conditioned to react to a given situation in a particular way. He brings to all driving situations the attitudes formed by his total experience in the home, in the church, and in his contacts with society.

Research in the behavioral sciences provides evidence that difficulties in personal adjustment often influence driving behavior. Even temporary conditions such as worry, fatigue, anger, or joy can determine the way one behaves in a given situation.

An attitude is a state of mind which is acquired from experience and learning and which influences what a person thinks and does. Attitudes involve more than just beliefs, they involve the feelings of liking and disliking, and these preferential feelings may become very intense. A person can have attitudes only with respect

^{3/} Strasser, Eales, and Aaron, op. cit., p. 37.

to things he has perceived. If a person has an experience several times and each time has the same general reaction he will eventually develop an attitude toward this experience.^{4/}

"Attitudes give continuity to personality because experiences are assimilated into patterns They give meaning to varied perceptions and activities by relating them to one another. Attitudes satisfy personal needs, especially those of a social nature."^{5/}

Previous research in behavior modification has shown that the ideas students develop are more meaningful and remembered longer than the ideas handed down to them or imposed upon them. Although the group interaction method of instruction required a greater expenditure of time than that required in a conventional driver education curriculum unit, if the learning results are more significant, the additional time represents a small price to pay.

PURPOSE

Although personality and attitudes are consistently thought to be factors which play a primary role in the operation of a motor vehicle, too little emphasis has been given these aspects in the conventional high school driver education program. Throughout the United States the training of drivers has not been pursued with any systematic procedure which incorporates these two factors.

The purpose of this study was to determine the influence of group methods in producing measurable attitudinal change in high school students learning to drive. The project drew upon readings, films, projects, and role playing exercises to help the student relate his own experiences to a socially acceptable framework of concepts and ideas. By participating in the group discussion decision process the student sought an explanation for his behavior and hopefully learned to react in a pattern consistent with the expectations of society.

This study was directed toward the creation of a driver education program for high school students that would reduce the necessity of retraining. It was envisioned that this course of study would inculcate into the graduate's pattern of behavior a set of attitudes that would be the basis for socially acceptable driving behavior.

^{4/} C. J. Murphy, Traffic Safety Education for Schools (Washington, D. C. : A. A. A. , 1965), p. 4.

^{5/} J. E. Aaron and M. K. Strasser, Driver and Traffic Safety Education (New York: The Macmillan Company, 1965), p. 66.

METHODOLOGY

In the experimental curriculum, the primary technique used for the modification of old and the formation of new attitudes was the small group discussion. Although the processes and procedures for Interactional Instruction were not novel, the combination of such separate and diverse teaching methods into a single curriculum unit was an approach not commonly used in high school courses of driver education.

The project was considered to be a pilot study and, therefore, the number of subjects were few. Two randomly selected classes from a local public high school made up the pool of subjects. Each class was split and matched as closely as possible according to age, school grades, ability test scores, achievement test scores, and social status. Prior to the interactional part of the experimental driver education program all members of the selected classes completed a biographical data sheet (see Appendix A). This information, as well as summaries of each student's school record (see Appendix B), was used to match the control and experimental group members. It was not feasible to have classes mixed by sex because of the manner in which the physical education classes were arranged.

Each of the four groups completed as part of a pre-test battery, a self evaluation grid (see Appendix C), the McGuire Safe Driver Scale, and the Cartoon Reaction Scale. At the completion of the classroom phase of the program these same tests were again administered to each of the participants.

The McGuire Safe Driver Scale is a paper and pencil test for selecting safe motor vehicle operators. It is based on the assumption that the most important factors in motor vehicle accidents are the attitudes and personality patterns of the driver. The Cartoon Reaction Scale was developed by Theodore Kule and Harold L. Henderson to test the hypothesis that problem and nonproblem drivers would respond differently, and to a significant degree, on a disguised projective test of humor utilizing cartoon driving situations.

A conflict between a self-gratifying behavior and socially responsible behavior is presumed to exist on the part of drivers of motor vehicles. By modifying and adopting the management grid,^{6/} participating students rated their own attitudes of driving behavior before and after the experimental program. This pre-test—post-test self-rating technique was used to indicate the student's own feelings of progress by comparing before and after grid positions.

