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ABSTRACT

This paper describes the Human Resources Research Organization's (HumRRO) development of teacher preparation guides for driver education (one for secondary school teachers and the other for commercial instructors) through the use of a process that has been commonly utilized by educational technologists in preparing instructional programs and materials. It is noted that the guides were developed to provide institutions preparing driver educators with a body of information that would enable them to develop programs that could meet the needs of their students and that could be administered within the teacher preparation resources available to them. HumRRO's development of the guides is described under the headings: (1) Analysis of Instructional Requirements (Survey of Teacher Preparation Standards, Analysis of Driver Educator Functions, Curriculum Development, Curriculum Administration); (2) Establishment of Instructional Objectives (The Driver Educator as a Driver, Survey of Driver Educators); (3) Determination of Guide Content (Sources of Information, Organization of Guide Content); (4) Evaluation; and (5) Concluding Statement. A diagrammatic model for development of the guides is included along with three appendixes entitled Components of the Highway Transportation System, Guide for Teacher Preparation in Driver Education Outline, and Sample of Driving Task from Part III: "Passing." (HP)

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# The Development of Guides for Teacher Preparation in Driver Education

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June 1974

Prepared for

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The Human Resources Research Organization (HumRRO) is a non profit corporation established in 1969 to conduct research in the field of training and education. It is a continuation of The George Washington University Human Resources Research Office. HumRRO's general purpose is to improve human performance, particularly in organizational settings, through behavioral social science research, development, and consultation.



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## PREFATORY NOTE

The research described in this paper was performed by the Human Resources Research Organization, under contract with the National Highway Traffic Safety Administration, Department of Transportation (Contract No. FH 11-7602). The paper is based on the final report (FR-DI-73-1) submitted to the sponsor in January 1973. It describes the development of two guides intended for use by universities and commercial (also called, professional) driving schools in preparing driver educators. The guides themselves were submitted separately to the National Highway Traffic Safety Administration under the following titles:

> "Guide for Teacher Preparation in Driver Education: Secondary School Edition," January 1973, printed for the National Highway Traffic Safety Administration, Department of Transportation, DOT-HS-801-132, by the U.S. Government Printing Office, Washington, D.C., July 1974.
>
> "Guide for Teacher Preparation in Driver Education: Driving School Edition," January 1973.

These documents were prepared by the staff of the Safety Research Program of HumRRO Division No. 1 (System Operations), Dr. J. Daniel Lyons, Director. The Principal Investigator for the contract was Dr. A. James McKnight, and Dr. Alan G. Hundt served as Project Director. Other staff members were June S. Cunningham, Jerome Corbino, Jane V. Lee, and Lola Craw.

The HumRRO staff was assisted by an advisory panel consisting of Dr. Richard Bishop, Florida State University; Dr. Alphonse Chapanis, Johns Hopkins University; Paul Halula, North American Professional Driver Education Association; Dr. Francis Kenel, University of Maryland; Richard R. Redinger, Easy Method Driving School; and Warren Rumsfield, North Shore Driving School.

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# THE DEVELOPMENT OF GUIDES FOR TEACHER PREPARATION IN DRIVER EDUCATION

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## PROBLEM

A study of safety manpower requirements conducted in 1968 (Booz, Allen, Hamilton, 1968) found that more than 1,000 new driver education instructors would be needed each year to cope with increased student loads. To meet this increasing need and at the same time to accommodate annual instructor turnover, a considerable expansion of college-level driver education instructor facilities will be necessary. A relatively recent review (Carr, 1970) disclosed that 256 colleges offered credit courses in preparation for driver education. However, only 97 of these colleges provided programs that met the 12 semester-hour standard recommended by the National Commission on Safety Education of the National Education Association (NEA, 1964). Further, only about one-half of the instructors of present driver education courses met the NEA's recommended instructor standards.

Concern over the quality of driver education was voiced as far back as 1932 at the White House Conference on Child Health and Protection, while specific recommendations on the subject were proposed some 15 years later by the American Association of School Administrators. The problem is obviously one of long standing.

Since programs offered by institutions of higher learning represent to a great extent the requirements imposed upon the high school driver education instructors by the individual states, the task of upgrading the level of instruction must be addressed to the states. While most states require instructors to have taken a basic driver education course at college level, less than half require completion of an advanced course or completion of a general safety course as recommended by the NEA.

The gradual expansion of driver education in secondary schools is believed by some to be making inroads upon the commercial driving school industry. However, estimates indicate there still are more than 2,000 commercial schools employing some 12,000 instructors (Dunlap and Associates, 1968). The formal educational requirements imposed upon commercial instructors are generally less stringent than those imposed upon instructors within the public school system. While almost all states require some form of certification for driving school instructors, very few states specify any formal educational prerequisites. Dunlap and Associates' survey showed that about a fourth of the commercial instructors have graduated from college while another fourth have completed some college course work.

It is not expected that standards for commercial and secondary school driver education courses will ever be identical. Commercial schools must be responsive to the demands of their customers, and this need will be reflected in the particular skills of the instructors. However, in the interests of consumer protection, some realistic standards must be imposed upon the preparation of commercial driving instructors as well as upon secondary school and college/university instructors.

## PROJECT OBJECTIVE

As a step toward improving driver education programs, HumRRO undertook, early in 1971, a program of research, the objective of which was to develop a set of instructional guides. These guides were to be used in preparing programs of instruction for prospective driver educators for secondary schools and commercial driving schools. The purpose of the guides was to put at the disposal of institutions preparing driver educators a body of information that would enable them to develop programs that could meet the needs of their students and could be administered within the teacher preparation resources available to them.

Initially the scope of work also included development of a guide for preparation of college-level teachers. However, it ultimately became apparent that prospective college-level teachers could not be differentiated from prospective secondary school teachers at the time they were receiving preparation in driver education, and a separate teacher preparation guide for driver educators at the college level was not developed.

For a number of reasons, it was not intended that the teacher preparation guides would prescribe one specific instructional program. First, a single program could not provide the flexibility required to cope with varying situations. Second, an instructional program prepared at any one point in time could not accommodate the changes in both needs and resources that are constantly occurring within the fields of highway safety and public education. Finally, it did not seem realistic to expect teachers at one institution—either a university or commercial driving school—to substitute for their own programs a program developed at another institution.

What was needed was a guide that would assist those engaged in teacher preparation to assemble curricula capable of meeting their own requirements and compatible with their own resources.

## DEVELOPMENT OF TEACHER PREPARATION GUIDES

The development of teacher preparation guides followed a process that has been commonly utilized by educational technologists in preparing instructional programs and materials. This process may be outlined as follows:

1. Analysis of Instructional Requirements—An analysis of the highway transportation system and educational system to identify the responsibilities to be imposed upon the driver education teacher.
2. Establishment of Instructional Objectives—A determination of the performances, skills, and knowledges which the driver education teacher must have to fulfill requirements.
3. Preparation of Guides—The preparation and assembly of materials needed to fulfill instructional objectives.
4. Evaluation—An assessment of the value of the guides in fulfilling instructional objectives.

