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A Survey of the Basic Needs for Providing a Satisfactory Driver Education Program in Washington High Schools

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A SURVEY OF THE BASIC NEEDS FOR PROVIDING A SATISFACTORY DRIVER EDUCATION PROGRAM IN WASHINGTON HIGH SCHOOLS

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CHAPTER I

THE PROBLEM AND DEFINITION OF TERMS USED

The nation's highway traffic safety problem has become a focal point of public concern. Evidence of this is to be found in the passage of legislation on the national and state levels, the increasing sums of public and private funds being spent to reduce the human and economic resource loss incurred annually, and the increasing activity of highway interest and user groups. The role of educational institutions in reducing the severity of the traffic safety problem is one of the basic considerations in each of the areas mentioned above.

Recent standards for traffic safety education courses in the secondary school have been issued by the U. S. Department of Transportation, and not one state in the union can meet the standards as set forth. In the state of Washington, the 40th Session of the State Legislature enacted legislation that encouraged the high schools of the state to offer courses in driver education. Yet, that program does not meet the standards enumerated by the federal government, and the program, as now operating, cannot meet the needs of secondary age youth in the state. Thus, the efforts of the secondary schools in the field of traffic safety education are being severely criticized by parents, official traffic safety agencies, and private highway interest groups.

I. THE PROBLEM

Statement of the Problem

The driver education program being operated in this state is not adequate in terms of meeting the course standards issued by the U. S. Department of Transportation. The purpose of this study is two-fold: (1) To present a basic course outline that will meet the federal standards, and (2) to assist school district superintendents in determining the essential scheduling and staff requirements to conduct a satisfactory driver education program.

Significance of the Study

The primary purpose of this study was to assist school district superintendents, school directors, and others responsible for improving and implementing curriculum at the local level, in determining the essential needs for developing a satisfactory traffic safety education program. The essential needs provided here were quantitative in nature as related principally to teaching staff, school facility, and the minimum time required to complete the course of instruction. Other needs such as the number of automobiles required, the contribution of driving simulator units, multiple car off-street driving ranges, and the Raytheon Learning System installed in a classroom were covered in general. Specific information concerning the value of these techniques of teaching is available in other research reports.

Past experience has shown that public school administrators encounter serious problems when developing new, or improving existing, programs relating to staff, scheduling, and financial support for programs. It is hoped that this study will be of assistance to them when they consider the traffic safety education course.

This study should serve to let others concerned with the total traffic safety effort know something about the problems of professional education in this field. Surely there are other sources of information on the problems of education in the traffic safety effort, but this should add to those other sources. The study also reveals a few of the general desires of educators concerning the future of traffic safety education in the state of Washington.

Procedures

Information for this study was obtained in two ways. First, a survey was made of current literature in the broad field of traffic safety and the specific area of traffic safety education. This survey was reported in Chapter II. In addition, fifty-one personal interviews were conducted with persons in the state of Washington and five persons outside the state. The interviews conducted in the state took place between March 3, 1967, and May 20, 1967. Those outside the state were conducted between August 10, 1967, and April 23, 1968.

The persons interviewed in the state were selected according to occupation, geographical location, the size of the city or school district in which they were employed, or expertise in the traffic safety field. Included were seventeen school district superintendents, curriculum directors, and coordinators of driver education programs; eight city chiefs of police; six county sheriffs; three chairmen of area safety councils; eight automobile dealers; two directors of commercial driving school enterprises; the Chief of the Washington State Patrol; the Director of the Washington Department of Motor Vehicles; the manager of the Washington Automobile Club; the chairman of the Citizens Advisory Committee to the Interim Committee on Highways of the State Legislature; a member of the Committee to Reorganize the State Department of Licenses which created the present Department of Motor Vehicles; the Managing Director of the Washington State Safety Council; two representatives of local insurance firms; one district manager and one regional representative of major insurance companies operating within the state.

Each of the interviewees was contacted by mail at least three weeks in advance of the day they were to be interviewed. A sample of the letter that was sent to each person was included in Appendix.

The requested time interval for each interview was forty-five minutes. However, the duration of the interviews varied from thirty minutes to three hours and twenty minutes. Each interviewee was given

the widest latitude of response. Five of the interview questions were asked of all respondents. These questions pertained to the role of the public secondary schools and colleges and universities in the field of traffic safety education, the basic course outline of a satisfactory driver education course, the professional qualifications of teachers in this field, and the steps that must be taken to improve the present course offering.

The data collected from the interviews was tabulated and analyzed. It was then integrated into the information obtained from the survey of literature.

Conclusions relating to program philosophy, organization, and content, were incorporated into the planning stages of the Washington Traffic Safety Education Project conducted by the Office of the Superintendent of Public Instruction during the 1967-68 school year. This is not to say that the results of this study served as the fundamental and broad guidelines for the Project, but that they were tested in the initial stages of developing a comprehensive program in an actual public school environment. They did prove to be of value in determining needs relative to staff, facility, and scheduling requirements. The Project afforded a broad test of the results of this study because the Project consisted of twelve separate traffic safety education programs.

Limitations of the Study

The purpose of this study was related to the quantitative needs of providing an acceptable, or satisfactory, driver and traffic safety education program in the secondary schools of the state of Washington. No attempt was made to estimate the costs of such a course offering because of the wide variation found in the economic conditions of each community and school district in the state. Administrators responsible for supervising the program are encouraged to make a preliminary survey of the costs according to the quantitative estimates provided herein.

Only minimum standards were considered for determining the quantitative needs of staff, facility, and time standards. This factor must be realized by those planning to incorporate a new course into their curriculum, and those considering improvements to a course of study already in operation. In either case, if it is determined that an improved course above the minimum standards is desirable, the data may again be useful by simply increasing the quantities considered to the desired level, keeping all other variables equal, and then following the same procedures to make the final estimates.

The course guidelines stated herein pertain only to traffic safety education courses as they can be operated within the state of Washington. All of the data collected in the study pertained to the Washington conditions, and cannot be assumed to be typical of any other state. It is

recognized that Washington has an established financial support capability derived from reimbursement funds at the state level. It is also recognized that the public schools cannot now meet the minimum standards by providing a satisfactory course for every child of secondary school age currently enrolled in the public and private schools of the state. However, it is hoped that the results of this study may be combined with other current research efforts in such a way that school administrators may receive maximum benefits from them.

This study does not attempt to specify criteria for text book selection or other specific materials that could be used in the classroom, simulation, multiple car off-street range, or on-street driving instruction. Such materials may be better selected by local school district personnel who are familiar with the district budget, local program design, instructor preferences, and all other considerations of a local nature.

II. DEFINITIONS OF TERMS USED

To avoid any confusion of intent or meaning, the following terms are defined according to their use in this study.

Traffic Safety Education

An organized secondary school course offered to students who have reached, or who are within six months of becoming the legal driving age. The intent of this course of instruction is to develop sound traffic

citizens who reflect positive pedestrian and driver attitudes, and possess demonstrable perceptual and manipulative driving skills.

Integrated Traffic Safety Education Program

A program which coordinates all learning experiences of youth in the classroom, simulator, multiple car off-street range, and on-street driving phases of the program into the same time frame. The experiences are gained systematically in a progressive and sequential manner by operating the various phases of the program concurrently.

Simulation

Any mechanical device which uses a film presentation to create the image of a traffic environment to which the student responds by engaging the controls of a mock automobile, and herein referred to as simulator instruction.

Multiple Car Off-Street Driving Range

An area removed from public use designed to allow one instructor to control the movements of a limited number of students in automobiles, simultaneously performing a variety of traffic maneuvers, while the instructor remains outside the cars. The automobiles must be equipped with some means of communication whereby the instructor can communicate with one or all of the students at a time. This technique is herein referred to as range instruction.

Traffic Safety Experts

Those persons contacted during the course of this study who, by virtue of experience, background, and position are recognized to be authorities in the field of traffic safety in the state of Washington, were termed traffic safety experts.

Four Phase Program

A traffic safety education program design that incorporates, in a sequential manner, the integrated learning experiences for students as they progress from the classroom to the simulator, the simulator to the multiple car off-street driving range, and the range to the on-street phase of the program.

Three Phase Program

A traffic safety education course which combines either simulator or range instruction with classroom and on-street instruction.

Classroom Instruction

That portion of the traffic safety education program in which groups of students receive instruction in the traditional teacher directed classroom environment.

On-Street Instruction

That portion of the traffic safety education program which takes place inside a dual-control automobile in which one instructor, located inside the vehicle, teaches one student, positioned in the driver's seat, and directs one or more observers in the back seat, while maneuvering under real traffic conditions on public streets and highways.

