

FINAL REPORT

**STATUS STUDY OF COMPREHENSIVE
AND RELEVANT DRIVER EDUCATION
PROGRAMS IN THE STATE OF
ILLINOIS**

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16. Abstract <p>Although driver education has been taught in the State of Illinois and throughout the United States since the 1950's, little was known about how driver education teachers and high school students view driver education in the State of Illinois. The scope of this research was to determine the specific subject areas covered in driver education courses as well as the amount of time spent in each. The development of this type of information would assist the Illinois Department of Transportation in assessing its safety education and injury prevention program.</p> <p>Data was collected through two separate, but similar questionnaires. One questionnaire was mailed to every high school in Illinois. The second questionnaire was personally administered by SIUC project staff to students in randomly-selected districts from all ten regions of Illinois. Each questionnaire listed twenty-six possible topic areas along with two "other" areas where the respondents could add another topic that might not have been listed. The median time (spent or should be spent) was found to be at least one hour for each topic item. Students indicated that, in all but four cases, they wanted more time spent on the topics than did the teachers. Driver education teachers and the students who have completed high school driver education programs want more hours devoted to most of the topics covered in the program.</p> <p>The recommendations included having Illinois strengthening the minimum requirements of the high school driver education program, raising the minimum time spent to 45 hours of classroom and 10 hours of laboratory. Recommendations pertaining to the Division of Traffic Safety, Illinois Department of Transportation, included providing grants to the Illinois State Board of Education and universities to develop new/necessary driver education and graduated licensing materials/learning packages/curriculum support; hiring a driver education specialist who can work with the various state agencies, professional organizations, high schools, and universities; and creating a research agenda relating to driver education.</p>					
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EXECUTIVE SUMMARY

Introduction

Driver education has been a valuable program in the United States as well as the State of Illinois with regard to teaching young people to drive an automobile. In any given year in the United States, over 10,000 schools teach driver education to over 2.7 million students (National Safety Council, 1985). In Illinois, public high school districts must provide a driver education course for all eligible Illinois students (legal resident of the district between the ages of 15 and 21 years who requests the course), regardless of the district of their residence, who attend an independent, parochial, or private school which is located within the public high school district's boundaries when application is made by the administrators of the independent, parochial, or private school.

Although driver education has been taught in the State of Illinois and throughout the United States since the 1950's, little was currently known about how driver education teachers and high school students view driver education in the State of Illinois. Because of this lack of knowledge about driver education, researchers from Southern Illinois University at Carbondale (SIUC), through funding and assistance from the Illinois Department of Transportation and the Illinois Transportation Research Center, initiated a Status Study of Comprehensive and Relevant Driver Education Programs in the State of Illinois. The goals of the project were to conduct a status study related to driver education within the State of Illinois and to determine specific subject areas currently being covered in driver education; to assess the time spent teaching each subject area; and to identify additional subject areas which need to be included in the driver education curriculum.

Scope and Objectives

The scope of this research was to determine the specific safety subject areas covered in driver education courses as well as the amount of time spent in each. In addition, there was a need to determine what subject areas were not being covered, which should be, and/or subject areas which perhaps needed additional time in the courses. The development of this type of information would assist the Illinois Department of Transportation in assessing its safety education and injury prevention program.

The specific research objectives were as follows:

Objective A: Comprehensive review of the appropriate State of Illinois Statutes as related to driver education and the Driver Education Guidelines as developed by the Illinois State Board of Education.

Objective B: Comprehensive literature review to determine what topics are considered important to cover in a driver education program (current and future), topics covered by other states in National Highway Traffic Safety Administration Region V, and estimates of time recommended by topic.

Objective C: Develop, with the assistance of the Project Technical Review Panel, a questionnaire to determine 1) the topics covered with respect to occupant protection and impaired driving, 2) driver performance, and 3) areas which providers feel should be covered which are not currently included in driver education courses.

Objective D: Conduct a status survey using the questionnaire developed in Objective C.

Objective E: Prepare a comprehensive summary of findings for Objective A, B, C, and D.

Objective F: Prepare a final report including 1) a summary of findings from the questionnaire survey to include topics covered and topics recommended to be covered and 2) conclusions and recommendations regarding both topics and time allotted to each of the topics.

Methods

The methods to accomplish the goals of the study included a comprehensive literature review of driver education. In order to determine specific subject areas covered in driver education and time spent on each area, two separate, but similar questionnaires were developed. The only difference in the questionnaires was in the demographic data information asked. One questionnaire was developed and mailed to every high school in Illinois. The instructions with this survey asked that it be completed by a knowledgeable driver education teacher from the district. The second questionnaire was developed and personally administered by SIUC project staff to students in randomly-selected districts from all ten regions of Illinois as defined by the Illinois High School and College Driver Education Association. Each questionnaire listed twenty-six possible topic areas along with two "other" areas where the respondents could add another topic that might not have been listed. Both the teachers and students were asked to recall the amount of time spent on each particular topic and to specify how much time should be spent on the particular topic. Comparisons were then made between the actual time spent and the time that should have been spent for each topic.