The remainder of this paper will describe the application of this process to the development of teacher preparation guides for driver education. The guides themselves were submitted to the National Highway Traffic Safety Administration under the following titles: "Guide for Teacher Preparation in Driver Education: Secondary School Edition," January 1973[1]; and "Guide for Teacher Preparation in Driver Education: Driving School Edition," January 1973.

[1] This document was published for the National Highway Traffic Safety Administration, Department of Transportation (DOT-HS-801-132), by the U.S. Government Printing Office, Washington, D.C., July 1974.

## ANALYSIS OF INSTRUCTIONAL REQUIREMENTS

The driver educator is a part of two worlds. First, he is a part of the "Highway Transportation System," helping prospective drivers to enter that system as safe and efficient vehicle operators. Second, he is part of an instructional system—either public or commercial—which imposes requirements of its own. In a sense, the driver educator may be viewed as constituting an "interface" between the highway transportation and instructional systems. A determination of the requirements imposed upon the driver educator by these two systems represents a logical starting point in the determination of his instructional requirements.

At first, the project staff was inclined to view the instructional requirements imposed upon the secondary school driver educator as quite different from those imposed upon the driving instructor employed by a commercial driving school. The needs of highway safety were the same, of course; instruction in safe and efficient driving should not vary regardless of where it is taught. However, the requirements of the two instructional systems were thought to differ markedly. Driver education in secondary schools is part of a complex 12-year enterprise governed by equally complex public policy. Instruction in a commercial driving school is, essentially, a business enterprise, subject to public policy, to be sure, but also responsive to economic considerations.

As work on the project proceeded, the differences between secondary school driving instruction and commercial driving instruction became progressively fuzzy, at least as far as teacher preparation is concerned. It was learned that many driving instructors are called upon to teach within the secondary school system under contract to individual schools or school districts. Moreover, an increasing number of driving schools are requiring their instructors to be capable of meeting a broad array of instructional requirements whether they are in immediate demand or not.

Since the similarities between secondary school and commercial school instructors are far greater than the differences, the term "driver educator" has been used throughout this report to refer to representatives of both groups.

## SURVEY OF TEACHER PREPARATION STANDARDS

One source of requirements for teacher preparation in driver education is the collection of standards imposed by various Federal, State, local and commercial agencies. An analysis of these standards was in order.

The standards imposed by the various states were determined to be the most potent factor in establishing teacher preparation requirements for both secondary school and commercial school instructors. Letters were sent to the Department of Education and the Department of Motor Vehicles in each of the 50 states and the District of Columbia, requesting copies of all documents setting forth requirements for driver education, both public and private. Earlier experience in attempting to obtain information from state agencies had made it clear that requests for documents were far more likely to be honored than requests for information.

Some 46 of the jurisdictions (states plus the District of Columbia) responded by providing appropriate documents. Whether the five states that failed to respond were uncooperative or simply lacked the desired documents cannot be determined. In any case, the 90% response that was obtained was considered satisfactory for determining the general nature of teacher preparation requirements imposed by state standards.

Of the states surveyed, only about a third imposed standards that were as severe as those recommended by the National Commission on Safety Education (NEA, 1964)—that is, 12 hours of traffic safety education, 6-12 hours of related electives, appropriate

teaching experience, and a good driving record. In the case of commercial driving schools, few states required anything more than a license and a good driving record.

It became obvious during the survey that governmental standards constituted a rather austere source of information concerning instructional requirements for driver educators.

## ANALYSIS OF DRIVER EDUCATOR FUNCTIONS

A more effective route to the identification of teacher preparation requirements lay in an analysis of the activities that driver educators are called upon to perform. Analysis of jobs and tasks has proven a generally fruitful way of identifying instructional requirements in a wide variety of areas.

An analysis of driver education teaching functions was performed using the following sources of information:

(1) Textbooks dealing with teacher preparation in traffic safety education (e.g., Aaron and Strasser, 1969).
(2) State curriculum guides (e.g., Virginia).
(3) Teacher preparation materials developed by colleges, universities, commercial driving schools, and equipment manufacturers.
(4) Journals and other documents prepared by professional associations, including the American Driver and Traffic Safety Education Association (ADTSEA), the North American Professional Driver Education Association (NPDEA), and the National Safety Council.
(5) Interviews with driver educators in secondary schools and commercial driving schools; interviews with representatives of colleges and commercial driving schools conducting teacher preparation.

The functions required of the driver educator are depicted graphically in Figure 1. These functions may be divided into two general categories: *Curriculum Development* and *Curriculum Administration*. In addition to participating in these functions, driver educators are frequently called upon to assist with programs outside of the formal school system, the most common of which are teaching driver improvement courses, teaching the handicapped to drive, and maintaining school-community relationships.

### Curriculum Development

In examining the functions involved in curriculum development, it should be apparent that the teacher's activities involved in preparing a program of driver education are very similar to the activities of this project (set forth at the beginning of this "method" section) in preparing the curriculum that enables the teacher to develop a curriculum.

How much of the average driver educator's activity is devoted to curriculum development may be legitimately questioned. The typical pattern appears to be for him to take the general curriculum guidance established at the state level and supplement it with materials readily accessible to him. Too often the curriculum is structured by a textbook or a simulator film library. Yet if driver education is truly to become a profession, its practitioners must be capable of developing curricula that will fit their own school situation, take account of their own capabilities as an instructor, and accommodate the ever-changing pattern of driving.

System Analysis. In developing a curriculum, the driver educator must be capable of analyzing the demands which the highway transportation system (Appendix A) imposes upon the driver. He must recognize the influence of vehicle design, accident information, highway and traffic engineering, highway safety legislation, and so on, upon curriculum