Traffic Safety Educators

Five faculty members of two universities and one college that offer comprehensive teacher preparation programs in the traffic safety field, who were consulted for this study.

Traditional Program

A traffic safety education course in which students receive instruction in a teacher directed classroom and in a dual control vehicle which is operated entirely under real traffic conditions on public streets and highways.

CHAPTER II

REVIEW OF THE LITERATURE

The references cited herein have a direct relationship to the traffic safety education course content and design. Because of the enactment of recent federal and state legislation, only those sources that approximate the new standards were considered.

The Highway Safety Program Standards were issued by the Secretary of Transportation under the authority of the Highway Safety Act, Public Law 98-564, of September 9, 1966. The initial standards were issued on June 27, 1967, and additional standards will be added as time passes. Since the initial standards were issued, no changes have been made relative to traffic safety education programs. It is appropriate to review both the act and the standards.

The general purpose of the federal act is stated in Section 402:

> Each state shall have a highway traffic safety program approved by the Secretary, designed to reduce traffic accidents and deaths, injuries and property damage resulting therefrom. Such programs shall be in accordance with uniform standards promulgated by the Secretary. Such uniform standards shall be expressed in terms of performance criteria (27:1).

Further, Section 402(b)(1) states that:

> The Secretary shall not approve any State highway safety program under this section which does not . . . (E) provide for a comprehensive driver training program, including (1) the initiation of a State program for driver education in the school systems

> or a significant expansion and improvement of such a program already in existence, to be administered by appropriate school officials under the supervision of the Governor . . .; (2) the training of qualified school instructors and their certification; (3) appropriate regulation of other training schools, including licensing of the schools and certification of their instructors; (4) adult driver training programs, and programs for the retraining of selected drivers; and (5) adequate research, development, and procurement of practice driving facilities, simulators, and other similar teaching aids for both school and other driver training use (27:2).

To comply with this provision of the Highway Safety Act, the Secretary issued the following standards in June, 1967:

> Standard: Each State, in cooperation with its political subdivisions, shall have a driver education and training program. This program shall provide at least that: I. There is a driver education program available to all youths of licensing age which: (A) Is taught by instructors certified by the State as qualified for these purposes. (B) Provides each student with practice driving and instruction in at least the following: (1) Basic and advanced driving techniques including techniques for handling emergencies. (2) Rules of the road, and other state laws and local motor vehicle laws and ordinances. (3) Critical vehicle systems and subsystems requiring preventative maintenance. (4) The vehicle, highway, and community features: (a) that aid the driver in avoiding crashes; (b) that protect him and his passengers in crashes; (c) that maximize the salvage of the injured. (5) Signs, signals, and highway markings, and highway design features which require understanding for safe operation of motor vehicles. (6) Differences in characteristics of urban and rural driving including safe use of modern expressways. (7) Pedestrian safety (28:10).

It is clear, then, that the federal Highway Safety Act of 1966, and the pursuant standards issued by the Department of Transportation, provide an outline for the implementation and development of traffic safety education programs throughout the country. However, the standards are broad enough so that the states are allowed a wide latitude for

developing programs that are best suited to the individual state's needs. This flexibility allows the states to assume the initiative and carry out a progressive program within the framework of the federal guidelines.

The 40th session of the Washington Legislature did not delay in taking action to implement the federal act. Two laws were passed, before the Department of Transportation issued the federal standards, that enhanced the growth of the state's traffic safety education efforts. House Bill Number 227 was passed into law on March 21, 1967. This law stipulates that:

> The department of motor vehicles shall not consider the application of any minor under the age of eighteen years for a driver's license unless . . . (2) The minor has satisfactorily completed a driver education course conducted by a recognized secondary school, that meets the standards established by the Office of the State Superintendent of Public Instruction or the minor has satisfactorily completed a driver education course, conducted by a commercial driving instruction enterprise, that meets the standards established by the Office of the State Superintendent of Public Instruction ans is officially approved by that office on an annual basis: Provided, however, that until July 1, 1969, the director may upon showing that a driver education course was not available to the minor waive said requirement if the minor shows to the satisfaction of the department that he has the ability to operate a motor vehicle in such a manner as not to jeopardize the safety of persons or property (29:1-2).

This act does not require that driver education courses be offered in every secondary school in the state, and it does allow the local districts some time to establish a means of meeting the student's needs for such a course. The waiver provision is an attempt on behalf

of the Legislature to give the public schools enough time to develop a course of instruction, hire staff members qualified to teach in the field, and determine the best scheduling arrangements within the context of the existing curriculum. However, the waiver provision expires on the same date that the penalty clause for non-compliance with the federal act becomes active. Thus, the public schools are not required to provide courses in traffic safety education for all students under the age of eighteen years, but those students must have satisfactorily completed such a course before they are eligible to take a driver license examination. It would be difficult to assume that the parents of those people would not look to the public schools for such course offerings.

The public schools have a two-year period in which to indicate an intention to provide a course in traffic safety education, and consequently avoid the penalties to the state under the federal act, or to allow some other public or private agency to meet this need. If the public schools do not comply with the laws, the Legislature will be faced with determining how the requirements will be met during the 1968 session.

The second law passed by the 40th session of the State Legislature dealing with traffic safety education was House Bill 268. This act created the Washington State Traffic Safety Commission. The commission was designed to accomplish two central objectives: (1) Centralize and unify the efforts of public and private agencies in the State concerned

with traffic safety, under the direction of the Governor; and (2) comply with the Highway Safety Act of 1966 and thereby avoid the penalties provided in that law. The first objective consists of a number of specific secondary objectives. Some of these are:

> . . . (1) To find solutions to the problems that have been created as a result of the tremendous increase of motor vehicles on our highways. . .; (2) To plan and supervise programs for the prevention of accidents on streets and highways including but not limited to educational campaigns designed to reduce traffic accidents . . .; (3) To promote and improve driver education; (4) and to authorize the Governor to perform all functions required to be performed by him under the federal Highway Safety Act of 1966 (30:1-2).

The Commission is to be made up of the Governor as chairman, the State Superintendent of Public Instruction, the Director of the Department of Motor Vehicles, the Director of Highways, the Chief of the State Patrol, a representative of the Association of Washington Cities, a member of the Association of County Commissioners, the county road administration engineer, and a representative of the judiciary to be appointed by the Governor.

Both of the above bills provided for additional funds at the state level for traffic safety education courses in local school districts. House Bill 227, Section 11, increased the driver education fees on traffic fines from $2.00/$20.00 of fine, or any portion thereof, to $3.00/$20.00 of fine. New Section 5 of House Bill 269 provides that:

> . . . each school district shall be reimbursed from the driver education account: Provided, that the State Superintendent

> shall determine the approximate per pupil cost of driver education and may reimburse up to seventy-five percent of the estimated per pupil cost of driver education (29:56).

Both of these acts of the State Legislature make it clear that the public schools have a role to play in the traffic safety field, and it appears that it is the intent of the Legislature to help the public schools perform this task. The means for establishing a satisfactory, statewide program have been created and no attempt has been made to legislate curriculum or certification requirements. These standards have been delegated to the State Superintendent of Public Instruction. It is appropriate, then, to examine the literature relating to curriculum, content, method, and design to determine some guidelines.

The National Commission of Safety Education of the National Education Association sponsored the fourth national conference on driver education in Washington, D. C., in November, 1963. In the report of the conference proceedings, some objectives and general program characteristics were enumerated. The specific objectives cited were:

> . . . to assist all students in: (1) learning the appropriate knowledge for increasing their efficiency of living in the total traffic environment . . . ; (2) learning fundamental driving skills and establishing basic and correct skill habits; (3) achieving a desirable pattern for behavior in our traffic society; (4) developing the ability to recognize, analyze, and respond to traffic situations in a manner that demonstrates proficiency in the driving task; (5) developing understanding of both driver and pedestrian limitations, obligations, and responsibilities, from legal and social viewpoints; (6) understanding how society may attain maximum efficiency in the operation of its motor vehicle transportation system (18:3).

The goals mentioned above may relate to specific objectives, but certainly they encompass the general concepts with which traffic safety education is concerned. The report further defines the subject matter that should be included in the traffic safety education program, the manner in which learning experiences should be coordinated, and the time span needed to present the experiences to the student specific topics to be covered (18:19-23).

The Superintendent of Public Instruction published a curriculum guide for traffic safety education courses in the secondary schools of the state of Washington. The guide, published in 1965, outlines the legal aspects for teacher certification, the minimum standards for recognition of accredited courses, and defines the nature of Washington's traffic safety problem and the role of public education in reducing the annual traffic toll. The most recent legal requirements for a statewide public school program have already been discussed in this chapter.