Prior to the first day of group interaction all students met the instructor when the items on the pre-testing schedule were administered. During the first week of class the emphasis was on the individual. The goals were to foster greater insight into self, an increased sensitivity to the feelings of others, a better under-

^{6/} R. R. Blake and J. S. Mouton, The Managerial Grid (Houston: Gulf Publishing Company, 1964).

standing of the behavior of others, and the effects of these factors on the participants. Under these conditions the members tried out behavior that represented new ways of behaving. Experimentation was sanctioned and rewarded. One relatively safe way to experiment was to mimic the leader's behavior.

Early in the group experience the members realized that they must become more open with feelings that typically they had learned to hide. Following this realization, group participants established group norms which sanctioned the expression of these feelings. Group norms that sanction silence and thought were also developed so that members did not feel coerced to say something before they had thought it through, out of fear that they would not have an opportunity to say something later. It also was necessary to create an emotional climate where new values could be learned and practiced in a protected atmosphere. The small group process satisfied these requirements.

It is necessary to keep in mind that this course was designed to develop a positive attitude toward driving, drivers, and the elements related to the driving task. By providing opportunities for class discussion and pupil interaction, in contrast to the strict authoritarian or lecture approach, the goal was to accomplish the following objectives.

1. Establish an attitude of responsibility for traffic safety.
2. Form an awareness that other drivers have similar traffic problems.
3. Create an appreciation of and the reason for signs, signals, etc. in the control of traffic.
4. Build an understanding that crashes can be prevented.
5. Develop an awareness that a crash is more probable if the driver violates the law.
6. Create an awareness that natural laws cannot be broken without personal injury or property damage.
7. Develop an acceptance of responsibility for driving behavior in the absence of control devices.
8. Demonstrate that a driver's personal problems may be manifested in the hostile manner in which he operates a motor vehicle.
9. Create a feeling that traffic safety is dependent upon every highway user accepting his responsibility to drive safely.

The experimental program was initially designed to be a full semester course, but the program did not materialize as envisioned because driver education was taught in conjunction with the physical education classes. This arrangement prevented the instructor from spending the time proposed in the original experimental design for twenty classes related solely to attitudes. The modified program inter-related subject matter with attitude training.

An outline of the course follows.

A. Vehicle Operator

1. Physical Characteristics
Chapters 2, 3, 4, and 6 of the text.^{7/}
 - a. Importance of physical limitations
 - b. Physical disabilities
 - c. Vision and hearing
 - d. Carbon monoxide
 - e. Effects of alcohol and drugs
 - f. Reaction times
2. Natural Laws
Chapters 5 and 6 of the text.
 - a. Friction
 - b. Gravity
 - c. Energy
 - d. Inertia
 - e. Centrifugal force
 - f. Stopping distances
 - g. Hydroplaning
 - h. Force of impact
3. Traffic Laws
Chapters 7 and 8 of the text and the Virginia Drivers Manual.
 - a. Obtaining a license
 - b. Speed

^{7/} American Automobile Association, Sportsmanlike Driving, (New York: McGraw-Hill Book Company, 1970).

- c. Signs, signals, and markings
- d. Equipment regulations
- e. Vehicle registration
- f. Financial responsibility
- g. Accident reports
- h. Traffic courts

B. The Automobile

1. Maintenance

Chapter 16 of the text.

- a. The owner's manual
- b. Routine procedures
- c. Special procedures
- d. Tire care
- e. Roadside emergencies

2. Economics

Chapter 16 of the text.

- a. Mechanical condition
- b. Gasoline consumption
- c. Tire wear
- d. Quick starts and stops
- e. Hitting road objects
- f. Speed

C. Pedestrians and Cyclists

Chapter 20 of the text.

1. Motorcycles

- a. Laws
- b. Safe practices
- c. Mechanical aspects

2. Pedestrians

- a. Laws affecting
- b. Safe practices
- c. Age and expectations

In addition to class discussions on topics relating to vehicle operation and safety generated by newspaper accounts of accidents and textbook material, the groups also had to read articles for class discussion, design and carry out individual and group projects, and participate in role playing exercises. Samples of these activities are listed below.

A. Readings

1. Part III, Managerial Psychology, by H. J. Leavitt
Summaries of:
 - a. Communication in Groups, pp. 242-251
 - b. Stages of Group Pressure, pp. 273-282
 - c. Conflict and Competition Among Groups, pp. 285-288
2. Organizational Behavior and Administration by P. R. Lawrence and J. A. Seiler
 - a. Personality Formation — the Determinants, p. 273 and ff.

B. Role Playing Exercises

1. Two drivers who were involved in an accident talking to the investigating officer.
2. Policeman stopping a violator.
3. Mock traffic court trial of an arrested drunken driver.
4. Teenager and parent discussing the use of the family car.