Model for Development of Guides for Teacher Preparation in Driver Ed

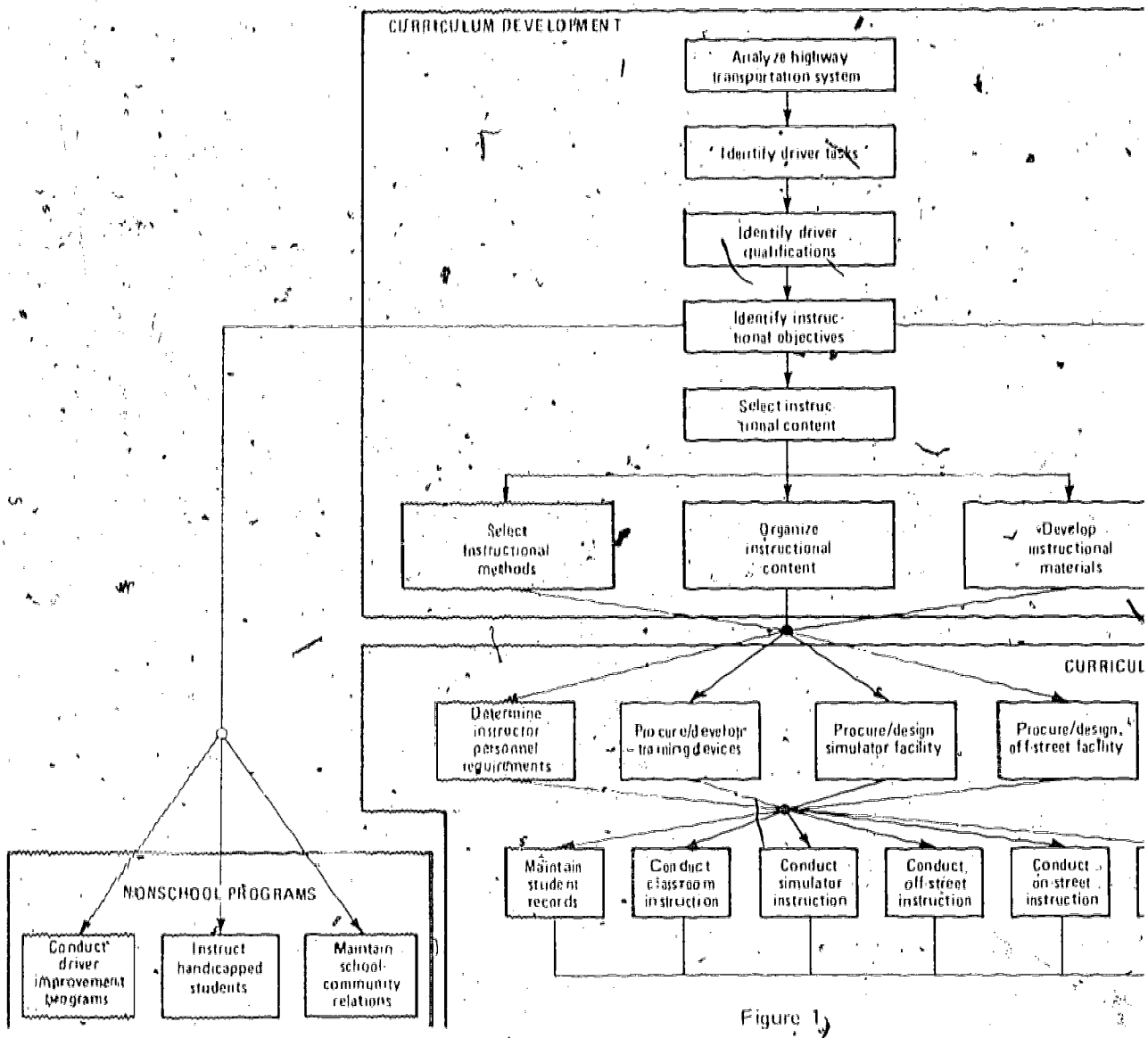


Figure 1

needs. Granted, much of this analysis is performed for the driver educator in preparation of the materials made available for his use. However, this does not relieve the driver educator of the responsibility for knowing enough about the needs of the highway transportation system, to be able to explain and justify characteristics of his curriculum, and to adapt that curriculum to the peculiarities of the highway transportation system in which he and his students will operate.

*Identifying Driver Tasks.* From his knowledge of the highway transportation system, the driver educator must assemble a picture of what the new driver must do in order to become a safe and efficient motor vehicle operator. These performances define the output of his instructional process. Many driver educators are unable to judge what kind of information and materials constitutes a competent driver education course. Classroom instructors, for example, are likely to be more familiar with such concepts as "laws of nature and man" or "how the eye sees" than they are with the driving performances these concepts are supposed to support.

The Driver Education Task Analysis (McKnight and Adams, 1970), performed under NHTSA sponsorship, provided a comprehensive inventory of the activities drivers are called upon to perform. This document provides a valuable source to driver instructors in establishing performance requirements for their curricula. It cannot, however, meet the driver educator's needs completely, since it cannot reflect entirely the many variations in driving conditions that exist across the country, nor can it fully accommodate the changes that are continually occurring in the nature of driving. The driver educator must be capable of establishing his own set of performance requirements for any curriculum.

*Identification of Driver Qualifications.* Once the driver educator has identified the performances he intends to include within his curriculum, he must identify the qualifications that underlie these performances. After all, he cannot manipulate the student driver's performances directly. He can only endow the driver with those qualifications that are needed to perform safely and efficiently after the student leaves the course and enters the highway transportation system. In preparing the teacher preparation guides, the following four categories of qualifications were established:

*Knowledges*—the information the driver must have to perform correctly, consisting primarily of:

- *Procedures*—information relating to performances themselves (e.g., starting the car, making a right turn at an intersection).
- *Principles*—general rules for performing (e.g., rules for use of turn signals).
- *Facts* (e.g., speed limits, tire pressures).
- *Identifications* (e.g., shape and location of controls).
- *Relationships* (e.g., the effect of alcohol consumption on conceptual processes).
- *Concepts* (e.g., centrifugal force).

*Skills*—those abilities that are required, over and above possession of information, and acquired through practice, to enable the individual to perform. Driving skills include the following:

- *Perceptual Skills*—the ability to interpret complex stimulus patterns (e.g., judgment of passing distance).
- *Manipulative Skills*—the ability to carry out complex, rapid, or coordinated motor responses (e.g., manipulation of the steering wheel during skid control).
- *Intellectual Skills*—the ability to apply information to reach decisions or solve problems (e.g., planning an optimum route).

*Attitudes*—beliefs or opinions of the driver concerning various aspects of driving (e.g., attitudes toward the effect of speed upon safety, attitudes toward the use of safety restraints).

*Habits*—those patterns which allow behaviors, over time, to occur without conscious mediation.

The term "qualifications" tends to connote merely the "ability" to perform. In this report, it is used more broadly to include both ability and motivation.

Many of today's driver educators lack a clear picture of the qualifications that are required actually to *drive* a vehicle. Much of the information that is communicated in conventional driver education bears only a tenuous relation to any required driving performance. This includes information concerned with such matters as the physiological aspects of vision, or stopping distances.

Identifying Instructional Objectives. With an understanding of the performances required of a driver and the qualifications that underlie these performances, the driver educator should be able to prepare a set of instructional objectives for his curriculum. The objectives would consist of descriptions of the performance capabilities, knowledges, skills, attitudes, and habits he intends to develop within his students as a result of curriculum instruction. An explicit formulation of instructional objectives is desirable in accomplishing the following:

(1) Helping to assure that the content, instructor, methods, and materials of the course are directed toward the proper ends.

(2) Providing a means by which students may identify what is expected of them.

(3) Providing a basis for evaluating student proficiency and course effectiveness.

Selecting Instructional Content. Armed with a set of instructional objectives, the driver educator may turn to the selection of appropriate content. Actually, if the objectives are described in highly detailed terms, they actually *define* the content. That is, they describe the procedures, concepts, and facts toward which content will be directed. There remains, then, the task of deciding how the content will be organized, what methods will be used to communicate it, and what materials are required to support these methods.

Organizing Instructional Content. A driver education program must be extremely well organized when it seeks to mold the student having no previous driving experience into a proficient motor vehicle operator, all within a limited time. Many driver educators pay scant attention to the organization of their curricula. Often a textbook or simulator film library provides the only structure. No body of procedure concerned with organization of driver education courses is available to be applied. Enabling driver educators to apply these procedures was an important goal in development of the teacher preparation guides.