The objectives of Washington's traffic safety education program do not vary widely from those of the National Commission on Safety Education. The minimum course standards are quite different, however, in that a minimum course in this state must consist of thirty clock hours of classroom instruction, six clock hours of behind-the-wheel training, and twelve clock hours of observation time. The guide separates the course into two parts: (a) classroom instruction and (b) laboratory

instruction. The laboratory portion includes all learning experiences presented to students outside of the environment of a teacher-directed classroom. Thus, instruction in a driving simulator or on a multiple car range would be classified as laboratory experience. "Behind-the-wheel" instruction is thought of as being the same as on-street experience in a dual-control automobile. Further, the guide allows for a substitution of on-street experience with either simulator or multiple car range instruction. Simulator experience "must be in the ratio of 4 to 1--that is, four hours of simulated experience to each hour of actual practice driving instruction in an automobile" (25:16). Further, "it is recommended that not more than two hours of the six (or more) clock hours per student in practice driving instruction be provided on an approved simulator" (25:16). There seems to be little empirical basis for these requirements, yet the use of driving simulators and multiple car range is growing in the state.

The guide outlines an acceptable classroom and laboratory program.

> The course requirement of classroom instruction as prescribed by state law consists of thirty to sixty hours. The driving instruction is organized to consist of six to eight clock hours. Twelve to eighteen clock hours must be devoted to observation time during practice driving (25:15).

A local school district may operate a traffic safety program that does not conform to these standards, but the instructional costs of such a

program would not qualify for reimbursement from the state driver education fund.

The guide further suggests units of instruction for the classroom and laboratory experiences although these units are not required for the course to be approved by the Office of the State Superintendent of Public Instruction. The six classroom units are entitled: (1) The Traffic Problem, (2) The Driver, (3) The Automobile, (4) Hours and Regulations, (5) Driving Skills, and (6) The Pedestrian and Other Highway Users. A number of resource materials, unit objectives, and student activities are suggested for each of these classroom units.

The suggested units for laboratory instruction are designed to be used with on-street instruction only. This is probably due to the fact that most traffic safety education programs in Washington are the on-street method of giving students driving experience, but the recent increased usage of driving simulators and multiple car ranges will undoubtedly create a need to establish guidelines for utilizing these methods in an approved program. At present the suggested laboratory units include the following titles: (1) Getting Acquainted With the Car, (2) Manual Shift Cars, (3) Automatic Transmission Cars, (4) Maneuvers--Standard and Automatic Transmissions, (5) Open Highway Driving, (6) Driving in City and Residential Areas, (7) Special Teaching Aids.

The last unit defines driving simulation, multiple car off-street range, off-street practice areas, and psycho-physical testing devices, but no standards are enumerated relative to how these should be used to affect improvement to an existing program. These are the stated objectives and program characteristics of an acceptable traffic safety education program defined by the State Superintendent of Public Instruction in this state.

An annual analysis of the growth, cost, and execution of the program in Washington State is published every two years by the Office of the State Superintendent of Public Instruction. This report reviews all legislative action taken by the Legislature during the biennium that affects the traffic safety education program. It also presents statistics concerning the number of districts offering such a program, the number of high schools in the state in which the program is offered, the number of students enrolled in public high schools who are eligible to take an approved course, the actual number of students completing such a course for which reimbursement was paid, the cost of administering the program in each school district as well as the costs incurred by the office of the State Superintendent of Public Instruction, the number of teachers certified to teach traffic safety education in the state, and the number of teachers actually teaching in the field, the number of instructional hours in every course in each school district in the state during and after

school hours, and the average cost per instructional hour from each school district submitting an application for reimbursement. All of these statistics are presented for each year of the biennium, together with a combined total for the two-year period.

This report is significant in terms of this study because it does illustrate how well the standards for traffic safety education presented earlier in this chapter are being met. For example, the U. S. Department of Transportation and the National Commission on Safety Education recommend that traffic safety education courses should be available for all secondary school aged youth. This is also stated as a desirable goal in the Washington Driver Education Guide, yet the report indicates that during the 1965-66 school year there were 152,830 students enrolled in grades 10, 11, and 12 in the public high schools in the state, and of those 25,517, or 16.70 per cent completed an approved course. During the 1966-67 academic year, 154,762 students were eligible to enroll in an approved course, yet only 32,821, or 21.21 per cent did complete such a program (26:7). Further, during the first year of the biennium, 174 school districts of 252 potential districts participated in the program. This involved 213 individual high school districts and 246 individual high schools (26:6). So, the program is growing each year, and the majority of the public high schools are offering an approved course. However, a small minority of the eligible students are completing an

approved program, which seems to indicate that something must be done to make the course available to students enrolled in high schools where no course now exists, and in the schools where programs are now being carried on something must be done to increase the capacity of the course offerings.

Complementing the federal and state guidelines relating to the organization, content, and course requirements outlined above are two college level textbooks on traffic safety education. Driver and Traffic Safety Education, written by Drs. James E. Aaron and Marland K. Strasser, presents a number of suggestions pertaining to the objectives, organization, and course content for traffic safety education programs. Again, the objectives stated in this text do not vary greatly from those stated in the publications reviewed above. Suggestions concerning the organization of the course do differ significantly.

The authors identify a number of factors that influence the traffic safety education curriculum, i.e., legislative requirements established by state and federal governments, the number of students that the program must accommodate, the source and amount of revenue available for the program, the size of the school district as it relates to the type of program organization and the availability and teaching capabilities of the staff (1:107). However, the authors recommend that the classroom phase of instruction be a minimum of one semester in length, comprised

of some ninety hours of instruction. The laboratory phase should consist of:

> . . . a minimum of 6 clock hours (but preferably 8 clock hours) of practice driving time per student. The minimum amount of time assigned to a complete program should be no less than 45 hours of classroom instruction and 6 clock hours of laboratory instruction per student (1:108).

The authors feel that these standards would allow enough time for competent, well-prepared teachers to develop the necessary understanding of the traffic safety problem, perceptual skills and habits, and manipulative skills of beginning drivers that the public schools are realistically able to influence.

The several types of laboratory programs available are also outlined in this text. The recommended standards for organization of each type parallel the standards set forth by the National Commission on Safety Education. If only the dual-control car method is to be used in a particular program, the six to eight hours of laboratory instruction per student is acceptable, but the program costs and amount of time needed are greater than the other types of organizational plans for laboratory instruction. The following formula is offered as an aid in determining the number of periods, teachers, and days required to complete a dual-control car type of laboratory instructional program. First, determine six factors:

> (1) the number of school days per year, (2) the number of teaching periods per day per instructor, (3) the minutes per class period,

(4) plan to put four students in a car per period, (5) the number of students eligible for driver training per year, and (6) the number of hours or periods needed by each student in a dual control car (1:112).

From the above, the following formula is derived:

$$\frac{\frac{\text{No. of teaching per.}}{\text{day}} \times \frac{\text{No. of days}}{\text{year}} \times \frac{\text{No. of students}}{\text{period}}}{\frac{\text{Number of periods required}}{\text{student}}} = \text{No. of Students (1:112)}$$

The multiple car off-street driving range and driving simulator laboratory programs are also considered in the text. When either, or both, of these types of programs are available, the authors comply with the recommendations offered by the National Commission of Safety Education. The Commission recommends that when driving simulators only are used with on-street instruction, "not more than one-half of the 6 (or more) clock hours per student in laboratory instruction be provided on state-approved simulators" (18:22). Further, the recommended time ratio for simulator instruction is "at least 4:1--that is, at least four hours of simulated experience to each one hour of experience at the controls of a practice driving car" (18:23). A definite standard has not yet been established by the Commission, and Aaron and Strasser do not suggest such a standard. Perhaps the best explanation for the absence of recommended standards for multiple car off-street instruction is found in a statement by the Commission:

> It is recommended that experience on a multiple car driving range be supplemented by one or more hours of practice under real traffic conditions in a dual-control car. In the absence of a sufficient amount of investigation and experience in this area, it is not feasible to recommend a definite ratio between time on a multiple car driving range and time for on-street practice in a dual control car (18:24).