C. Independent Written Projects

1. Spot map of all county fatalities, personal injuries, and property damage accidents.
2. Photographic display of hazardous locations.
3. Observations of traffic violations and a chart of approximate age, sex of offender, and nature of offense.
4. Notebook of newspaper reports, with pictures, of accidents. Description of cause and preventive measures that could have been taken.

D. Independent Practical Projects

1. Met weekends at a service station and changed automobile tires.
2. Went to the parking lot and raised a hood of a car and pointed out and discussed the engine compartment.

E. Guest Speakers

1. How to purchase an automobile.
2. Automobile insurance.
3. Drugs, alcohol, and driving.

The author realizes that this is not an all inclusive list of items that should, or even could, be taught in a course of driver education. These are the items covered in the experimental program and were selected because of their interest to students and applicability to attitude formation.

It is also noted that these students spent some time, approximately three weeks, in class with their regularly assigned teachers, as well as time on the driving range and on the road in a car with an instructor.

EVALUATION

After a student has completed the interactional instruction driver education and traffic safety course of study, three results are possible:

1. No change — the student has not appreciably altered his behavior in either direction.
2. Positive (from the societal point of view) change which is signified by:
 - a. An increased awareness of the cause and prevention of traffic violations and crashes, and
 - b. A development of the positive attitudes of alertness, consideration for others, orderliness, etc.

3. Negative change, which is signified by:

- a. Stagnation of action,
- b. complacency, and
- c. solidification of previous poor mental and emotional states.

A statistical treatment of the test data was performed in an attempt to determine the direction and magnitude of attitude change elicited in program participants.

Generally speaking, a hypothesis is simply a statement of an expected outcome. Any statistical test of a hypothesis is essentially a test of the null hypothesis, since it only tells the probability that a difference occurred by chance. In any experiment, the experimental group is expected to perform differently from the control group, e. g. , to learn more or less efficiently, reveal personality or attitude differences, etc.

In rejecting a null hypothesis, we assert that the obtained difference is significant, meaning that it indicates the existence of a difference between the populations which is greater than zero. In accepting a null hypothesis we concede that there is no reason to suspect, as far as the data are concerned, that the population means for each variable differ at all.

Upon conclusion of the experimental phase of the group discussion driver education program a null hypothesis was tested. This method of instruction was compared with the program as taught in a conventional classroom situation to determine if there were significant differences in the performance of control and experimental group members on several standardized tests.

The null hypothesis tested is:

At the termination of the program there will be no significant difference in the scores of students who participate in Interactional Instruction and students who take the regular driver education curriculum, as evidenced by their performance on a battery of tests.

This short-term determination of effectiveness will be expanded so that long-term effectiveness can be studied. Evaluation will be continued for a minimum period of two years. One year from course completion the follow-up procedure will be expanded. The Division of Motor Vehicles will be requested to supply the following information for each member of the experimental and control groups: (1) Arrests, (2) accidents, and (3) convictions. The groups will be statistically compared to determine if a significant difference existed in their actual automobile and road behavior as shown by their driving records.

The two year follow-up is similar in nature to that used at the end of the first year: A comparability of the groups in the areas of (1) attitudes, (2) arrests, (3) accidents, and (4) convictions will be carried out.

The following hypothesis will be tested.

There will be no significant difference in the driving records, i.e., accidents, arrests, and convictions, of the experimental and control groups one and two years after the end of training.

A statistical analysis was performed so that it might be determined if the experimental approach to driver education was superior to the conventional method that is being used in high school. Each student who participated in the study was given, as part of a pre-test and post-test battery, a McGuire SD Scale, a Cartoon Reaction Scale, and a self-evaluation grid. The self-evaluation grid results are excluded from the statistical analysis, because no satisfactory way was found to quantify the results, or to correlate the results with those of the other two tests.

Only students who took all of the tests were included in the statistical analysis. This was done to make the results as consistent as possible. Two types of operations were performed. The first, using the standard t test, determines whether the test scores from two selected samples are significantly different. The second uses the coefficient of correlation to measure the relation between the McGuire and the Cartoon Scales. This statistical procedure permits the prediction of one test score on the basis of the other. In interpreting the tables the following terms are used:

t VALUE is the appropriate value for the t test statistic based on the values for the two samples shown.

DF is the number of "degrees of freedom" for the test indicated and is defined as two less than the sum of the sample sizes.