Major Findings

The median time (spent or should be spent) is at least one hour for every topic item (social and economic consequences, emotions and driving, rules of the road, physical limitation of other drivers, vehicle dynamics, impaired states of alertness, basic vehicle control, visual scanning, hazard identification and recognition, time-speed-distance-estimates, predict the actions of others, decision making in traffic situations, speed control, vehicle positioning, handling driving emergencies, handling special situations, vehicle maintenance, self-assessing of driving performance, alcohol, drugs, and their effects on driving, driving responsibilities, occupant protection, having a positive attitude, communication techniques, fuel-efficient driving, vehicle ownership responsibilities, and driving in adverse conditions). For 15 of the 26 topics, teachers would like to spend approximately one hour more. For one topic, (Item 19: Alcohol, Drugs, and Their Effects on Driving) the typical teacher would like to spend at least two more hours on the subject.

Students indicated that in all but four cases, they wanted more time spent on the topics than did the teachers. On two topics, (Item 8: Visual Scanning and Item 11: Predict the Action of Others) there was no difference between the amount of time that the students and teachers felt "should" be spent. On two other topics, (Item 5: Rules of the

Road and Item 19: Alcohol, Drugs, and Their Effects on Driving) the teachers would like more time spent on the subjects than would the students.

Conclusions

Teachers who teach in and students who have completed high school driver education programs want more hours devoted to most of the topics covered in the program. Teachers and students want more time spent on social and economic consequences of driving, emotions and driving, vehicle dynamics, impaired states of alertness, hazard identification and recognition, time-space-distance estimates, decision making in traffic, speed control, vehicle positioning, special situations, self-assessing of driving performance, alcohol, drugs, and driving, driving responsibility, occupant protection, and communication techniques. More specifically, both teachers and students want a lot more time spent on alcohol, drugs and driving. Finally students, in particular, want more time devoted to the various topics in the driver education program than do teachers.

Recommendations

The recommendations that follow are based upon the results of this study:

1. Illinois must consider strengthening the minimum requirements of high school driver education, which should include basic driver education and further enhanced driver education.
2. Raise the minimum time spent in Illinois high school driver education from the current 30 hours of classroom instruction and 6 hours of laboratory instruction to 45 hours of classroom instruction and 10 hours of laboratory instruction. In most topic areas, both teachers and especially students believe that more hours should be spent on preparing a high school student to drive.
3. Because of the need for additional hours and the need to strengthen the driver education program, the State of Illinois needs to consider additional funding of high school driver education through increased driver licensing fees, fines for persons put on court supervision, etc.
4. The Illinois high school driver education course should particularly increase the number of hours devoted to instruction on alcohol, drugs and their effects on driving.
5. Other areas that need to be given specific consideration for increased instruction include:
 - a. social and economic consequences of driving
 - b. emotions and driving
 - c. vehicle dynamics
 - d. impaired states of alertness
 - e. hazard identification and recognition
 - f. decision making in traffic situations
 - g. speed control
 - h. vehicle positioning

- i. handling special situations
- j. driving responsibility
- k. occupant protection
- l. communication techniques

Most of the above listed topics need to be discussed and practiced in the classroom and follow-up activity and practice in the laboratory.

- 6. Illinois high school driver education courses should consider including instruction on the use of cellular phones, car jacking prevention, emergency off-road recovery, and standard transmission shifting.
- 7. Because there are many groups and agencies who can assist in strengthening and improving the quality of the high school driver education instruction provided to the young driver in the State of Illinois, the following recommendations are provided to these groups and agencies:
 - a. National Highway Traffic Safety Administration -
 - 1) give grants to the State of Illinois to fund enhanced Driver Education and Graduated Licensing programming/activities
 - b. Division of Traffic Safety, Illinois Department of Transportation-
 - 1) provide grants to Illinois State Board of Education and universities to develop new/necessary driver education and graduated licensing materials/learning packages/ curricula support
 - 2) provide grants to the Illinois State Board of Education and Illinois Secretary of State to assist them in developing graduated licensing program materials that can be used by high schools to increase the probability of students being successful, crash free and violation free drivers.
 - 3) hire a driver education specialist who can work with the various state agencies, professional organizations, high schools, and universities. This person would assist these groups with improving driver education and graduated licensing programs.
 - 4) create a research agenda that includes the following:
 - a) explore causal factors underlying crash experience of young drivers
 - b) identify the characteristics of a novice driver that could lead to good driver behavior and performance
 - c) evaluate emerging driver education practices and programs
 - d) develop driving performance and assessment standards for youthful drivers
 - e) identify and evaluate incentive programs that will encourage good youthful driver performance
 - 5) since there is low awareness of the need for changes in driving skills and attitudes as they relate to reducing crashes

that result in injuries and deaths of youthful drivers, the Division of Traffic Safety should identify the appropriate targeted audiences and then develop methods (focused and cost-effective advertising campaign) by which they can be made aware of the problem. Press and public relations materials should be developed and made available and feature stories and editorials developed and placed in the state print and non-print media.