The Commission's recommendations were published in 1964, and in 1965, Dr. Richard W. Bishop, an associate professor at Florida State University, published a study entitled, "Comparing the Effectiveness of various Combinations of On-Street and Multiple Car Driving Range Instructional Hours." Dr. Bishop conducted this study in cooperation with the Brevard County Public Schools, and reports that an established time standard may be possible. One of the conclusions of this particular study is that 6 hours of multiple car range experience develops the basic driving skills, perceptual habits, and understandings to a degree no less significant than the same amount of on-street experience (6:19). Bishop states, however, that this does not mean that a student should not have the opportunity to experience real traffic situations on public streets and highways. This is due, he feels, to a limitation of most multiple car off-street ranges that exist today in that students seldom travel at speeds in excess of twenty miles per hour, and the driving situation of the range is a controlled one when operated by a competent teacher. But in terms of the contributions both driving

simulators and multiple car off-street ranges make to the public school program, Bishop says:

> . . . driving ranges and simulators may prove to be the savior of the laboratory phase of driver and traffic safety education, since they help to solve the quantity-quality-cost problems facing public education in general and driving and traffic safety education in particular (6:20).

Dr. Thomas A. Seals completed a research project at Florida State University in August of 1966. This study was a published doctoral dissertation entitled, "An Evaluation of Selected Driver and Traffic Safety Education Courses." This research design compared four types of traffic safety education programs including a traditional course consisting of classroom and on-street instruction only; a three-phase course consisting of classroom instruction, multiple car off-street driving range experience, and one hour of on-street experience; and two types of four-phase programs that combined and integrated instructional treatments in the classroom, in a driving simulator, on a multiple car range, and on-street driving in a dual control automobile.

Dr. Seals reports that when he compared the test scores of each of the four groups, obtained from a driving knowledge test and the McGlade Road Test, which were administered at the conclusion of the instructional period, the following results were obtained: (1) On the knowledge test both of the four-phase groups scored higher than either the traditional group or the three-phase group, but there were no

significant differences between the two four-phase groups; (2) on the McGlade Road Test the students in the traditional program and either one of the four-phase programs scored significantly higher than the students in the three-phase program, yet there were no significant differences between the first three groups (23:62).

Seals concluded that in terms of obtaining knowledge of the driving task, driving simulators do make a significant contribution. Further, in terms of driving performance in an actual driving environment on public streets and highways, traffic safety education courses make a better contribution in terms of preparing young, beginning drivers if they combine on-street, simulation, and range instruction with classroom experience, or if all of the laboratory instruction is accomplished in a dual control vehicle in real traffic situations than courses offering a three-phase experience including a large portion of laboratory experience on a multiple car off-street driving range. Seals reports that the simulator instruction appears to add significantly to the knowledge of the learner, and when used in conjunction with range and on-street instruction it also adds to the manipulative and perceptual skill levels of the learner. He does not intend to discount the value of multiple car range instruction, but he does point out a few of the limitations of this method. For example:

> . . . it is felt that limitations in design and size of off-street multiple car driving ranges do not permit students to acquire many of the skills needed to cope successfully with opposable traffic.

> On the other hand, the range technique enables learners to master certain basic and essential operational skills, procedures, and habits. Because the facility provides instruction at a comparatively low cost per pupil and can furnish worthwhile student experiences, the range is often considered an important part of comprehensive and effective courses (23:68).

However, when driving simulators and multiple car off-street driving ranges are included as instructional methods in a traffic safety education course, new problems are created for the school administrator who is responsible for program planning, scheduling, and determining the number of staff members and automobiles needed to carry out the program. Both of these methods reduce the number of hours required in an on-street instructional effort, and both reduce the number of teachers needed to handle a larger number of students enrolled in the course. Yet if both methods are to be used, the quality of the over-all program may be maintained at least at the same level as for the traditional program. Therefore, the formula presented earlier in the review of the text written by Aaron and Strasser is no longer adequate because it is designed to be used with the traditional program.

To overcome this problem, Aaron and Strasser include a formula devised by Dr. Richard Bishop, published in "Safety Education" in December, 1964. This formula, designed to determine the number of instructor hours needed to conduct a four-phase program, is also included in the Driver Education Guide published by the Washington State

Superintendent of Public Instruction. To determine the program needs in terms of teachers, automobiles, and instructional hours, four factors must be considered: (1) Instructor hours, (2) the number of students enrolled in the program, (3) the amount of time required for each student in a driving simulator or on a multiple car range, and (4) the number of cars on a range or units in a simulator. Then the following formula may be used:

$$I = \frac{ST}{U}\ (\text{Simulator}) + \frac{ST}{U}\ (\text{Range}) + ST\ (\text{On-street}) \qquad (8:113\text{-}114)$$

The obvious problem with the above formula is that it does not allow the administrator to determine the number of classroom or laboratory sections, and schedule the number of students in each section. Another weakness is that it is intended to relate to the total program needs during a full day, and does not allow for variations by teacher period during the day. Therefore, it would be useful in terms of planning general program requirements, or establishing tentative needs, but it would be quite limited in its application beyond that point.

It is clear, then, that there are several ways to meet the objectives of traffic safety education and a number of considerations to be made when deciding upon the various teaching methods to be used in accomplishing these goals. In this state, the traditional approach is the most common, but recent events appear to be creating new needs. It is

appropriate, then, to survey the traffic safety scene in an attempt to define the directions of change.

CHAPTER III

REPORT OF THE STUDY

I. GROUPS OF PERSONS INTERVIEWED

The persons interviewed for this study may be grouped into six categories. Group I includes persons directly involved in directing some portion of the public school traffic safety education program in Washington State. The group includes fourteen school district superintendents, two department chairmen, two directors of commercial driving enterprises, and one school district curriculum director. Group II includes five county sheriffs and five city chiefs of police. Group III includes six independent automobile dealers and the managing director of the Washington State Automobile Dealers Association. Group IV includes six traffic safety experts in Washington State and is comprised of the Chief of the State Patrol, the Director of the Department of Motor Vehicles, the Chairman of the Interstate Commission on Highway Policy of the Council for Western States Governments, the General Manager of the Automobile Club of Washington, the Co-chairman of the Citizens Advisory Committee to the Interim Committee on Highways of the State Legislature, and the Managing Director of the Washington State Safety Council. Group V includes five college professors from two universities

and one college, all of which are located in states other than Washington, that carry on comprehensive teacher preparation programs in the field of traffic safety education. Group VI includes two local insurance company representatives, one district representative, and one regional representative of three different insurance companies that sell automobile insurance.

II. QUESTIONS COMMON TO ALL INTERVIEWEES

Five questions, common to all groups, were asked in each interview. Table I illustrates how the interviewees answered the question, "Do you feel that driver education should be included in the public school curriculum?"

TABLE I

ANSWERS GIVEN BY ALL GROUPS TO QUESTION 1

Group	Response		Per Cent
	Yes	No	Yes
School Directors	17	2	89%
Law Enforcement Personnel	10	0	100
Automobile Dealers	7	0	100
Traffic Experts	6	0	100
Traffic Safety Educators	5	0	100
Insurance Representatives	4	0	100
Total	49	2	96

In response to question 1, only two persons of the fifty-one interviewed said that they did not think driver education courses should be taught in the public schools. Both of these individuals were directors of commercial driving enterprises.

The second question asked of all persons interviewed was, "Should driver education courses be taught by fully certified secondary school teachers?" Table II illustrates how this question was answered by all respondents. The question provoked three different answers: (1) "yes" the course should be taught by fully certificated secondary school teachers; (2) the classroom portion of the course should be taught by certificated secondary school teachers, but the laboratory portion should not be; and (3) "no" the driver education course should not be taught by fully certificated secondary school teachers.

Ten of the school directors, or 53 per cent, said that certificated teachers should conduct the classroom instruction, and five of these, or 26 per cent, said that this certification is needed for laboratory instruction also. The law enforcement personnel responded in a similar manner. Seven of them, or 70 per cent, said fully certificated teachers were needed in the classroom, but only three of these seven, or 30 per cent, said that the same certification is needed for laboratory instruction. Five of the traffic experts, or 83 per cent, said that classroom teachers should be fully certificated, but only one, or 17 per cent, said the same

TABLE II

ANSWERS GIVEN BY ALL GROUPS TO QUESTION 2

Group	Classroom Instruction			Laboratory Instruction		
	Yes	No	Per Cent	Yes	No	Per Cent
School Directors	10	9	53	5	14	26%
Law Enforcement Personnel	7	3	70	3	7	30
Automobile Dealers	6	1	86	3	4	30
Traffic Experts	5	1	83	1	5	17
Traffic Safety Educators	5	0	100	5	0	100
Insurance Representatives	2	2	50	1	3	25
Total	37	17	69	18	33	35

for laboratory instruction. All of the traffic safety educators said that teachers of traffic safety education should be fully certificated secondary school teachers. They did not distinguish between the two phases of the program. Two of the insurance representatives, or 50 per cent, expressed the opinion that the classroom teacher should be fully certificated, but only one, or 25 per cent, felt the same was needed for teachers in the laboratory phase.