Selecting Instructional Methods. The methods by which driver education programs may be taught can be classified as follows:

(1) *Presentational* methods that involve the attainment of objectives through presentation of information to the student (e.g., written materials, audio visual presentations, lecture).

(2) *Interactional* methods that involve the attainment of objectives through interaction among students or between students and instructor (e.g., group discussion, classroom exercises).

(3) *Practical* methods that involve the attainment of objectives through practice of terminal performances (e.g., in-car instruction, simulation).

Each of these instructional methods may be applied in various settings, including independent study, classroom, driving range, and on street. An examination of existing driver

education programs indicates that the optimum application of instructional methods to settings is not being made. Driver educators, like their colleagues in other fields, appear to devote too much classroom time to the presentation of information that could be more efficiently communicated in other ways. Likewise, too much in-car time is spent on presentations and interactions that could take place more economically elsewhere.

*Developing Instructional Materials.* Before he can begin to instruct, the driver educator must translate his content, organization, and methods into instructional materials. These materials include the following:

*Student Materials.* Printed, graphic, and audiovisual materials designed to communicate information and guide student practice.

*Instructor Materials.* Printed materials to guide the instructor in conducting classroom, off-street, and on-street instruction.

*Instructional Support Materials.*

- *Instructor Aids.* Materials used directly by the instructor, including transparencies, checklists, motion pictures, etc.
- *Equipment.* Standard equipment needed to support instruction, including projectors, desks, blackboards, automobiles.
- *Devices.* Equipment developed specifically for driver education, including simulators, mock-ups, etc.
- *Facilities.* Constructed facilities, including classroom space, driving range.

Many of these materials must be procured commercially (e.g., textbooks, simulator films). In this case the driver educator's responsibility includes the identification of material requirements and the preparation of specifications where required. There are generally some materials that must be prepared by the instructor himself. These include pupil-oriented student handout materials (e.g., preparation for behind-the-wheel sessions) and his own lesson plans.

*Development of Proficiency Evaluation Measures.* With the preparation of required materials or identification of requirements in the case of those materials that must be obtained externally, the curriculum development process is completed, insofar as actual instruction is concerned. However, no curriculum is truly complete without preparation of measures for evaluating student proficiency. These measures include written tests of knowledge and attitude, simulator tests, and behind-the-wheel tests, both on- or off-street. The purpose of student proficiency measures is threefold: (a) identification of specific student deficiencies to guide remedial instruction, (b) evaluation of student capability relative to successful completion of the course and issuance of licensing certificates, and (c) identification of deficiencies within the curriculum itself.

Many driver educators tend to rely upon externally produced proficiency measures, such as the tests furnished with textbooks and simulator films. These measures are appropriate only to the extent that they tap instructional objectives of the particular curriculum being administered. Since few of these externally produced measures can fulfill the conditions of effective evaluation, the instructor must have the ability to prepare valid proficiency measures of his own.

## Curriculum Administration

The curriculum is a blueprint for learning. How well a student will ultimately learn to drive well depends in great measure on the quality of the curriculum under which he is taught. However, the curriculum can accomplish nothing until it is placed in the hands of qualified instructors, supported with appropriate materials. The instructor's activity in administering the curriculum may be divided into two categories: planning and procurement, and instruction.

Planning and Procurement. Before any instruction can take place, the personnel and materials required to implement a curriculum must be in place. While this sounds like a "one time" activity, such is rarely the case. A continued planning and procurement activity is needed in order to accommodate changes in curriculum, resources, personnel turnover, and changes in requirements.

The required number of instructors must be recruited and oriented to the particular school system. While this is primarily a concern of the supervisory level driver educator, it represents a complex task. Just determining the number of instructors required can be very complicated when several schools and a "multiphase" program (i.e., classroom, range, simulator, on-street) are involved.

The driver educators typically play a large role in the planning and procurement of facilities. A well-designed curriculum will generally go a long way toward identifying facilities requirements. However, an attempt to implement specifications in a way that recognizes the practical realities of the school situation is a complex undertaking.

Finally, the driver educator will be the primary source of requirements for instructional materials, including simulators, training devices, audio-visual aids, and printed materials. Here again, a well-defined set of curriculum requirements will provide a sound basis for selection of materials and make the driver educator less dependent upon salesmen for identification of his needs.

Instruction. The most important thing an instructor has to do is, of course, to instruct. His ability both to enable and to motivate students to learn is probably the most important factor in determining how well his students will be able to drive. The purely instructional activities turned out to be the most difficult to identify in the effort to analyze the driver educator's functions. Much of the instructor's effectiveness in teaching involves basic personality characteristics that are difficult to explain in terms of explicit behaviors. Another large component of instructional performance involved basic educational techniques which were beyond the scope of a driver education guide. However, there remained a large number and variety of performances involved in classroom simulator, off-street, and on-street instruction that could be identified for coverage within the guide.

While the driver educator's role in the [illegible] is central to [illegible] instructional activity, the interaction with school administrators, maintenance of appropriate records is also an important function. In some instances, the instructor must also interact with parents in helping the latter to supervise the students' out-of-school driving activities.

Finally, the instructor must administer and interpret proficiency evaluation measures for the purposes described earlier, that is, identification of student deficiencies, evaluation of student capability, and evaluation of cost effectiveness. The first two functions help to control curriculum administration itself by respectively guiding remedial instruction efforts and deciding who is eligible to pass the course. Where the nature and magnitude of student deficiencies are such as to suggest that the root cause lies in the curriculum itself, the instructor must seek to overcome the cause through revision of content, organization, instructional method, or materials.

Nonschool Programs. Much of the driver educator's effort is consumed by activities occurring outside of the school in which he is employed. The driver educator is frequently called upon to engage in extracurricular activities, the most common of which are the following:

(1) Conduct of driver improvement programs, including, defensive driving, advanced driving, and court sponsored remedial programs.

(2) Special student programs, particularly those involving instruction of mentally and physically handicapped persons.

(3) Maintenance of good school-community relationships through participation in civic programs of a governmental and non-governmental nature.

## ESTABLISHMENT OF INSTRUCTIONAL OBJECTIVES

The analysis of the driver educator's functions, described in the preceding section, resulted in an inventory of the activities required of the driver educator. If the process for curriculum development that was described in the preceding section were to be followed, the next step would be to identify performance objectives as well as knowledge and skill objectives for the driver educator. However, the performances that comprised the duties of the driver educator, like those that make up the duties of executives, scientists, and other professionals, cannot be stated in very precise terms.

While the broad functions can be identified, specific activities involved are far too variable to be identified with the specificity that driving behaviors, for example, can be identified. And while the performances which constitute driver education are too varied to be identified, the knowledges and skills that underlie these performances can be more clearly defined. For example, it is not difficult to identify what the instructor should know about the advantages and disadvantages of driver simulation. But specifying the myriad ways in which this information would be used, the specific decisions to be made and problems to be solved, would almost be impossible. For the reasons just noted, the identification of instructional objectives for the teaching preparation guides was limited to description of knowledges and skills.