- c. Illinois State Board of Education-
 - 1) provide strong support and commitment for an enhanced driver education curriculum, including the current driver education program and graduate licensing program.
 - 2) continue to have at least one full-time person devoted to supervising driver education in Illinois.
- d. Illinois Secretary of State-
 - 1) provide strong support and commitment for an enhanced driver education curriculum, including current driver education program and graduated licensing program.
 - 2) continue supporting alcohol, drugs and driving programs in high school driver education.
- e. Illinois High School and College Driver Education Association-
 - 1) continue to support effective high school driver education programs.
 - 2) give support to increasing the number of classroom hours to 45 and the number of laboratory hours to 10.
- f. High School teachers-
 - 1) continue to be devoted to high quality high school driver education.
 - 2) teach a broad based driver education program.
- g. Universities-
 - 1) those universities with a teacher preparation program in driver and traffic safety education should continue to provide a quality program.
 - 2) recruit new students into completing the teacher preparation program.
 - 3) topics highlighted in numbers 2 and 3 above should be taught to future high school driver education teachers.
 - 4) universities need to promote enhanced driver education programming and the need for more classroom and laboratory instruction in high school driver education.
- h. Schools and School Administrators-
 - 1) support an enhanced high school driver education program.
- i. Vehicle Procurement-
 - 1) work with automobile dealerships/leasing programs to make affordable vehicles available for use in training.

INTRODUCTION

Driver education has been a valuable program in the United States as well as the State of Illinois with regard to teaching young people to drive an automobile. In any given year in the United States, over 10,000 schools teach driver education to over 2.7 million students (National Safety Council, 1985). In Illinois, public high school districts must provide the driver education course for all eligible Illinois students (legal residents of the district between the ages of 15 and 21 years who request the course), regardless of the district of their residence, who attend an independent, parochial, or private school which is located within that school district's boundaries when application is made by the administrators of the independent, parochial, or private school.

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LITERATURE REVIEW

Traffic crashes are the number one cause of death for youth and represent over one-third of all deaths of young people between the ages of 15 and 20 years. Teenagers make up approximately 7 percent of the population but they account for 14 percent of motor vehicle deaths. The crash rate per mile for drivers 15-20 years of age is about four times higher than the rate for adults. Factors such as alcohol use and speeding too fast for conditions play a large role in the disproportionate involvement in traffic crashes among youth (U.S. Department of Transportation, 1992; National Safety Council, 1995).

The extremely high injury rates seen in the first years of driving serve as a grim reminder of the need to focus on young novice drivers. There is no simple solution to reducing the crash involvement of young people (National Highway Traffic Safety Administration, 1994). In many cases, crashes are not caused by lack of knowledge of traffic laws or basic vehicle handling skills. The problem often appears to be more a function of the developmental characteristics of youth and their risk taking behavior, their belief that they are invincible, and their susceptibility to peer pressure. An added problem is the accepted use of alcohol by our society for a variety of situations and celebrations. Add to the above listed problems limited driving experience, sometimes poor attitudes, differing perceptions of the risk of various traffic situations (i.e. high speed driving), and a significant lack of good judgment in critical driving situations, and you have an increased probability of unsafe traffic behaviors that frequently result in a crash with injuries or death for young drivers (National Highway Traffic Safety Administration, 1994).

Education plays an important role in addressing the traffic safety problems of young people. However, providing instruction to individuals on how to drive is not a new concept. The

first known novice driver education program dates back to about 1916. Following World War I the automobile played an important role in the social and economic growth of the country. The growth of the automobile brought with it an enormous social problem in the name of traffic crash injuries and fatalities. Driver education had its origin because of the growing problem with traffic crash injuries and fatalities. Traffic safety "experts" during the early years felt that one solution to the traffic crash problem might lie in the education of young people as they approached the legal driving age. Thus, driver education programs began to grow in earnest during the 1930's (Aaron & Strasser, 1977).

As high school driver education programs grew, so did teacher preparation programs at the college level. This growth resulted in the first National Conference on High School Driver Education being held in 1949. One of the major recommendations from this conference was that a minimum novice driver education course should consist of 30 hours of classroom instruction and 6 hours of behind-the-wheel instruction (NHTSA, 1994). This formula is still followed today in many driver education programs.

The popularity of high school driver education programs peaked in the early 1970's when over 14,000 high schools provided some type of driver education training program to over 2 million students per year. During the last twenty years, driver education program offerings in the high schools have been on the decline as a result of such things as economic factors and questions regarding program effectiveness. Even though most Illinois 15 and 16 year olds complete a driver education program and recent a license at age 16, the majority of teenagers in the United States do not receive any type of formal high school driver education training (NHTSA, 1994). Young people today learn from their parents, friends, commercial schools, or by other means. Many of

the high schools that provide driver education require the parents or students to pay for all or part of the training (NHTSA, 1994).

There are no federal requirements for driver education programs. Programs are regulated by the states, but the requirements can be minimal. Approximately 25 states require some form of driver education for young people wanting a driver's license before the age of 18. Very few states have a program requiring achievement of specific driving objectives. Many driver education programs appear to offer the basic "30 and 6" or less. Such programs are by design very basic and often result in nothing more than the student getting licensed. A program designed only to teach a student to pass the driver license exam was not the intent of those safety educators who developed driver education (NHTSA, 1994).