RESULT is the conclusion based on the t value and the number of degrees of freedom at a 0.05 level of confidence. A 0.05 level of confidence means that the probability that a difference in scores occurred by chance is 5%, or, that the indicated conclusion will be correct 95% of the time.

Table 1 compares the scores received by the students who took the pre-test and post-test scales. In all cases, any differences in the scores are statistically insignificant. It appears that neither method of instruction was effective in improving the attitudes of students in the short period of time between the two tests.

TABLE 1
COMPARISON OF PRE- VS. POST-TEST SCORES

<u>Class</u>	<u>Test</u>	<u>t Value</u>	<u>DF</u>	<u>Result</u>
1 Experimental	Cartoon	.906	26	I
1 Control	Cartoon	1.048	26	I
2 Experimental	Cartoon	1.092	28	I
2 Control	Cartoon	.302	32	I
1 Experimental	McGuire	.429	26	I
1 Control	McGuire	.773	26	I
2 Experimental	McGuire	.720	28	I
2 Control	McGuire	.082	32	I

An alternate interpretation is possible. It is feasible that attitudes could have changed, but that the standardized tests used were not the correct ones for measuring this change. Remarks made by several students lend some credence to this idea. Students felt that having seen the cartoons when they took the pre-test, the cartoons were not as funny the second time. The Cartoon Scale was so designed that "good" attitudes correlate with high "funny" scores. The depressed scores, or lack of improvement in scores, might be the result of the test rather than the program.

The pre-test results of Table 2 validate the efforts of splitting and matching each sample into an experimental and a control group. Since all differences are statistically insignificant, the experimental and control groups were properly matched in terms of attitude toward the driving task prior to participation in the driver education program.

TABLE 2
COMPARISON OF EXPERIMENTAL VS. CONTROL

PRE-TEST				
<u>Class</u>	<u>Test</u>	<u>t Value</u>	<u>DF</u>	<u>Result</u>
1	Cartoon	.236	26	I
2	Cartoon	.902	30	I
1	McGuire	.226	26	I
2	McGuire	1.485	30	I
POST-TEST				
1	Cartoon	.033	26	I
2	Cartoon	.650	30	I
1	McGuire	.033	26	I
2	McGuire	.492	30	I

The major intent of the study is to measure the effect of the experimental approach to driver education. The post-test results are not significantly different for either of the two teaching approaches. The two groups were essentially similar before the onset of instruction. After the two different methods of instruction they remained alike. As measured by the test results it cannot be said that one method is superior to the other.

Comparisons between Class 1 students (males) and Class 2 students (female) without regard to the experimental and control divisions were carried out. These results (see Table 3) indicate that there are no differences in scores on the Cartoon Scale by the two groups. The results also support the statement that "females score

higher than males on the McGuire Scale." ^{8/} The author of the McGuire Scale points out that females tend to score about five points higher than males.

TABLE 3
COMPARISON OF CLASS 1 VS. CLASS 2

<u>Test</u>	<u>t Value</u>	<u>DF</u>	<u>Result</u>
Cartoon Pre-	1.174	58	I
Cartoon Post-	.954	58	I
McGuire Pre-	1.940	58	I
McGuire Post-	2.620	58	S

Table 4 shows the coefficient of correlation between the Cartoon Reaction Scale and the McGuire Safe Driver Scale for each of the groups in the study. The correlations are not sufficiently high, in either the positive or negative direction, to allow a prediction, with a high degree of correctness, of one score based on a score obtained on the other test.

Even though scores on the self-rating grid did not lend themselves to a statistical analysis, these scores were viewed in a nonstatistical manner. A change in grid position to a position which indicates a more favorable, socially responsible position was the desired outcome. (See Table 5.)

The Class 1 (males) experimental and control groups showed no measurable overall change. Class 2 (females) showed a very slight positive change, but the change does not appear to be mathematically significant. The students in all four groups did not indicate, through a change in their self-ratings, that they felt that an improvement in their attitude toward driving resulted from participating in a driver education program.

^{8/} F. L. McGuire, A Brief Outline of Techniques in Driver Selection (Beverly Hills, California: Western Psychological Services, 1962), p. 23.