The third question asked of all persons interviewed was, "Who should be responsible for certifying teachers of traffic safety education?" The responses to this question are tabulated in Table III below.

TABLE III

ANSWERS GIVEN BY ALL GROUPS TO QUESTION 3

Group	Superintendent of Public Instruction	Washington Traffic Safety Commission	Per Cent Yes
School Directors	16	3	84%
Law Enforcement Personnel	3	4	30
Automobile Dealers	3	0	43
Traffic Experts	6	0	100
Traffic Safety Educators	5	0	100
Insurance Representatives	4	0	100
Total	37	7	73

The interviewees who answered Question 3 answered it in three different ways. Sixteen, or 84 per cent, of the school directors thought that the certification of driver education teachers should be a function of the State Superintendent of Public Instruction, but three of them, or 16 per cent, thought that the Washington Traffic Safety Commission should certify teachers in this field. At the time the interviews were conducted in this state, the Legislature had not acted upon the legislation which created the Commission, so this answer reflected the opinions of the respondents should the Commission be created. Three of the law enforcement personnel, or 30 per cent, believed that the State Superintendent of Public Instruction should be responsible for certifying teachers; four, or 40 per cent, thought the Traffic Safety Commission should be responsible; and three, or 30 per cent, did not feel qualified to answer the question. The remainder of the interviewees felt the State Superintendent of Public Instruction should certify teachers of traffic safety education.

The fourth question asked of all persons interviewed was, "Should the state colleges and universities of this state provide on-campus teacher preparation programs in traffic safety education for both graduate and undergraduate students?" Table IV illustrates how this question was answered by all groups.

Seventeen, or 89 per cent, of the school directors thought that the state colleges and universities in Washington should provide on-campus

teacher preparation programs in the field of traffic safety education, and two of the directors, or 11 per cent, thought that the colleges and universities should not provide such programs. Nine, or 90 per cent of the law enforcement personnel answered "yes" to the question, and one, or 10 per cent said "no." Again, all of the automobile dealers, traffic experts, traffic safety educators, and insurance representatives answered "yes" to the question.

TABLE IV

ANSWERS GIVEN BY ALL GROUPS TO QUESTION 4

Group	Response		Per Cent
	Yes	No	Yes
School Directors	17	2	89%
Law Enforcement Personnel	9	1	90
Automobile Dealers	7	0	100
Traffic Experts	6	0	100
Traffic Safety Educators	5	0	100
Insurance Representatives	4	0	100
Total	48	3	94

The fifth question asked of all interviewees was, "What can be done to improve the quality of the present traffic safety education program being conducted in the public secondary schools of this state?" Table V illustrates the diversity of answers given to this question, and

TABLE V

ANSWERS GIVEN BY ALL GROUPS TO QUESTION 5

Answers Given	School Directors (N = 19)		Law Enforc. Pers. (N = 10)		Auto Dealers (N = 7)		Traffic Experts (N = 6)		Traffic Safety Educ. (N = 5)		Insurance Rep. (N = 4		Total (N = 51)	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1. Raise the certification requirements for teachers	5	26	6	60	3	43	6	100	5	100	3	75	28	55
2. Start using more ranges and simulators	7	37	3	30	0	0	3	50	4	80	2	50	19	37
3. Identify a body of subject matter and develop a scope and sequence of instructions for the course	4	21	5	50	0	0	4	67	1	20	1	25	15	29
4. Make the course available to all students in the public schools	4	21	6	60	3	43	2	33	5	100	2	50	22	43
5. Gain the support of public school administrators for the program	0	0	3	30	2	29	5	83	4	80	1	25	15	29
6. Provide more on-street instruction and less observation in the car	7	37	4	40	1	14	1	17	0	0	1	25	14	27

TABLE V (continued)

Answers Given	School Directors (N = 19)		Law Enforc. Pers. (N = 10)		Auto Dealers (N = 7)		Traffic Experts (N = 6)		Traffic Safety Educ. (N = 5)		Insurance Rep. (N = 4)		Total (N = 51)	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
7. Better supervision of the program is needed at the state level.	2	11	0	0	0	0	4	67	0	0	0	0	6	12
8. The colleges and universities in the state need to implement good programs in the field of traffic safety	4	21	1	10	0	0	4	67	5	100	1	25	15	29
9. Conduct more research in the traffic safety field.	2	11	0	0	0	0	0	0	0	0	0	0	2	4
10. Do away with the practice of using educational television with large groups of students.	1	5	0	0	0	0	1	17	0	0	0	0	2	4
11. Provide more state funds to operate the driver education program.	1	5	0	0	0	0	0	0	0	0	0	0	1	2
12. Use vehicles with standard transmission for on-street instruction.	0	0	0	0	1	14	0	0	0	0	0	0	1	2

TABLE V (continued)

Answers Given	School Directors (N = 19)		Law Enforc. Pers. (N = 10)		Auto Dealers (N = 7)		Traffic Experts (N = 6)		Traffic Safety Educ. (N = 5)		Insurance Rep. (N = 4)		Total (N = 51)	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
13. Improve the attitudes of drivers.	0	0	0	0	0	0	4	67	0	0	2	50	6	12
14. Stop contracting the on-street instruction to commercial schools.	0	0	0	0	0	0	1	17	0	0	0	0	1	2
15. Broaden the traffic safety education program to include all students in grades K-12.	0	0	0	0	0	0	1	17	0	0	0	0	1	2
16. Put more emphasis on how alcohol affects driver performance.	1	5	0	0	0	0	1	17	0	0	0	0	2	4
17. Invite more police officers into the classroom as guest speakers.	0	0	3	30	0	0	2	33	0	0	0	0	5	10
18. Include more first aid instruction in the course.	0	0	1	10	0	0	1	17	0	0	0	0	2	4

the frequency of each answer. Table V shows that a number of answers were given to Question 5. Many of the respondents offered several suggestions as to how the driver education program could be improved; therefore, the percentages do not equal 100 per cent for each group. The percentages do reflect the frequency of each response by group.

The most common suggestion made was to raise the certification requirements for teachers of driver education. This answer was given by five school directors, six law enforcement personnel, three auto dealers, six traffic safety experts, all five traffic safety educators, and three of the insurance representatives, for a total of twenty-eight or 55 per cent of the respondents.

The second most common suggestion made was that the course should be available to all students of secondary school age. Four school directors, six law enforcement personnel, three auto dealers, two traffic safety experts, all five traffic safety educators, and two of the insurance representatives for a total of twenty-two or 43 per cent of the respondents suggested that the course should be available to all high school students.

The third most common response given to Question 5 was that driver education courses should utilize driving simulators and multiple car off-street driving ranges to a greater degree. Seven of the school directors thought increased usage of ranges and simulators would improve the quality of the driver education program in this state, while three

traffic experts, four traffic safety educators, and two insurance representatives concurred in this opinion, for a total of nineteen or 20 per cent of the respondents.

Three answers to Question 5 were the fourth most common answers. The first expressed the opinion that educators must identify the significant subject matter in the field of traffic safety education, and then a logical scope and course sequence of instruction must be developed. Four school directors, five law enforcement personnel, four traffic experts, one traffic safety educator, and one insurance representative, for a total of fifteen or 29 per cent voiced this opinion. It is interesting to note that none of the automobile dealers expressed this opinion. The second answer given with the same degree of frequency was that traffic safety educators teaching in the public secondary schools, colleges, and universities of this state must gain the support of public school administrators before the program could be improved. None of the school directors voiced this opinion, but three law enforcement personnel, two automobile dealers, five traffic experts, four traffic safety educators, and one insurance representative did express this opinion. The third answer to question five given with this degree of frequency was that the state colleges and universities need to implement sound programs in the field of traffic safety. This answer did not pertain to teacher preparation alone, but also included programs in traffic engineering, traffic law

enforcement, and motor vehicle administration. Four school directors expressed this point of view, as did one law enforcement person, four traffic experts, all five of the traffic safety educators, and one insurance representatives. None of the automobile dealers voiced this opinion.

The fifth most common response category expressed the thought that by increasing the amount of on-street instructional time and decreasing the observation time spent in a dual control vehicle, the quality of the traffic safety education program would be improved. Seven of the school directors, four law enforcement personnel, one automobile dealer, one traffic expert, and one of the insurance representatives for a total of fourteen or 27 per cent of the interviewees expressed this idea. None of the traffic safety educators voiced this opinion.