Once a young person receives a driver's license, most states allow this inexperienced driver to drive anywhere at anytime. Only nine states prohibit teenagers from driving during the high-risk nighttime and early morning hours. The risk of fatal crashes for teenagers is highest between 9 p.m. and 6 a.m. (NAII, 1993). Another special restriction for young drivers in many states involves alcohol. Thirty-five states, including the State of Illinois, and the District of Columbia now have penalties for violations of blood alcohol concentrations (BACs) that apply only to young drivers (IIHS, 1995). Alcohol poses a more serious risk of motor vehicle crashes for younger drivers due to their inexperience with both alcohol and driving (NIAAA, 1994). Seventy-eight percent of high school students responding to the Illinois State Board of Education's Youth Risk Behavior Survey (YRBS) indicated they had consumed alcohol, 14 percent reported having driven a vehicle one or more times when they had been drinking alcohol, and 39 percent responded that they had ridden one or more times in a car or other vehicle driven

by someone who had been drinking alcohol (IDPH, 1994). The driving task is seriously affected by alcohol and drugs because they impair the mental processes required to operate a motor vehicle. Various traffic safety experts recommend that the unit of study addressing alcohol and drugs be taught for 3 to 5 clock hours (ISBE, 1995).

Safety belt use is another factor deemed vital for reducing the risk of death and serious injuries from motor vehicle trauma. Safety belt use remains low even though forty-eight states (all except Maine and New Hampshire) plus the District of Columbia have mandatory safety belt laws. The nationwide estimated safety belt use in passenger vehicles was 58 percent in 1994 (IIHS, 1995). A primary reason for non-use of safety belts is that the probability of a crash on any given trip is low and each safe trip serves as a reinforcement for non-use. Also the vast majority of drivers consider themselves to be below average for risk of a crash (Bross et al., 1994; IIHS, 1995).

Although traffic safety experts agree that driver education for young people prior to the legal driving age is a key factor in solving the crash problem, many differ in the specifications of important topics to cover, the amount of time allocated for topics, and in teaching strategies. Driver Education and traffic safety professionals agree that knowledge of basic traffic laws and basic vehicle handling skills are absolutes in any driver education program. However, most would also agree that this "basic" education ignores the need for traffic problem solving skills necessary to become a competent and responsible driver. Authorities attribute the problems of young drivers to inexperience and lack of adequate driving skills, excessive use of a motor vehicle during high risk hours (especially night-time), risk-taking, and poor judgment and decision making. A broad-based curriculum that focuses more on safe driving attitudes, developing good behavioral

patterns, and training drivers to recognize and respond to hazards in their ever changing environment, as well as on basic skills, is desired to train novice drivers the skills necessary to reduce crashes (AAA Foundation for Traffic Safety, 1995; Mintz, 1995; Dennis, 1994; Crowe, 1994 ; Quensel, 1995; Mottola, 1995).

Since driving is a risk-taking activity, driver education programs should teach drivers about making decisions that reduce risk. Most of the present curriculum used in driver education programs is loaded with information about basic skills of driving, traffic laws, driving in various environments and under adverse conditions, etc., but offer little or no assistance in accurate and effective processing of that information (Carney, 1994; Mottola, 1995). The topics of decision-making , risk taking, and risk acceptance, followed by the practical application of these topics to driving situations, should be included in, and some believe should become the central element of the driver education curriculum (Worzbyt, 1994; Carney, 1994). Important topics to include in driver education curriculum from a decision making view include how to perceive risk, how to favorably manage the occurrence of a dangerous event, and how to reduce the potential consequences of a possible collision (Carney, 1994; AAA Foundation for Traffic Safety, 1995).

The Pennsylvania Enhanced Driver Education Curriculum (Worzbyt, 1994) utilizes a risk assessment decision making model to enhance the practical application of classroom instruction to actual driving conditions and situations. The curriculum uses decision making as a central component to instruction to train students to regard driving and traffic safety from a decision-making perspective; view driving as a mental as well as a physical activity; become more aware of the consequences of their driving decisions; exhibit more control and less confusion when responding to unfamiliar road conditions and driving situations; and assume personal

responsibility for themselves and their vehicles in creating a safe driving environment for others . Information processing and decision making concepts are recommended as an enhancement to current competency based programs that focus on each individual having an adequate knowledge base and skill level prior to the successful completion of a driver education program (Mintz, 1995).

The average driver education program has been strongly criticized for its ineffective training of novice drivers to reduce crash rates. One area targeted for improvement in driver education is the minimum time standards for driver education courses. Recommendations for change range from 40 hours of classroom instruction, 8 hours of behind-the-wheel instruction, and 20 hours of backseat observation, to a 90 hour program with 60 hours in the classroom, 12 hours of simulation, 6 hours of in-car instruction, and 12 hours of in-car observation (Quensel, 1994; Jones, 1994).

Novice drivers are less able to control attention, scan the environment effectively, detect potential hazards early, and make tough decisions quickly (AAA Foundation for Traffic Safety, 1995). Since young drivers lack the skills to perceive risk and make risk-reducing decisions about hazards, experts recommend that students be given sufficient behind-the wheel (BTW) training. Simulation should not be a substitute for BTW training and each student should have the minimum 6 hours (AAA Foundation for Traffic Safety, 1995). Also recommended is that every student have an instruction permit for a reasonable period of time (6 months) before becoming eligible to apply for an operator's license allowing students time to gain driving experience (Quensel, 1995). Twenty-nine states (including Illinois) and the District of Columbia require permits before getting driver's licenses, but only 13 states (not including Illinois) specify

mandatory periods that permits must be held (IIHS, 1995).