TABLE 4

CARTOON REACTION SCALE VS. MCGUIRE SD SCALE

<u>Class</u>	<u>Correlation Coefficient</u>
1 Experimental Pre-	.102
1 Experimental Post-	-.091
1 Control Pre-	.289
1 Control Post-	.203
2 Experimental Pre-	.021
2 Experimental Post-	-.170
2 Control Pre-	-.160
2 Control Post-	-.058

TABLE 5

CHANGE IN GRID POSITIONS

<u>Class</u>	<u>X</u>	<u>+</u>	<u>0</u>	<u>-</u>
1 Experimental	1	5	5	4
1 Control	4	4	5	4
2 Experimental	6	4	6	2
2 Control	4	6	6	4

X = did not take both pre- and post-tests

+ = changed to a positive position

0 = no change

- = changed to a negative position

The short-term results of the experimental approach to driver education lead to the conclusion that there is no appreciable difference in attitude modification from the conventional approach. Further, based on pre- and post-test results, one can conclude that any approach to driver education does not prove effective in improving attitudes. Those students who enter a program with a good attitude complete the course with a good attitude, and those students who begin with a bad attitude end with the same attitude. The follow-up studies will be of special interest to see if this situation maintains itself over a period of years.

Although this study appears to show that driver education, as well as the experimental approach, does not have the desired effect, there are several possible defects in the methodology, as noted below.

- (1) The unchanged post-test Cartoon Reaction scores could be the result of the fact that a joke isn't as funny the second time. The test requires the student to evaluate, on a Likert type scale, the humor in driving-related cartoons.
- (2) It is also possible that any form of driver education is beneficial, and that the experimental approach is better than the control approach, but that the two tests used are not capable of measuring the improvement resulting from instruction. This view is reinforced by the fact that there is no strong positive correlation between the tests.

RECOMMENDATIONS

In light of the fact that this program was a pilot study and used small numbers of students, that changes were made in the originally proposed experimental program, and that all of the proposed pre- and post-testing was not carried out because one of the publishers did not ship the tests in time for use, the author recommends that the study be continued for a second session.

In the second trial of the study several modifications are proposed:

- (1) Increased emphasis on attitudes and decreased emphasis on text materials.
- (2) Deletion of self-rating grid because of difficulty in converting data for statistical analysis.
- (3) Addition of the Driver Attitude Survey by D. H. Schuster and J. P. Guilford to the test battery.

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APPENDICES A - C

APPENDIX A

BIOGRAPHICAL DATA SHEET

Please Print

NAME _____ Date _____

Address _____

Place of Birth _____ Height _____ Weight _____

Date of Birth _____ Age _____

Father's Name _____

Address (if different) _____

Circle highest school grade he finished	Grammar School	High School	College
	1 2 3 4 5 6 7 8 9	1 2 3 4	1 2 3 4

Father's Occupation _____

Mother's Name _____

Address (if different) _____

Highest grade she finished	Grammar School	High School	College
	1 2 3 4 5 6 7 8 9	1 2 3 4	1 2 3 4

Mother's Occupation _____

Name of Brothers

1. _____ Age _____ School Grade _____

2. _____ Age _____ School Grade _____

3. _____ Age _____ School Grade _____

4. _____ Age _____ School Grade _____

Name of Sisters

1. _____ Age _____ School Grade _____

2. _____ Age _____ School Grade _____

3. _____ Age _____ School Grade _____

4. _____ Age _____ School Grade _____

Name of other people who live with you

1. _____ Relationship _____

2. _____ Relationship _____

3. _____ Relationship _____

4. _____ Relationship _____

Additional Information

APPENDIX B

SUMMARY OF SCHOOL RECORD

Grade _____			Grade _____		
Subject	Semester Grade	Final Grade	Subject	Semester Grade	Final Grade
1.			1.		
2.			2.		
3.			3.		
4.			4.		
5.			5.		
6.			6.		

Grade _____			Grade _____		
Subject	Semester Grade	Final Grade	Subject	Semester Grade	Final Grade
1.			1.		
2.			2.		
3.			3.		
4.			4.		
5.			5.		
6.			6.		

Ability Test Scores

Name of Test

V N T

- 1.
- 2.
- 3.

Achievement Test Scores

Name of Test

- 1.
- 2.
- 3.
- 4.

Extracurricular Activities

Name

- 1.
- 2.
- 3.
- 4.

Additional Information

APPENDIX C

SELF EVALUATION GRID

(An adaption of the Managerial Grid by Robert R. Blake and Jane S. Mouton)

The two variables of the grid are:

- (1) Self gratifying driving behavior, which is equivalent to a concern for one's self, and
- (2) socially responsible behavior, which is equivalent to a concern for the rights of others.

These two variables, and some of their possible combinations, are shown in Figure 1. The horizontal axis indicates concern for one's self and the vertical axis indicates a concern for others. Each is expressed on a scale ranging from 1, which represents a minimal concern, to 9, which represents a maximal concern.