## THE DRIVER EDUCATOR AS A DRIVER

The analysis of instructional requirements, described in the previous section, focused entirely upon the driver educator's performances and qualifications as they related to the act of teaching. However, the driver educator, like any other educator, must also know his subject. In other words, he must be a competent driver. He must both know about and possess the knowledges and skills that underlie efficient vehicle operation.

The driving aspects of the teacher's responsibility have been previously studied as part of the Driver Education Task Analysis mentioned earlier. This study encompassed both analysis of the driver's tasks (McKnight and Adams, 1970) and the identification of instructional objectives (McKnight and Hundt, 1971), and served as a basis for establishing objectives for the guide relative to actual driving.

## SURVEY OF DRIVER EDUCATORS

Descriptions of the driver educator functions, together with descriptions of related knowledge and skill areas, were assembled in the form of a questionnaire which was administered to a panel of driver educators representing both secondary schools and professional driving school instruction. Each panelist was asked to indicate the relevance of the function, knowledge, and skill area to the responsibilities of the driver educator. The purpose of this survey was not one of discovery but rather of confirmation.

All of the listed functions, as well as knowledge and skill areas, were confirmed as appropriate to the role of a driver educator. It was surprising that this general confirmation was characteristic of commercial driving school representatives as well as those engaged in secondary school driver education. That representatives of commercial driving schools would consider objectives concerned, for example, with simulation or off-street

instruction relevant to their operations was not anticipated. The results of the survey should not be construed as indicating that commercial driving school instructors currently perform all the functions identified. It does, however, point to the desire of the commercial driving school industry to assure that commercial driving school instructors are capable of performing such functions.

## DETERMINATION OF GUIDE CONTENT

Once the knowledges and skills required of the driver educator had been identified, a comprehensive survey was undertaken to identify instructional content appropriate to these objectives.

### SOURCES OF INFORMATION

Generally speaking, the same sources used in the analysis of driver educator functions were utilized in attempting to identify appropriate content. The list of individual sources used is too large to be reproduced here. They are, however, listed in both guides. Of particular value in development of the guides were the following:

(1) *Driver and Traffic Safety Education—Content, Methods, and Organization*, by James E. Aaron and Marland K. Strasser.

(2) *In-Car Instruction: Methods and Content—A Manual for Teachers of Driver and Traffic Safety Education*, by William G. Anderson.

(3) A variety of reports dealing with simulation, off-street instruction, and other instructional methods developed by Illinois State University.

(4) Various articles appearing in the *Journal of Traffic Safety Education*, Dr. Richard Kaywood, Editor.

### ORGANIZATION OF GUIDE CONTENT

Separate guides were prepared for the secondary school and driving school instructors. Because of the similarity of the two professional groups with respect to instructional objectives (as shown during the survey of driver educators noted earlier), consideration was given to consolidating the content into one guide. However, the sponsor felt that even the relatively small differences between the two guides justified the preparation of two separate documents. To avoid giving the impression that they were truly independent documents, both were given the same title, "Guide for Teacher Preparation in Driver Education," one bearing the subhead "Secondary School Edition," and the other "Driving School Edition."

Both guides followed a common outline (Appendix B). In Part I, "The Highway Transportation System," the attempt was made to establish the role of the driver educator within the highway transportation system in general, and as an agent of highway safety in particular. Part II, "Components of the Driver Education Instructional System," deals with the driver educator as an educator and covers both the curriculum development and curriculum administration functions. Part III, "Driving Tasks," provides the technical content in which the driver educator is to teach; it comprises approximately two-thirds of the contents of the guide. The differences between the Secondary School and Driving School editions are confined to Parts I and II.

Part III has a decidedly "performance" orientation. Such an orientation was a part of the contract under which the study was conducted. The content of Part III is divided

into each of 60 driving tasks as identified in the Driver Education Task Analysis. Appendix C shows the format and the kind of information contained in each of these driving tasks.

It will be noted that for each task, the following is provided.

*Introduction*: An explanation of the driving task, the degree of difficulty in performing the task, and the potential hazards involved.

*Driving Task Requirements*: A description of the performances, knowledges, and skills required in the performance of the task.

*Learning Problems*: A description of the most frequent problems encountered by students in learning to perform the task.

*Instructional Aids*: A list of the major suppliers of classroom aids, films, filmstrips, and transparencies dealing with content of the task.

*Resource Materials*: A list of references related to the content of the task.

A listing of instructional aids and resource materials at the end of each task was a matter of some concern among members of the project advisory panel, because, although the various aids and resources had been examined for their relevance to a particular task, no attempt was made to evaluate quality. Some panel members felt that the listing of a particular aid or resource might be taken by those using the guide as an endorsement. The final decision was that the list was useful enough to be included but should have an appropriate disclaimer.

## EVALUATION

The original plan for the project called for a pilot test of the guide within a secondary school and professional driving school. However, since the purpose of the guide was to provide a document that would enable driver educators to develop their own teacher education curricula, the only way in which the guide could be truly "pilot tested" would be to place it in the hands of individuals representative of its intended audience and wait while they prepared a teacher preparation curriculum and administered it to a group of prospective driver educators and driving instructors. Such a pilot test would require several years.

For evaluation purposes, therefore, a preliminary draft of the guide was prepared and distributed to the advisory panel for review. In addition, 50 draft copies of each guide were disseminated among representatives of the secondary school and commercial driving school community for review. A final draft of each guide was prepared on the basis of reviewers' comments.

## CONCLUDING STATEMENT

Since the passage of the Highway Safety Act of 1966, the field of driver education, stimulated by State and Federal funding, has undergone considerable change. Far more secondary school students are receiving driver education than was the case a decade ago. The way driver education is taught is also changing. Among the changes are (a) increased use of simulation techniques in developing perceptual skills, (b) a more reasonable approach to the treatment of alcohol, and (c) inclusion of the advanced driving techniques and evasive maneuvers in secondary school programs.

As changes in driver education continue to occur, the content of any teacher preparation program must keep pace. This means that the guides, like other materials on driver education, will need to undergo revision if they are to remain useful.

# LITERATURE CITED

# AND

# APPENDICES

## LITERATURE CITED


Aaron, James E. and Strasser, Marland K. *Driver and Traffic Safety Education: Content, Methods, and Organization*, The MacMillan Company, New York, 1969.

Anderson, William G. *In-Car Instruction: Methods and Content—A Manual for Teachers of Driver and Traffic Safety Education*, Addison-Wesley Publishing Company, Reading, Massachusetts, 1968.

Booz, Allen and Hamilton, Inc. *Safety Specialist Manpower; Manpower Requirements, Volume 1*, Booz, Allen and Hamilton, Inc., Washington, D.C., 1968.

Carr, Paul O. "Driver and Safety Education—A Survey of Colleges and Universities," *Safety*, vol. vi, no. 2, March-April 1970, National Education Association, Washington, D.C.

Dunlap and Associates. *Driver Education and Training*, Dunlap and Associates, Darien, Connecticut, 1968.

National Education Association. *Policies and Practices for Driver and Traffic Safety Education*, National Education Association, Washington, D.C., 1964.