Although not a new concept, the idea of graduated licensing for novice drivers is gaining popularity with traffic safety professionals as a solution to the high crash problem. In 1975, the National Highway Traffic Safety Administration (NHTSA) developed a "model" graduated licensing system to address the traffic safety problems of young drivers (Robinson, 1995). Under graduated licensing, drivers progress through phases or stages (usually three) to full licensing. Graduated licensing allows the novice driver to practice under controlled conditions before obtaining a full license. These programs usually restrict where, when, how or with whom the driver may drive. Eleven states have some form of a graduated-licensing system, 10 have nighttime restrictions and two require a crash or conviction-free period before the full license can be sought (Hans, 1994). The present recommendation is to develop driver education curriculum coordinated with graduated licensing systems that would phase drivers into the driving environment while being properly educated and trained (Robinson, 1995; NHTSA, 1994; AAA Foundation for Traffic Safety, 1995).

The features of a graduated licensing system include (Robinson, 1995):

- the successful completion of a basic driver education course and a learner's permit stage
- a second level driver education program in which safe decision-making skills are taught after basic skills are acquired
- supervised basic driver practices and advance practice sessions during high risk (e.g., nighttime) hours
- lower legal blood alcohol concentration requirements for persons under 21 years of age
- nighttime driving restriction
- youth oriented
- more rapid driver improvement actions for accidents and violations
- mandatory safety belt usage by all occupants and limitations on the number of passengers in a motor vehicle being operated by a teenager
- demonstrated safe driving performance
- issue a provisional license to all drivers under age 21 which is distinctive from the regular

driver's license

- require all suspended or revoked drivers being restored for traffic safety violations to be placed in a provisional license program

The effect of graduated licensing for teenagers will be studied in a \$1.2 million program recently announced by the National Highway Traffic Safety Administration. North Carolina and Alaska were the first states approved for funding (Highway & Vehicle Safety Report, 1994).

The preceding literature review has identified numerous factors relating to the traffic crash problem of novice drivers. It is clear from this review that experts believe important topics to cover in a driver education curriculum must address the cognitive (knowledge), psychomotor (driving skills), and affective (attitudes) needs of the novice driver. It is believed that driver education curriculum should include topics that focus on the qualities (desirable skills, traits, or characteristics) of a driver that influence driving performance.

The literature has identified 10 qualities of a driver that influence driving performance. These qualities include motivation, knowledge, attention, perception, detection, evaluation, psychomotor skills, execution, safety margin, and responsibility.

Motivation is one driver quality that influences what the driver chooses to do, as opposed to what he/she is able to do. An important topic addressing motivation is risk tolerance which involves understanding and valuing the social and cost consequences of having crashes. Other topics under motivation are emotion and intrinsic motivators. These topics address the drivers' emotional reactions to other road users as well as self-esteem growth from self-control/autonomy.

Knowledge is a quality that influences other factors of driving particularly hazard detection, perception, and risk evaluation. Important topics for the novice driver to have know on are: recognizing how novice drivers differ from experienced drivers, the basic driving task,

rules of the road, signs, signals and roadway markings, regulations regarding speed, impairment, occupant restraints, and licensing requirements, recognizing needs of cyclist/pedestrians, lane positioning, assess the limitations of a car to permit evasive maneuvers, and to describe the relation of speed to crash energy.

Novice drivers are said to be less able to control **attention** or scan the environment for potential hazards than experienced drivers. Attention drives the searching, scanning, and noticing that a driver does and is believed to be controllable by deliberate action of the driver and improves through experience. Topics to consider when addressing attention are alertness and things that effect it such as fatigue, preoccupation, and substance effects. Dividing attention over a number of continuous, simultaneous tasks is an important part of attention. Related to attention is **detection**. Attention refers to searching, scanning, and noticing potential hazards.

Another quality that influences performance is **perception**. Perception involves adding meaning or understanding to the data detected by the senses. Perception errors include failure to recognize, or misinterpretation of, what is seen. Topics relating to perception are recognizing limitations of perceptions and recognizing hazards while driving.

After detecting a potential hazard, novice drivers must learn to evaluate the perceived hazard to see if it is indeed hazardous. **Evaluation** is a complex cognitive process. Related topics include risk assessment and consider others' point of view, and attribution bias. Making an appropriate decision follows the identification of a hazard. The decision making process includes recognizing optional responses, selecting an appropriate response in time-limited and high-pressure situations, risk acceptance, and recognizing the need to keep trying if first choice response fails.

Drivers must have a certain level of **psychomotor skills** to properly **execute** an intended action. Important topics are controlling acceleration and speed, controlling deceleration, steering (hand-over-hand and shuffle/slide, etc.), skill integration (the ability to start, accelerate, turn, backup, and stop smoothly), demonstrating or describing skid correction, and demonstrating evasive maneuver skills.

Determining the **safety margin** in a given situation is perhaps the most critical of all the driver qualities. Speed choice, safe headways, avoiding delayed response to detected hazards, committing to safe margins in all conditions, and adapting driving practices to all external conditions are considered important topics in driver education.