Referring to Figure 1, the lower left hand corner depicts a 1, 1 individual who exhibits both a minimal concern for himself and for others. The upper left hand corner is an example of a maximum concern for others but a minimal concern for himself. The 9, 1 individual, represented on the graph in the lower right corner, portrays a maximum concern for self and a minimum concern for others. The 9, 9 individual, as shown in the upper right corner, represents one who has both a maximum interest in himself and in his fellow man. And finally, the 5, 5 person in the center of the diagram is a middle of the road individual in both areas of concern.

Figure 2 is a blank grid form for self rating by the students. By referring to the instructions and the diagram in Figure 1, they are able to have actual ratings by which they are able to gauge performance standards.

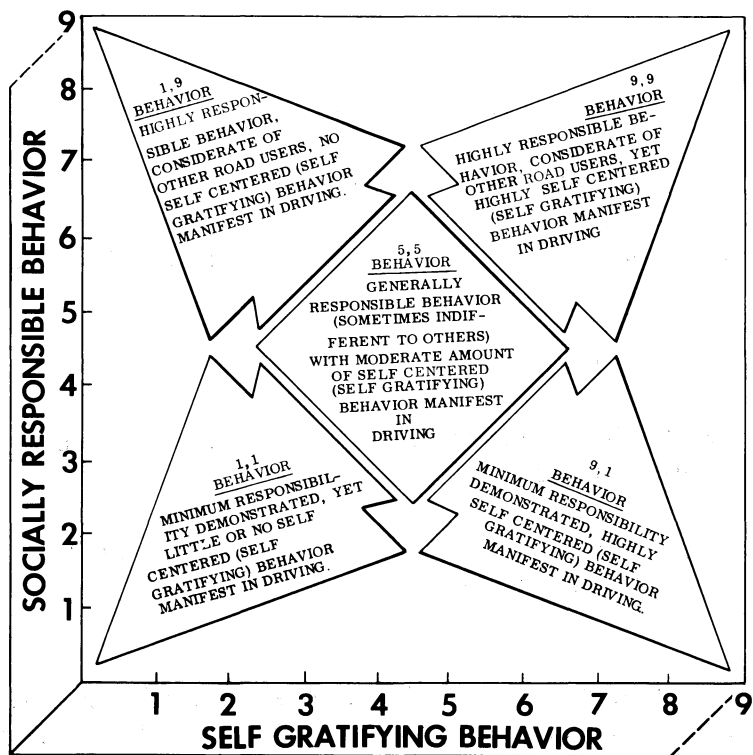


Figure 1. Driver behavior grid.

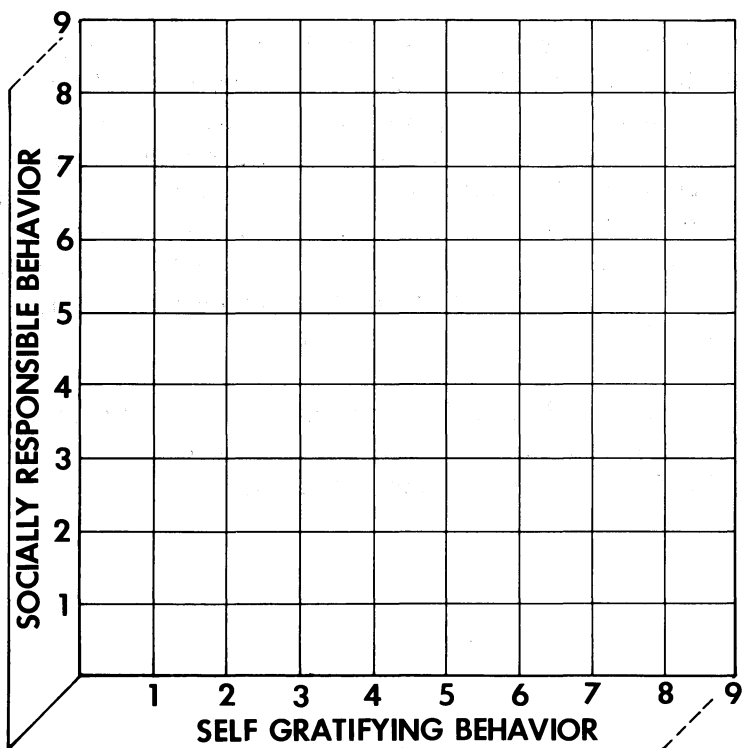


Figure 2. Grid form for self rating.