National Highway Traffic Safety Administration, Department of Transportation. *Guide for Teacher Preparation in Driver Education: Secondary School Edition*, (DOT-HS-801-132), prepared by A. James McKnight, Alan G. Hundt, and June S. Cunningham, Human Resources Research Organization, Alexandria, Virginia; printed by the U.S. Government Printing Office, Washington, D.C., July 1974.

McKnight, A. James and Adams, Bert B. *Driver Education Task Analysis, Volume I. Task Descriptions*, Department of Transportation Technical Report HS 800 367 (HumRRO Technical Report 70-103), November 1970.

McKnight, A. James and Hundt, Alan G. *Driver Education Task Analysis, Volume III. Instructional Objectives*, Department of Transportation Technical Report HS 800 369 (HumRRO Technical Report 71-9), March 1971.

## Appendix A

# COMPONENTS OF THE HIGHWAY TRANSPORTATION SYSTEM

The automobile and the person who drives it are part of a large, complex highway transportation system. This transportation system includes, in addition to the driver and his vehicle, the roadway over which the vehicle is driven and the traffic the driver encounters, and the natural environment in which the driver operates the vehicle. How well these components interact with one another will determine how effective the highway transportation system is in achieving its goal—the safe, rapid, and comfortable movement of people and goods from one place to another.

*The Driver.* Since it is the driver who sets the highway transportation system in motion, it is the driver's performance that, more than anything else, determines how effectively the system will operate. The driver's performance is, in turn, greatly influenced by the early instruction he receives. This instruction not only helps to establish the knowledges and skills that determine how well he can perform, but it also can exert a strong influence over the attitudes and habits that determine how well he will perform.

*The Vehicle.* While improvements must be sought, today's automobile is still, on the whole, a potentially safe and dependable piece of equipment. However, whether this potentiality is realized depends largely on its human operator. He must be prepared to drive it effectively and keep it in safe operating condition through routine maintenance and repair.

*Roadway.* Today's roadway system measures more than 3½ million miles. It would take a driver, covering 300 miles a day, more than 33 years to drive the entire system. In order to utilize this roadway system effectively, the driver must be able to cope with its characteristics—its hills, curves, intersections, on-ramps and off-ramps. He must also react properly to the signs, control signals, and lane markings that have been provided to regulate the flow and enhance the safety of highway travel.

*Traffic.* The presence on the roadway of other roadway users, including automobiles, trucks, buses, and pedestrians, constitutes a potential obstacle to the driver's progress and a hazard to his safety. Since traffic is composed largely of vehicles and drivers, it does not constitute a separate component of the highway transportation system in any objective sense. However, from the viewpoint of the individual driver who, after all, represents the focal point of this guide, traffic represents an important and formidable component of the system. The demands it places upon him are heightened by the fact that other road users are not static, but move in a complex and often unpredictable pattern.

*The Environment.* The natural environment in which the highway transportation system operates, because it interacts with other components in determining the effectiveness of the system, may be conveniently viewed as an inherent part of the system itself. Changes in illumination, weather, and temperature, ranging from normal to extreme, create a condition to which the driver must adapt.

## Appendix B

# GUIDE FOR TEACHER PREPARATION IN DRIVER EDUCATION OUTLINE

Part I—Highway Transportation System
- Introduction
- Components of the Highway Transportation System
- Highway Safety Problem and Programs
- Management of Highway Safety Programs

Part II—Components of the Driver Education Instructional System
- Objectives of Driver Education
- The Driver Educator
- Curriculum Development
  - Instructional Objectives for Driver Education
  - Selection and Organization of Instructional Content
  - Selection of Instructional Methods and Media
  - Lesson Plan Development
  - Proficiency Evaluation
- Curriculum Administration
  - Planning and Procurement
  - Instruction
  - Program Administration
  - Special Programs

Part III Driving Tasks
- Introduction
- Basic Control
- Driving Procedures
  - General Procedures
  - Normal Driving Situations
  - Adverse Driving Situations
  - Night Driving
  - Special Conditions
- Emergency Procedures
- System Maintenance

# Appendix C

# SAMPLE OF DRIVING TASK FROM PART III: "PASSING"

## Passing

**The student should be able to perform a safe pass on two- or three-lane roadways.**

The term "passing" in this Guide will refer to passing another car on a two- or three-lane road where the need to make temporary use of a lane also used by oncoming traffic imposes a limit upon the distance and time that may be consumed by the passing maneuver. Passing on multilane highways, where the threat of oncoming traffic is not great, is considered essentially a lane changing maneuver and is treated as such.

The ability to pass safely is limited by the distance available within which to complete the pass. This distance may be limited by (1) *oncoming cars*, (2) *roadway configurations that may conceal* oncoming cars, and (3) legal prohibitions against passing. The ability to judge whether a pass can be completed within the available distance is one of the most complex yet critical skills demanded of drivers. The maneuver accounts for approximately one fifth of the fatal accidents each year.

### DRIVING TASK REQUIREMENTS

**The student should know the procedures, hazards, and laws that pertain to passing on two-lane and three-lane roadways.**

Passing another vehicle is a complex procedure requiring the driver to make decisions based on his own good judgment. He has no allowance for doubt and indecision. Doubt increases decision time and decreases the time available to complete the pass. With any doubts, he should not undertake the procedure.

### Deciding to Pass

In determining whether it is safe to initiate a pass on a two-lane or three-lane roadway, the driver should:

Observe the roadside for signs indicating he is within or approaching a no-passing zone.

- When a sign indicates the end of the no-passing zone, the passing procedure may be initiated.

Observe lane markings to the left side of the lane.

- Passing should not be initiated when the left side of the lane is marked with one or two solid lines, or if there is a solid line to the right of a broken line.
- Passing is permitted when there are no lane markings or if the left side of the lane is marked by a broken line or by a broken line to the right of the solid line.

The end of a no passing zone should not be anticipated by initiating a pass prematurely. On a two lane roadway, nearly half of all drivers will initiate the pass before prohibitive lane markings end.

Observe the roadway ahead.

Passing limitations on the roadway itself are sometimes disregarded by drivers, thus causing a significant number of accidents each year. These limitations include:

- Hills and curves which restrict sight distance.
- Intersections, where it is illegal to pass and where unexpected vehicle maneuvers may occur, such as the lead vehicle suddenly attempting a left turn, traffic entering from the right and forcing the lead vehicle to the left, failure of other vehicles to check for oncoming traffic before entering the lane.
- Bridges, tunnels, and railroad crossings.
- Pedestrians on the right of left edge or shoulder of a two-lane roadway.

The available passing distance may be judged by observing the roadway ahead. Drivers consistently underestimate the required overtaking and passing distance. At 50 miles per hour, more than 75 percent of the estimates for overtaking and passing distances are considered dangerous.

The speed of the lead vehicle may be judged when observing the roadway ahead.

- When the lead vehicle's speed is 50 miles per hour, approximately 750 feet are required to complete the pass.
- In an accelerative pass, the driver is able to judge the speed of the lead vehicle from the speed of his own car.
- In a flying pass (where the original speed of the passing car is greater than the speed of the vehicle being passed), the driver judges the closing rate between the car and the lead vehicle.