The tenth and final quality influencing driver performance is **responsibility**. Responsibility includes self-monitoring (monitoring the impact of one's own driving behavior on other road users), commitment to driving unimpaired, commitment to respecting others' safety margins, commitment to conflict/crash avoidance, consistent use of seat belts and child safety seats, communication (direction signals, headlight and horn use, and warning flashers), and energy and environmental conservation (fuel-efficient driving skills and environmental costs of vehicle use) (AAA Foundation for Traffic Safety, 1995; Mottola, 1995; Jones, 1995; Harvey, 1995; Quensel, 1976). Responsible driving requires that the driver have basic self-control and self-correction which is needed for safe, mature, efficient, and socially responsible use of the roads (AAA Foundation for Traffic Safety, 1995).

Experts believe it is necessary to achieve and maintain a high level of all the previously described driver qualities in order to maintain a safe level of driver performance (AAA Foundation for Traffic Safety, 1995). Obviously some driver qualities require more time than others to be

thoroughly established. The breakdown of time per topic depends on the difficulty of the task, the background of students, the perceived importance of the topic by the educator, and the course time parameters. The average length of driver education courses in high school DE programs across the U.S. is 16 weeks. In about half of the programs, classroom and laboratory instruction is integrated and run concurrently throughout the course with BTW training being stretched over 9 lessons, taking an average of 26 school days to complete (Jones, 1995). Typically, DE consists of 25-30 classroom hours and between 6 to 10 hours of BTW training. Experts agree that this time allotment has proven to be insufficient for educators to adequately train novice drivers in the skills necessary to be responsible drivers (AAA Foundation for Traffic Safety, 1995; Quensel, 1995; Jones, 1995).

METHODS

Subject Selection and Data Gathering Process

Driver Education Teachers

The driver education teachers who participated in the Status Study of Comprehensive and Relevant Driver Education Programs Study by completing the teacher questionnaire were selected through the following process:

1. SIUC project staff requested and obtained an address listing of the schools in the State of Illinois (School Code) from the Illinois State Board of Education.
2. Each school from the listing was then sent a questionnaire requesting that the driver education department chair or some other driver education teacher familiar with the driver education program for that school complete the survey.

3. Teachers who attended the Illinois High School and College Driver Education Association (IHSCDEA) Conference in Effingham in May 1996 were reminded that they needed to complete the survey if they had not previously done so.
4. Each school was asked to return the completed questionnaire by May 24, 1996.

Additional Comments:

A total of 268 surveys were returned and analyzed. This represented 43% of the 621 schools who were sent surveys.

High School Students

The high school students who participated in the Status Study of Comprehensive and Relevant Driver Education Programs Study were selected through a random process based upon the school listing obtained from the Illinois State Board of Education. The following steps were followed:

1. SIUC project staff first divided the schools listed by the Illinois State Board of Education into the ten regions served by the Illinois High School and College Driver Education Association (IHSCDEA) (see region breakdown on map on next page).
2. Four schools were randomly selected from each region to serve as a potential site for administering questionnaires to students who had completed driver education.
3. Project staff secured permission to administer surveys to students in at least one randomly selected school per region with an attempt to over sample students from the largest regions (1, 2, 3, 4, and 9) of the state.
4. SIUC project staff then personally administered the surveys in the randomly selected

schools from which permission had been obtained. The data was obtained from high school students beginning on May 1, and ending on May 17, 1996.

Additional Comments:

A total of 488 surveys were completed by high school students from thirteen schools, which far exceeded the project goal of receiving 200 completed surveys from high school students. Two schools were sampled in Region 1 (Chicago) because of its large population base. Two schools were sampled in Region 8 because neither school was able to supply the twenty students necessary to achieve a project goal of sampling at least twenty students per region. Two schools were sampled in Region 10 because of its geographical area. All ten regions of the state were represented in the survey process, with the most highly populated regions being over sampled. Two hundred and ninety eight surveys were completed by students in the five most populated regions while 190 surveys were completed by students in the least populated regions. The schools sampled represented the diversity of students in the State of Illinois, including gender, racial mix, urban/rural, and large/small. The schools where students were surveyed are listed below by region:

Region 1	Chicago Bogan and Chicago Curie
Region 2	Proviso West
Region 3	Plainfield
Region 4	St. Charles
Region 5	Geneseo
Region 6	Peoria Woodruff
Region 7	Tolono Unity
Region 8	Robinson and Stewardson-Strasburg
Region 9	Greenfield
Region 10	Murphysboro and Edwards County

The Sample Size and its Representativeness

The size of the sample and its representativeness are two of the most important factors in any study trying to infer from the characteristics of a sample to the characteristics of a population. In this study, we are trying to infer statistics of time spent on topics from our sample of 488 students to all students in the State of Illinois. Random sampling is the best way to ensure a representative sample. A reasonably large sample size provides confidence in the interpretations because the sampling error (the extent to which statistical results, such as medians and correlations, vary from sample to sample) decreases as the sample size increases.

We received useable responses from 488 students and 268 teachers. The schools from which these responses were received are shown on the map presented in the section entitled "Map Explanation". Schools (providing students responses) from every district were sampled randomly. The instrument was sent to a driver education teacher at every school.

We could have obtained a larger sample of students. We could have surveyed many students in one or two schools in the city of Chicago and obtained a sample size of 3000. Obviously the driving experience and education of those students is not representative of students from rural Illinois.

Based on the methods of sampling the schools and the apparent representativeness across the state of the instructors, the authors feel that the sample size and its representativeness are more than adequate from the inferences and conclusions made in this study.