Six of the interviewees, two school directors and four traffic experts, thought that the traffic safety education program in this state could be improved if the program was more thoroughly supervised from the state level. This opinion was stated in general terms and no suggestions were made relative to specific actions that could be taken by the office of the Superintendent of Public Instruction.

Six persons also said that the program could be improved if driver education courses would do more to develop better driving attitudes in students. Four traffic experts and two insurance representatives gave this response.

Five of the persons interviewed, three law enforcement personnel and two traffic experts, stated the opinion that the traffic safety education program could be improved across the state if police officers were used more in high school classrooms as guest speakers.

Two school directors felt that more research is needed in the entire traffic safety field before improvement in the traffic safety program could be significantly accomplished.

One school director and one traffic expert expressed the opinion that program improvement would be accomplished if educational television programs commonly used in driver education classrooms were eliminated.

Two persons, one school director and one traffic expert, also felt that program improvement would be realized if more emphasis was placed upon the effects of alcohol on a driver's performance in the traffic safety education program.

One law enforcement officer and one traffic expert suggested that more first aid instruction should be given in the classroom phase of the driver education program.

One school director said that more funds for operating the program were needed from the state level. One automobile dealer said that automobiles with standard transmissions should be used in the on-street portion of the program. One traffic expert said that the practice of contracting to a private driver instruction enterprise should be stopped. One

traffic expert felt that the traffic safety education program should be made more comprehensive and be included in the over-all K-12 curriculum.

III. RESPONSES TO QUESTIONS ASKED TO INDIVIDUAL GROUPS

In addition to the five questions asked of all interviewees, each group was asked questions that were germaine to its particular interest. The school directors were asked five additional questions. The sixth question asked was, "How would the public school program be affected if the state legislature passed a law requiring all youth between the ages of sixteen and eighteen, who wanted to obtain a driver's license, to provide the Department of Motor Vehicles with evidence of having satisfactorily completed a course in traffic safety education?" Table V illustrates how the school directors answered this question.

Twelve of the school directors, or 63 per cent, thought that driver education courses would be added to the secondary curriculum with or without the support of the educational community. Seven, or 37 per cent, held the opinion that enrollment would at least double in driver education courses. Six, or 32 per cent, thought a serious teacher shortage would result from such legislation. Three, or 6 per cent, said that a driver education course would be added to the high school curriculum on an extended day and/or year basis. Two people expressed the

TABLE VI

ANSWERS GIVEN BY SCHOOL DIRECTORS TO QUESTION 6

	Answers Given	Number of Responses	Per Cent of Total
1.	All high schools will be forced to offer driver education courses.	12	63%
2.	Increase enrollments in driver education courses at least two-fold.	7	37
3.	Create a serious teacher shortage.	6	32
4.	The course would have to be included in the curriculum but on an extended day and/or year basis.	3	16
5.	It would create a need to develop a special program for transient students and dropouts.	2	11
6.	Other courses in the curriculum would have to be terminated.	1	5
7.	School district policy on the granting of waivers would become a community issue.	1	5
8.	It would create a need to reassess the value of using commercial driving schools in the public school program.	1	5
	Total	33	

opinion that special programs for transient students and high school dropouts would have to be developed if all young people between sixteen and eighteen years of age had a need to complete a driver education course. One person, or 5 per cent, said that other curricular offerings would have to be terminated if a course in driver education was to be added to the total school program as a result of such legislation. One person also stated that school district policy on the granting of waivers, which is a provision of this law, would become a community issue. One person also felt that such a law would create a need to reassess the value of contracting the on-street portion of the public high school driver education course offering to commercial driving schools.

The seventh question asked of the school directors was, "Should the driver education course be expanded to forty-five hours of classroom instruction and more than six hours of on-street instruction? If so, would this kind of change make the course easier to schedule because of its conformity with the normal school quarter scheduling system?"

When answering the first part of this question, four (21%) of the directors said that the course should be expanded in both the classroom and on-street instructional areas, twelve (63%) said it should not be expanded, and three (16%) said they had no opinion because they did not have a driver education course offering in their school curriculum. However, seventeen directors (89%) said that the course would be easier

to schedule if it did coincide with the ninety-day semester system; two (11%) who did not comment on the first part of the question declined to comment on the second part as well.

The eighth question asked of the school directors was, "Do you approve of financing the major portion of the traffic safety education program by attaching a fee on fines assessed for traffic violations?" Five directors (26%) said "yes" to this question; six (32%) said "no"; and eight (42%) said that the source of revenue was not important as long as it did not have to come from local sources.

The ninth question asked in the interviews with school directors was, "Do you think that the current level of reimbursement from the state driver education fund is adequate?" Twelve persons (63%) answered "yes"; five people (26%) said "no"; and two persons said that they had no idea because they had no knowledge of the reimbursement program. Neither of these directors had a traffic safety education course in their program.

The tenth and final question asked of school directors was, "Do you think that the traffic safety education program in this state would be improved if multiple car off-street driving ranges and driving simulators were more commonly used as teaching techniques?" Five directors (26%) said that by utilizing these two teaching methods the course would be improved because they would enhance the quality of the program and increase the capacity of the course offering without adding new staff

members. Fourteen (74%) of the directors said that they did not know enough about these techniques to voice a valid opinion, and two persons (11%) said that the effectiveness of the course would be diminished if range and simulator instruction was more widely used.

Only one additional question was asked of the law enforcement personnel. The question was, "How does driver education blend with law enforcement to reduce the severity of today's traffic safety problem?" Table VII illustrates how these respondents answered the question.

TABLE VII

RESPONSES OF LAW ENFORCEMENT OFFICERS TO QUESTION 6

	Answers Given	Number of Responses	Per Cent of Total
1.	Law enforcement and driver education are both educational efforts; the former is selective and remedial, and the latter is preventive.	9	90
2.	Police officers should teach the on-street instruction and certificated teachers should teach in the classroom.	4	40
3.	Police officers can only help driver education teachers by appearing as guest speakers in driver education classes.	1	10
4.	No comment.	1	10

Table VII illustrates that nine law enforcement officers (90%) said that law enforcement and driver education are both educational

efforts. However, a distinction is made in the role of each because enforcement was interpreted as being basically concerned with selected drivers, or law violators, and remedial in that it is an attempt to correct the behavior which resulted in a violation of the law. Driver education has a different role because the emphasis is placed upon preventing violations and traffic accidents. Four officers (40%) said that police officers should teach the on-street portions of the driver education program. One person (10%) expressed the opinion that police officers could help teachers only by appearing as guest speakers in driver education classes. One person (10%) did not comment on the question. Again, the number of responses does not total 100 per cent because four officers expressed more than one opinion.

The automobile dealers were asked only one additional question also. The question was, "Could you provide three times as many free-loan automobiles as you now supply for driver education courses?" All of the dealers said they could meet such a demand. However, four (57%) said that the school authorities would have to notify them at least four months in advance of the date of delivery.

The traffic safety experts were asked one additional question, also. The question was, "Would you be in favor of requiring driver education of all youngsters between the ages of sixteen and eighteen years of age? If so, how would such a requirement affect the public

school driver education program?" All of the experts said that they would approve such a requirement. Table VIII illustrates the answers given to the second portion of this question.

Five of the seven traffic experts (83%) agreed that students between the ages of sixteen and eighteen years would increase enrollment pressures for driver education courses. They also felt that the parents of these youngsters would express a demand for the course to local school officials. Three of the experts (50%) said that school directors would be forced to add a driver education course to the regular school curriculum. Two (33%) of the experts said that such legislation would increase the use of range and simulator instruction. One person said that the colleges would have to train more teachers; one felt that the State Superintendent of Public Instruction would be forced to encourage the local districts to add driver education to the secondary school curriculum; one person also felt that such a law would enhance the growth of the commercial driving schools; and one person felt that the number of unlicensed drivers on the public roadways would be increased.

The traffic safety educators were asked three specific questions in addition to the five common questions. The first of these was, "Do you know of any mathematical formula that could be used to determine the staff and scheduling requirements for a traffic safety education program of any design that local school district administrators could use

TABLE VIII

RESPONSES OF TRAFFIC EXPERTS TO QUESTION 6

	Answers Given	Number of Responses	Per Cent of Total
1.	Parental and student demand for driver education would increase	5	83%
2.	The colleges would have to train more teachers	1	17
3.	The use of driving simulators and multiple car ranges would be increased in driver education courses	2	33
4.	The Superintendent of Public Instruction would be forced to encourage more schools to offer driver education courses	1	17
5.	The commercial driving schools would grow rapidly	1	17
6.	School boards, administrators, and teachers would have to accept driver education and add the course to the public school curriculum	3	50
7.	This requirement would increase the number of unlicensed drivers who operate motor vehicles on the public streets and highways	1	17

for program planning?" All five of the educators said "no" to this question. However, four of them said they were aware of valid formulas for planning a traditional traffic safety education course, but they also added that the formulas could not be used for three or four-phase programs with the same degree of reliability.