Available passing time may be judged, based on the driver's judgment of passing distance and closing rate.

- A driver's ability to judge closing rate is quite limited, but he responds appropriately to passing distance and the speed of the lead vehicle.

Accelerative capability of the car may be judged, with consideration given to the car's load (e.g., pulling a trailer), power of the motor, and condition of the car.

- Most cars, with normal acceleration capability, require approximately six seconds to pass a moving vehicle at normal highway speeds. Acceleration capability decreases as speed increases, the degree varying among car types.

The safety margin available for returning to the driving lane may be determined by observing the roadway ahead.

Finally, by observing the roadway ahead, a determination can be made as to whether the pass can be completed safely within the available passing distance. If there is any doubt, the pass must not be initiated.

In determining whether it is safe to initiate a pass, the driver should also

Observe oncoming traffic

Failure to note an oncoming vehicle or misjudging the speed and distance of the oncoming vehicle is a primary cause in a significant number of accidents.

In observing oncoming traffic in order to make a decision to pass, the driver's judgment continues to be a major factor. He must make estimates on the distance and speed of the first oncoming vehicle and continue to judge the available passing time and the accelerative capacity of the car.

A

Drivers tend to overestimate short distances and underestimate long distances between the car and the oncoming vehicle.

Curves and hills greatly reduce the driver's ability to judge the distance at which an oncoming vehicle would be visible.

A driver's judgment of the speed of the oncoming vehicle is poor, because he is influenced by his own speed. Inability to estimate speed results in a tendency to assume there is a constant passing time. This, in turn, causes the driver to underestimate the time required for passing at high speeds and to overestimate the time at low speeds.

Observe oncoming traffic and use the following criteria to determine whether he can complete the pass within the available passing distance and without excessive speed:

A minimum passing time of [illegible] seconds. This shortest acceptable safety margin is five seconds.

Five percent of drivers accept hazardous passing opportunities at least [illegible] percent reject safe passing opportunities.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

If the car ahead is passing another car, the driver passing should not be initiated until the vehicle initiating the first pass has completed the maneuver, the roadway ahead is clear and an acceptable gap is available.

Passing behind another vehicle on a two-lane or three-lane roadway is dangerous because the passing vehicle may delay its return to the driving lane or may not leave an adequate gap for the car to reenter the driving lane in time for the driver to avoid oncoming traffic.

## Preparing to Pass on a Two-Lane or Three-Lane Roadway

In preparing to pass, the driver should

Select the proper passing lane.

Only the left lane is used for passing moving traffic.

The right lane may be used for passing when the vehicle is stopped in the center lane for a left turn.

Observe other traffic.

Signal his intention to change lanes.

Signaling well in advance of changing lanes reduces the possibility that the vehicle following will pull out and attempt to pass the car.

Maintain proper following distance before changing lanes.

Following distance should be sufficient to permit the driver to check the clearance ahead, to accelerate in the right lane before passing, and, if necessary, to decelerate and reenter the driving lane.

## Initiating a Pass on a Two-Lane or Three-Lane Roadway

When initiating the passing maneuver on a two-lane or three-lane roadway, the driver should

Signal the lead vehicle by flicking the lights at night or by sounding the horn when necessary.

When the vision of the driver of lead vehicle is obscured by a trailer, an open trunk lid, snow, and so on, the driver of the passing car should sound his horn.

## Passing a Vehicle on a Two-Lane or Three-Lane Roadway

When passing the vehicle ahead on a two-lane or three-lane roadway, the driver should

Move quickly through the blind spot of the lead vehicle.

This blind spot is located at the 7-8 o'clock position of the lead vehicle where the vision of the lead vehicle's driver is obscured by the post of the left rear window.

Continue the passing maneuver with minimum delay.

Stay within the speed limit unless exceeding the limit becomes necessary.

If sudden acceleration is needed, a forced downshift can be made which gives extra power or speed. A forced downshift, which spurts the car in passing gear, is made by pressing the accelerator pedal to the floor.

Abort the pass and return to the driving lane if there is doubt the pass can be completed safely.

As stated earlier, doubt increases decision time and diminishes the time available to pass.

## Passing More Than One Vehicle

When sight distance permits, the driver may pass more than one vehicle in one passing maneuver after assessing the remaining passing distance and time and determining there is a large enough gap between vehicles ahead to permit him to reenter the driving lane at a safe speed.

## Returning to Driving Lane

When returning to the driving lane after passing on a two-lane or three-lane roadway, the driver should:

Signal with the right hand directional turn signal his intentions to return to the right lane.

Steer the car smoothly back into the driving lane, positioning it in the center of the lane.

A significant number of accidents each year are caused when the driver swerves sharply in front of the passed vehicle. The passing driver oversteers, or the driver of the passed vehicle panic brakes.

Cancel the turning signal.

Adjust his speed to the flow of traffic in the driving lane.

**The student should know the skills required for passing.**

Before deciding to pass the lead vehicle, the driver must be able to judge the available passing time and distance.

When there is no oncoming traffic, the driver should base his judgment of time on the distance available—that is, the distance between his car and the end of a passing zone or some other limiting circumstance, such as a curve or hill. When there is an oncoming vehicle, he should base his judgment of available passing time on available distance and his judgment of the speed of the oncoming vehicle. Drivers can judge distance more accurately than they can judge the speed of an oncoming vehicle. They tend to underestimate the speed if the vehicle is traveling fast and overestimate if it is traveling slowly.

The driver must also be able to judge the amount of time or distance required to pass the lead vehicle. He should know the accelerative capacity of his car, given the speed he is traveling, the load he is carrying, and the operating condition of the car.

In addition, he must be able to judge the rate differential (closing gap) between himself and the lead vehicle.

The driver should avoid making a series of individual judgments; rather, he should combine the cues of speed and distance into an overall perception of a safe or unsafe pass.

# LEARNING PROBLEMS

**The student should know the difficulties that may be experienced in learning to pass other vehicles.**

## Prolonged Precautionary Check to Side and Rear

The passing maneuver can be very dangerous for any driver, but especially for the beginner. While the driver is using the mirrors to check conditions to the rear and side, his car is moving forward. Obstacles move into the path in front while he is checking to the rear, and he may not have time to react. In addition, the car veers from its established path while the student is making the precautionary checks, or the student may fail to perceive obstacles in front. The instructor should emphasize the necessity for making brief rather than prolonged checks and for maintaining a constant awareness of the roadway ahead.

## Reluctance to Pass a Moving Vehicle

The beginning driver may exhibit a reluctance to pass another vehicle, even though it is safe to do so and even though he may be driving under the speed limit behind a slow-moving vehicle. He must be encouraged to perform the maneuver when it will expedite traffic and when it is safe. Telling the new driver the number of feet and/or the number of seconds required to pass safely will not be too meaningful to him, although he should know that the range is from six to ten seconds at normal highway speeds, in a car with normal acceleration capability. The instructor should time a safe passing procedure for the beginning driver to give him a "feel" for this element of the maneuver. He should soon begin to realize that (1) adequate time for passing is indeed 6-10 seconds; (2) anything less is dangerous; and (3) taking 15 seconds to complete the procedure causes a bottleneck which may result in hazardous conditions. Simulated passing drills will also help the new driver acquire confidence in himself before he practices on the street.