Survey Development

The development of the survey instruments that were completed by teachers and students

required several steps. The first step involved the development of an open-ended questionnaire regarding topic areas taught by driver educators. This instrument was distributed to several traffic safety professionals, driver education teachers, and teacher trainers attending the annual American Driver and Traffic Safety Education Association (ADTSEA) Conference at Huntsville, Alabama, in August, 1995. Immediately upon returning from the ADTSEA Conference, SIUC project staff sent questionnaires along with explanation letters to additional ADTSEA Conference attendees who had not been contacted at the conference. This follow-up resulted in a few more responses.

The information provided by the safety professionals who attended the ADTSEA Conference was analyzed and additional topics were suggested by SIUC project staff utilizing the following key resources:

- American Automobile Association. Novice Driver Education Model Curriculum Outline.
- U.S. Department of Transportation. Research Agenda for an Improved Novice Driver Education Program.
- Illinois State Board of Education. Driver Education Curriculum Material for Illinois High Schools: Enhancements of Illinois Driver Education Since 1986.
- Margaret L. Johnson et al. Drive Right.

The suggested topics were then sent to the Project Technical Review Panel along with Illinois Department of Transportation (IDOT) staff for analysis and comments. The comments and suggestions from the Panel and IDOT staff were then further refined and draft student and instructor questionnaires were developed. After a meeting with the Project Technical Review Panel and IDOT staff in January, 1996, the two survey instruments were further refined and prepared for pilot testing. It was also decided at this meeting to survey more students than the

original planned sample of 200, with special efforts directed toward over sampling in the most highly populated areas of the State of Illinois. Another key suggestion from this meeting was that SIUC staff develop a topic explanation sheet to clarify each topic listed on the survey. The task of developing the topic explanation sheet was undertaken immediately so that the sheet would be available for the pilot testing. SIUC staff learned later that this topic explanation sheet was quite helpful to those completing the survey, especially to the students who were not as familiar with some of the terms.

The pilot testing of the student survey was conducted in February, 1996, with two classes of junior and senior level students attending Steeleville High School. All students completing the survey had completed driver education. The pilot testing of the teacher surveys was conducted in March and early April, 1996, with recently retired driver education teachers. Both the student and the teacher pilot tests yielded only a few minor revisions to the survey instruments.

After making the minor revisions to the instruments as a result of the pilot tests, the final surveys were printed. The teacher surveys were sent to every high school in the State of Illinois in late April, 1996. The Illinois State Board of Education provided SIUC staff with the Illinois School Code listing of all the high schools and the contact person at all of the schools. A letter was sent with each survey asking that a knowledgeable driver education staff member such as a department head complete the survey for the school system. The letter also outlined the procedures for completion of the survey. In order to encourage participation by the driver education teachers, Larry Wort, IDOT Section Chief of Traffic Safety Programs, spoke to the Illinois High School and College Driver Education Association (IHSCDEA) Conference in May, 1995, explaining that SIUC staff would be conducting the survey during the next year. During

the fall of 1995, all driver education teachers attending regional IHSCDEA workshops were reminded that the survey would be forthcoming during the spring of 1996. At the IHSCDEA Conference in May, 1996, Dan Shannon of the SIUC staff addressed the membership, again encouraging those who had not completed the survey to do so as soon as possible. As a result of the efforts of project staff from IDOT and SIUC, 255 surveys were returned during late April and May, 1996. A copy of the survey, the letter, and the topic explanation sheet are in the Appendix.