The seventh question asked of the group of college professors was, "Do you feel that a formula should be developed for the three and four-phase programs? Why?" One person (20%) said "yes" to this question; two persons (40%) said that perhaps a formula would be helpful; and two persons (40%) said "no" to the question. The one respondent who said that a formula should be developed felt that the formula would simplify the administrator's task. The other four interviewees said they seriously doubted that a formula could be developed because of the numerous combinations of three and four-phase programs; that is, a three-phase program may consist of classroom, on-street, and range or simulator instruction. The amount of range or simulator instruction combined with classroom and on-street instruction would determine program needs. The same is true of the four-phase program, but there are more possible combinations of instructional treatments in the four-phase program than the three-phase program.

The eighth question asked of each educator was, "How would you determine the staff, facility, and scheduling needs of a particular high school that conducted a four-phase program?" Table IX illustrates

TABLE IX

RESPONSES OF TRAFFIC SAFETY EDUCATORS TO QUESTION 8

	Answers Given	Number of Responses	Per Cent of Total
1.	Consider the program philosophy expressed by the administration.	3	60%
2.	Determine the number of students that the program must serve each semester.	5	100
3.	Establish the instructional time requirements for each phase of instruction.	5	100
4.	Design an integrated sequence of all phases of instruction.	4	80
5.	Determine the maximum student load capacity for each phase per instructional period.	5	100
6.	Determine the number of periods needed to accomplish the time requirements of the course design.	5	100
7.	Consider the teaching competency of the staff.	1	20
8.	Plan a comprehensive program at least a semester in length.	5	100

how this question was answered by the group. All five of the traffic educators would determine the number of students enrolled in a traffic safety education course each semester, the time requirements for each instructional phase of the program, the enrollment capacity for each phase instructional period of the school day, the number of periods required to satisfy the total time standard established for each phase of instruction, and all of the educators said they would plan a program of at least a semester in duration. Three persons (60%) said they would also consider the philosophy of the local schoold administration, and one person (20%) said he would consider the teaching competency of the staff.

The insurance representatives were asked one additional question: "Does your company offer reduced rates for automobile insurance to students who have successfully completed a traffic safety education course? If so, how much is the rate reduced for such students?" Three of the representatives (75%) said their companies did offer reduced rates. One representative (25%) said his company did not reduce rates for this reason. In response to the second part of the question, two persons (50%) said their companies reduced the rates by 15 per cent. One representative (25%) said his company reduced the rate by 25 per cent.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

I. SUMMARY

The purpose of this study was to gather information relative to the staff, program design, and scheduling needs of local school districts offering, or planning to offer, a traffic safety education course in the secondary school curriculum. Data was collected by surveying current professional policies at the state and national level, and by interviewing fifty-one persons directly concerned with, or interested in, the present traffic education effort in the state of Washington.

The study was conducted in three stages. The first phase lasted three and one-half months, from March 3, 1967, to May 20, 1967. During this time, forty-six interviews were conducted with school district superintendents, commercial driving school directors, county sheriffs, city chiefs of police, independent automobile dealers, traffic experts in the state, and representatives of insurance companies that are heavily involved with insuring property and persons against loss due to traffic accidents. The persons interviewed in this phase were classified into five categories: (1) school directors, (2) law enforcement personnel, (3) automobile dealers, (4) traffic experts, and (5) insurance representatives. The information obtained in this phase of the study was analyzed

and found to be deficient in terms of accomplishing the primary purpose of the study. This was largely due to the fact that a consensus was not forth-coming on all of the questions asked of all persons interviewed. This was due in part to the lack of familiarity with the traffic safety education program in the state evidenced by many persons in all groups.

Therefore, the second phase of the study was undertaken after July 1, 1967. This portion of the study consisted of five interviews with persons recognized as being authorities in traffic safety education. All of these persons are faculty members of universities and colleges which conduct comprehensive traffic safety programs. All of these individuals teach or direct graduate and undergraduate programs in the traffic safety field, and two of the interviewees wrote one of the two college textbooks intended for use in teacher education programs in this field.

In addition to the five questions asked of all persons interviewed in phase one, these educators were asked three additional questions pertaining to scheduling and subject matter content for satisfactory traffic safety education courses at the secondary school level. A consensus was reached by the educators on all but the fifth question asked of them, but this is understandable because they do not have a close working knowledge of the program in this state. They are well aware of the program requirements, reimbursement standards, and efforts being made by the Office of the State Superintendent of Public Instruction to administer

and improve the quality of the program in the state. Enough information was obtained from this series of interviews in regard to course content, time standards, and methods of scheduling various types of programs to tentatively establish testable guidelines in these three areas.

The third and final phase of the study was a test of the conclusions reached in phase two. These conclusions were reached by combining the data accumulated in the first series of interviews with that of the second series of interviews, and the information found in a search of the literature pertaining to course content, design, and research relating to an investigation of various types of traffic safety education programs.

The Washington Traffic Safety Education Project, conducted by the Superintendent of Public Instruction, was designed to compare the effectiveness of twelve different instructional treatments in this field. Naturally, all twelve programs required different combinations of content, time standards, and scheduling procedure in a real, functional school environment. Thus an opportunity was available to evaluate the preliminary conclusions reached in phase two of this study. This third phase started on September 1, 1967, and concluded June 6, 1968.

II. CONCLUSIONS

The first conclusion that may be made as a result of this study is that driver and traffic safety education is a function of the public

school as it relates to young people who are about to reach, or have reached, the minimum age of sixteen years, who wish to obtain a driver's license in this state. Forty-nine of the fifty-one persons interviewed during the course of this study said that they felt the public schools should provide a program designed to prepare young drivers to safely and efficiently operate a motor vehicle on the public streets and highways. However, the school directors felt that local funds should not be spent for this program from the annual district budget, and six of them (31%) felt that the current revenue source was not adequate.

Teachers of traffic safety education should hold at least a B. A. degree and have a background in safety education that would prepare them for a successful career in this field. The school directors and law enforcement personnel contacted during the course of this study were not in agreement with this conclusion, but the traffic experts, traffic safety educators and the National Commission of Safety Education strongly recommend this standard for beginning teachers. The school directors were obviously concerned about the cost and availability of persons with these qualifications should such requirements be established. Further, the State Superintendent of Public Instruction should be responsible for certifying teachers of traffic safety education.

The course content of a satisfactory traffic safety education course should conform to the broad outline expressed in the Highway

Traffic Safety Standards. This would include both classroom and laboratory instruction on the following topics: (1) basic and advanced driving techniques, (2) handling driving emergencies, (3) the motor vehicle laws of the state, (4) critical vehicle systems, (5) the social contributions of highway travel, (6) motor vehicle accident prevention, care of injured persons and the recovery from personal injury and property damage, (7) the geometrics of highway construction, (8) the characteristic differences in driving in urban and rural environments, and (9) pedestrian safety. The emphasis of such instruction should be placed not only upon preventing motor vehicle accidents, but upon reducing the severity and recovery from losses incurred in collisions as well.

The minimum time standards for a satisfactory course in traffic safety education should be as follows: (1) Classroom instruction should consist of a minimum of one school quarter, or forty-five hours, whichever is greater. (2) Laboratory instruction should be integrated with and conducted concurrently with the classroom experience. This should facilitate ease of scheduling and upgrade the quality of the present program because it would allow more time to treat the various topics in the basic course outline. Whether all or part of the course is taught during the normal school day or during an extended day program is of no appreciable significance. The important factor here is that the course should be extended over a forty-five to ninety day period so that the

desired experiences may be scheduled sequentially from the classroom through the laboratory portion of the program. This time standard was recommended by the National Commission on Safety Education, the traffic experts, and traffic safety educators.

Traditional traffic safety education courses may be scheduled over the recommended time span by using either of the formulas discussed in Chapter II. However, when range and/or simulator instruction is added to the course as an instructional treatment, a different method of scheduling is needed. The need for another method is created because the amount of instruction in each phase of the laboratory program should change, and the capacity of the range or simulator reduces the number of teachers needed. The number of on-street instructional hours may be reduced according to the number of simulator and/or range lessons completed by all students and depending upon how well the range-simulator instruction parallels experiences gained in other phases of the program. Generally, the scheduling procedure for three and four-phase programs may be accurately accomplished by following these steps:

1. Plan to enroll one-half of all students desiring the traffic safety education course each semester of the school year.
2. Determine if an equal number of students enrolled in the course are available each period of the school day. If so, the staff needs will remain the same each period; if not, the

number of teachers will vary each period that enrollments differ widely.