## Judging the Available Passing Time or Distance

A beginning driver will have a problem in determining the available passing time or distance. When there is no oncoming traffic, he must learn to make a judgment based upon the distance available between the car and the limiting circumstance, such as the end of the passing zone, a curve, or a hill. When there is an oncoming vehicle, he must learn to make a judgment based upon available distance and his estimate of the speed of the oncoming vehicle. Drivers tend to judge distance more accurately than they do the speed of an oncoming vehicle.

As the beginning driver progresses through the instruction he should develop the ability to make better estimates of passing time, distance, and rate of closure. With development of his perceptual skills many of the difficulties he experiences in passing other vehicles should become less troublesome.

## Gap Ahead of Vehicle Being Passed

Another perceptual activity the beginning driver must undertake when deciding to pass is the assessment of the suitability of the gap in front of the vehicle being passed. This assessment is particularly critical on two-lane roadways. A beginning driver may concentrate on his speed, or oncoming traffic, and neglect to determine if there is space ahead of the vehicle ahead to permit reentry into the driving lane. Beginning drivers should be warned of the danger of not determining the suitability of the gap in front of the lead vehicle.

## Freezing at the Wheel

The passing maneuver is demanding on the beginning driver. In addition to making a series of critical judgments, he must control speed, maintain directional control, and maintain a constant surveillance for potential hazards. The maneuver is an exciting one that frequently absorbs the student driver to the extent that he gives inadequate attention to the usual surveillance checks for potential hazards. It is not uncommon for a beginning driver to "freeze" at the wheel when an unforseen obstacle suddenly appears in the passing lane at a point midway through the maneuver.

Instructors should be aware of the possibility of such occurrences. Use of a driving range practically eliminates the possibility of the sudden appearance of an obstacle or animal during the course of the maneuver. However, a decision to restrict instruction of the passing maneuver to the range should be weighed against the fact that a new driver will profit from supervised on-street instruction.

# INSTRUCTIONAL AIDS

**The student should know the instructional aids that can be secured or constructed to supplement classroom instruction.**

## CLASSROOM AIDS

| Type | Source | Title |
|---|---|---|
| Chalkboard and traffic situation board | | |
| Chalkboard or traffic situation board for in-car use | | |
| Charts and/or tables on accident statistics related to passing | | |
| Handout/pamphlet | National Safety Council | "Six Points for Completed Pass" |

## FILMS/FILMSTRIPS/SLIDES

### Classroom Visual Aids

"Passing Maneuvers No. 1—The Basic Passing Maneuver," filmstrip, 60 frames, color, Ford Motor Company.

"Passing Maneuvers No. 2—Hazard on the Side," filmstrip, 57 frames, color, Ford Motor Company.

"Passing Maneuvers No. 3—Oncoming Traffic," 57 frames, color, Ford Motor Company.

"Passing Maneuvers No. 4—Being Passed," 51 frames, color, Ford Motor Company.

"Passing Maneuvers No. 5—Passing Emergencies," 64 frames, color, Ford Motor Company.

"How to Pass Safely," No. 6, Defensive Driving Film Series, 10 minutes, b/w, Association Films, Inc.

"Passing/Being Passed,"* No. 6, Techniques of Defensive Driving Series, National Safety Council.

"The Perfect Pass," 30 2x2 slides, National Safety Council.

"Passing Fancy," 15 minutes, b/w, General Motors Corporation.

### Simulator Films

"Perfect Passing," 17 minutes, color, AEtna Life & Casualty Co.

"Road Check,"* 20 minutes, color, AEtna Life & Casualty Co.

"Hit the Highways,"* 23 minutes, color, Allstate Enterprises.

## RESOURCE MATERIALS

**The student should know the basic texts, periodicals, and reports that will provide material for the development of lesson plans.**

### BASIC REFERENCES

AEtna Life and Casualty Co. in consultation with Pepyne, Edward W. *Teacher's Manual: AEtna Drivotrainer System*, film sections as follows: "Perfect Passing," "Road Check," "Separating and Compromising Risks," and "Crash Avoidance."

Allstate Insurance Company, *Allstate Good Driver Trainer System*, film booklet, "Hit the Highways."

American Automobile Association, *Teacher's Handbook—Sportsmanlike Driving*, 6th Edition, pp. 150-154, 183-184.

Anderson, William G. *In-Car Instruction: Methods and Content*, pp. 193-201.

*Although total length of the visual aid is listed, only segments of it pertain specifically to the instructional objective.

## BASIC REFERENCES (Continued)

Anderson, William G. *Learning to Drive: Skills, Concepts and Strategies*, pp. 131-138.

Anderson, William G. *Teacher's Manual for Learning to Drive*, pp. 38-41.

Center for Safety Education, New York University. *Driver Education and Traffic Safety*, pp. 120, 161-162, 191-192, 199-202, 220-222.

McKnight, A. James and Adams, Bert B. *Driver Education Task Analysis, Volume I: Task Descriptions*, pp. 32-0 - 32-7.

McKnight, A. James, and Hundt, Alan G. *Driver Education Task Analysis, Volume III: Instructional Objectives*, pp. 62-66.

Malfetti, James L. *A Description of the Driving Task Adaptable for a Manual for Beginning Drivers*, pp. 31-36.

Quane, W. Laurance. *Utilizing the Multiple Car Driving Range*, pp. 18, 20-21, 36-37, 39, 67-68.

## SUPPLEMENTARY REFERENCES

Aaron, J.E. and Strasser, M.K. *Driver and Traffic Safety Education*, p. 259.

American Automobile Association. *Sportsmanlike Driving, Practice Driving Guides, for use with Sportsmanlike Driving*, 6th Edition, p. 23.

American Automobile Association. *Teaching Driver and Traffic Safety Education*, pp. 401-402.

Anderson, William G. *Laboratory Manual for Learning to Drive*, p. 17.

Automotive Safety Foundation. *A resource Curriculum in Driver and Traffic Safety Education*, pp. 53-54.

Center for Safety Education, New York University *Man and the Motor Car*, pp. 204, 205, 262-268.

Glenn, H.T. *Youth at the Wheel*, pp. 166-167, 192-196, 247-251.

Strasser, M.K. and Aaron, J.E. *The New Driver's Guide*, pp. 56-57, 63.

Strasser, Marland K., Eales, John R., and Aaron, James E. *Driver Education: Learning to Drive Defensively*, pp. 165, 270, 283-285, 287-288, 291.

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15. Supplementary Notes
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16. Abstract
Two separate guides were developed, one for secondary school driver education teachers and the other for commercial driving school instructors. The development of both guides involved a four-step process: (a) an analysis of both the highway transportation system and the instructional system, public and private, to identify instructional requirements imposed upon the driver education teacher; (b) identification of the performances, skills, and knowledges required of the driver educator in meeting his instructional requirements; (c) the preparation and assembly of materials needed to fulfill the instructional objectives; a large-scale review of the guides by representatives of the secondary school and commercial driving school communities.

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17. Key Words

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