3. Determine the number of classroom hours available to meet the course requirements. This will determine the number of classroom sections needed each period, and the size of each section.

4. Decide upon the number of hours of range, simulator, and on-street instructional hours to satisfy the laboratory requirement. Combine this with the capacity of the simulator, range and on-street automobiles. Actual driving hours are significant, not the number of observation hours required. The observation requirement may be satisfied by adjusting the number of students in the back seat of the dual control vehicle as needed. This will determine the number of teachers needed in the laboratory phase each period and the number of days that must be devoted to range, simulator, and on-street instruction.

III. RECOMMENDATIONS

The colleges and universities in this state should provide a teacher preparation course, on-campus, for both graduate and undergraduate students preparing to teach in the traffic safety field. At the

time this study began, none of the colleges or universities in the state provided such on-campus courses. At the present time, two state colleges do offer a minor in safety education to undergraduate students. Graduate students may enroll in the same courses as undergraduate students, but no undergraduate major or graduate degree program exists in the state. The two programs that are presently operating on the campuses of two colleges are seriously limited to classroom and on-street experiences only. This condition restricts the preparation of teachers in this state to those two phases of the program. The college program needs to expand to encompass simulator, range, and multimedia techniques as well because the use of these methods is increasing steadily in the high schools of the state.

The State Superintendent of Public Instruction should revise the Washington Driver Education Guide to conform more closely with the recently published Highway Safety Standards and to upgrade the quality of the teacher preparation program in this state. Specifically, the thirty to sixty hours recommended for classroom instruction should be increased to forty-five to ninety hours. Secondly, there is no standard for range programs, or four-phase programs, expressed in the Guide. Realistic standards based upon current research should be clearly defined and allow for a significant reduction in on-street instructional time. This would encourage local districts with large enrollment problems to meet

the quantity-quality problem with a reasonable degree of efficiency. Third, the certification requirements for teachers of traffic safety education should be raised to include at least a B. A. degree with an undergraduate major or minor in the safety education field. This would enhance the qualifications of teachers and encourage the colleges and universities in the state to provide more comprehensive pre-service teacher preparation programs.

The colleges and universities in the state should provide more in the way of research services in the traffic safety field and teacher preparation programs. Pre-service teacher preparation programs should include range and simulator instruction as well as classroom and on-street experience to meet the growing demand for teachers adequately prepared to teach in all phases of the high school program.

A research study should be initiated by the State Superintendent of Public Instruction, or by the staff of one of the colleges or universities to investigate various ways to provide a satisfactory traffic safety education program in small, rural school districts that cannot afford to offer a course in the normal curricular structure. Perhaps the intermediate districts could be of assistance to such local school districts by providing a staff of trained and certified teachers who would travel to each small district and conduct the type of course best suited to the local needs of the rural district.

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APPENDIX A

LETTER OF APPOINTMENT

APPENDIX A

SAMPLE OF THE LETTER OF APPOINTMENT SENT TO ALL INTERVIEWEES

March , 1967

Dear :

You have been selected as one of seventy-five persons to be interviewed in connection with a research study being conducted by the Office of the State Superintendent of Public Instruction. As we stated in our first letter to you, we are trying to determine what must be done to improve the teaching of driver education in the public secondary schools of the state.

I would like to interview you on _____ between _____ and _____. The interview should require between 30 and 50 minutes. The following procedure is proposed for your approval. The length of the interview may be increased, or shortened, as you desire. The questions to be asked are enclosed with this letter for your consideration. Information concerning other related topics may be added if you wish. A tape recording will be made during the interview if you do not object. Please be assured that a written draft of the interview will be sent to you for your approval before any information gathered will be used as a direct quote, or general statement, in the final publication of the study. If you wish, a copy of the completed study will be made available to you.

Your cooperation in this matter will be greatly appreciated.

Sincerely yours,

Robert C. Munson
Graduate Assistant
Central Washington State College

RCM:cb

APPENDIX B

INTERVIEW QUESTIONS

INTERVIEW QUESTIONS ASKED OF SCHOOL DIRECTORS

1. Do you feel that driver education should be included in the public school curriculum?
2. Should driver education courses be taught by fully certified secondary school teachers?
3. Who should be responsible for certifying teachers of traffic safety education?
4. Should the state colleges and universities of this state provide on-campus teacher preparation programs in traffic safety education for both graduate and undergraduate students?
5. What can be done to improve the quality of the present traffic safety education program being conducted in the public secondary schools of this state?
6. How would the public school program be affected if the state legislature passed a law requiring all youth between the ages of sixteen and eighteen, who wanted to obtain a driver's license, to provide the Department of Motor Vehicles with evidence of having satisfactorily completed a course in traffic safety education?
7. Should the driver education course be expanded to forty-five hours of classroom instruction and more than six hours of on-street instruction? If so, would this kind of change make the course

easier to schedule because of its conformity with the normal school quarter scheduling system?

8. Do you approve of financing the major portion of the traffic safety program by attaching a fee on fines assessed for traffic violations?
9. Do you think that the current level of reimbursement from the state driver education fund is adequate?
10. Do you think that the traffic safety education program in this state would be improved if multiple car off-street driving ranges and driving simulators were more commonly used as teaching techniques?

INTERVIEW QUESTIONS ASKED OF LAW ENFORCEMENT PERSONNEL

1. Do you feel that driver education should be included in the public school curriculum?
2. Should driver education courses be taught by fully certified secondary school teachers?
3. Who should be responsible for certifying teachers of traffic safety education?
4. Should the state colleges and universities of this state provide on-campus teacher preparation programs in traffic safety education for both graduate and undergraduate students?
5. What can be done to improve the quality of the present traffic safety education program being conducted in the public secondary schools of this state?
6. How does driver education blend with law enforcement to reduce the severity of today's traffic safety problem?

INTERVIEW QUESTIONS ASKED OF AUTOMOBILE DEALERS

1. Do you feel that driver education should be included in the public school curriculum?
2. Should driver education courses be taught by fully certified secondary school teachers?
3. Who should be responsible for certifying teachers of traffic safety education?
4. Should the state colleges and universities of this state provide on-campus teacher preparation programs in traffic safety education for both graduate and undergraduate students?
5. What can be done to improve the quality of the present traffic safety education program being conducted in the public secondary schools of this state?
6. Could you provide three times as many free-loan automobiles as you now supply for driver education courses?

INTERVIEW QUESTIONS ASKED OF TRAFFIC EXPERTS

1. Do you feel that driver education should be included in the public school curriculum?
2. Should driver education courses be taught by fully certified secondary school teachers?
3. Who should be responsible for certifying teachers of traffic safety education?
4. Should the state colleges and universities of this state provide on-campus teacher preparation programs in traffic safety education for both graduate and undergraduate students?
5. What can be done to improve the quality of the present traffic safety education program being conducted in the public secondary schools of this state?
6. Would you be in favor of requiring driver education of all youngsters between the ages of sixteen and eighteen years?

INTERVIEW QUESTIONS ASKED OF TRAFFIC SAFETY EDUCATORS

1. Do you feel that driver education should be included in the public school curriculum?
2. Should driver education courses be taught by fully certified secondary school teachers?
3. Who should be responsible for certifying teachers of traffic safety education?
4. Should the state colleges and universities of this state provide on-campus teacher preparation programs in traffic safety education for both graduate and undergraduate students?
5. What can be done to improve the quality of the present traffic safety education program being conducted in the public secondary schools of this state?
6. Do you know of any mathematical formula that could be used to determine the staff and scheduling requirements for a traffic safety education program of any design that local school district administrators could use for program planning?
7. Do you feel that a formula should be developed for the three and four-phase programs? Why?
8. How would you determine the staff, facility, and scheduling needs of a particular high school that conducted a four-phase program?

INTERVIEW QUESTIONS ASKED OF INSURANCE REPRESENTATIVES

1. Do you feel that driver education should be included in the public school curriculum?
2. Should driver education courses be taught by fully certified secondary school teachers?
3. Who should be responsible for certifying teachers of traffic safety education?
4. Should the state colleges and universities of this state provide on-campus teacher preparation programs in traffic safety education for both graduate and undergraduate students?
5. What can be done to improve the quality of the present traffic safety education program being conducted in the public secondary schools of this state?
6. Does your company offer reduced rates for automobile insurance to students who have successfully completed a traffic safety education course? If so, how much is the rate reduced for such students?