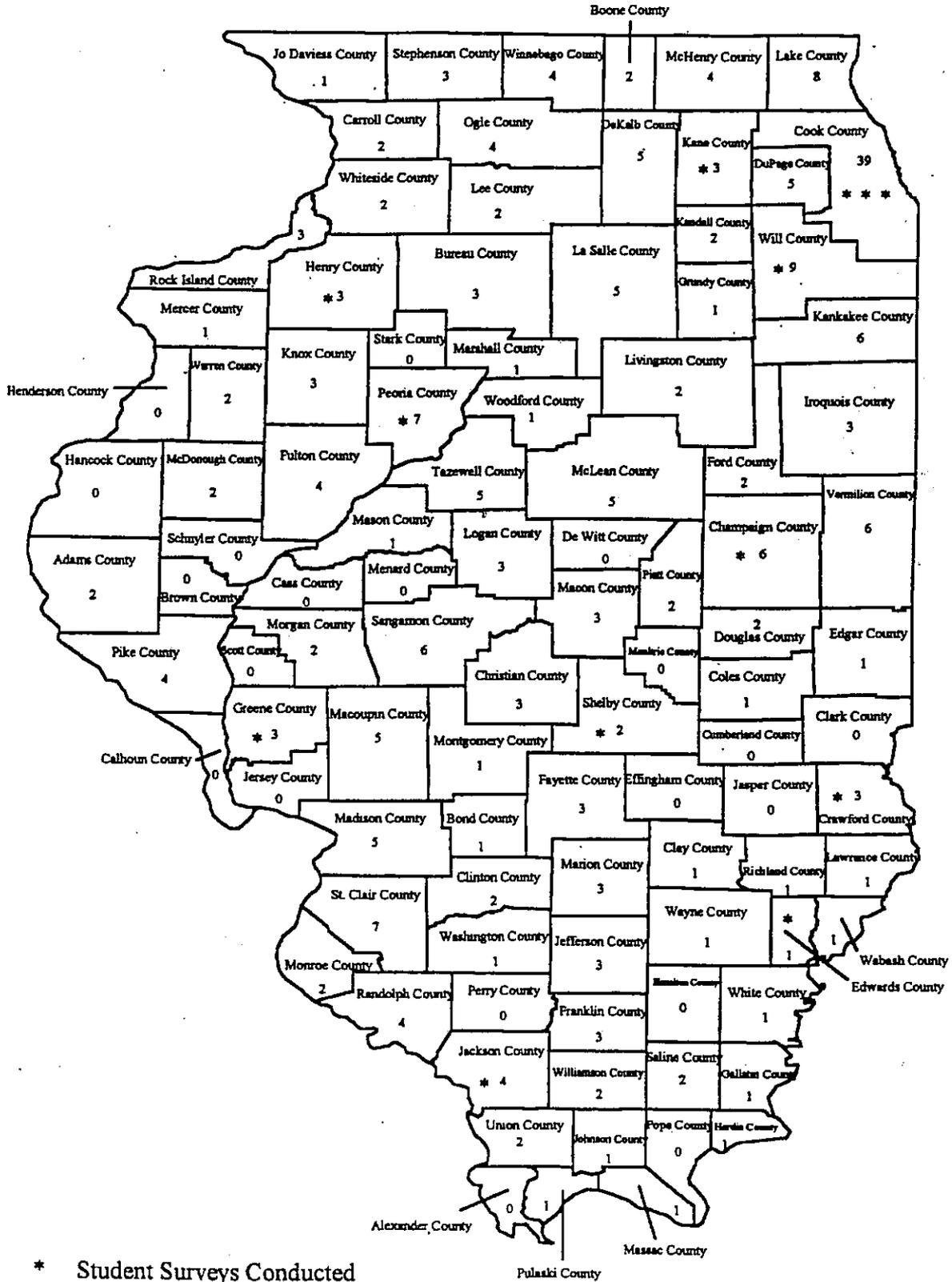
In order to survey students about the topics that they remembered covering in driver education, SIUC staff divided the schools into the ten regions defined by the Illinois High School and College Driver Education Association. SIUC staff then randomly selected four schools in each region from which at least one school was surveyed. The students from the selected schools were chosen by class (usually a physical education class, study hall, or health class) by the contact person (principal, department chair, driver education teacher, etc.). SIUC staff personally administered each survey by explaining the purpose of the study and distributing a letter which further explained the survey purpose and procedures. Project staff then distributed the survey, pencils, and the topic explanation sheet while further explaining how to answer the questionnaire. All students were asked, not told, to participate in the study. No student refused to participate. Surveys were administered in thirteen schools representing all ten IHSCDEA regions of the State. A total of 488 students were surveyed. Almost all of the students surveyed were juniors or seniors with a small percentage being sophomores. All students surveyed had completed driver education in Illinois. The areas with the highest population were over sampled. A copy of the student survey and letter are in the Appendix.

Map Explanation

The map on the page 20 indicates that responses to the teacher questionnaires came from all around the State of Illinois. The only counties from which there were no responses were counties with only one, two, or three typically smaller schools except for Effingham and Hancock counties which have more than three schools.

Responses were received from schools located in 81 of the 102 counties in the State of Illinois. Only forty-six schools located in the twenty-one counties failed to respond to the survey. There was excellent response from the larger population counties such as Cook, Lake, Will, Kankakee, Dupage, Champaign, Peoria, McLean, Sangamon, Madison, and St. Clair. There was also excellent representation from the many rural schools that comprise the large rural areas that make up most of the State of Illinois.

Distribution of Respondents by County



Reliability and Validity

Reliability

The reliability of a survey instrument indicates how consistently it measures responses. If a respondent answers similarly from one time to the next, the instrument is said to be reliable.

Reliability is often measured by a squared correlation of the measures based on the instrument for each student with other measures of the same students using different but similar tests (parallel form reliability) or the same test at the later time (test-retest reliability). Reliability (or squared correlation coefficients) is measured on a scale of 0 (no consistency) to 1 (perfect relationship).

Another way to get two instruments is to consider each half of the instrument with the measurement from the other half of the instrument. If the responses from one half of the instrument are consistent with responses from the other half, the instrument is said to be reliable. There are many ways to get halves of tests (e.g., the odd items compared to the even items, the first half compared to the last half, etc). The reliabilities will vary depending on how the instrument is divided in half. Cronbach's coefficient alpha is the average of all possible reliabilities.

One of the principal factors affecting the reliability of an instrument is the number of items in the instrument. It is very hard for a test with 2 or 3 items to be very reliable. It is relatively easy for a test with 100 items to have high reliability.

The Cronbach Coefficient Alpha reliabilities for the student version of the test were .935 and .955 for the 'Did Spend' and 'Should Spend' subtests, respectively. For the version for the teachers, the reliabilities were .938 and .955, respectively. The extremely high reliability may be due to two factors: (1) The instrument is somewhat lengthy (26 items), and (2) there is general

agreement about the time spent on the various topics.

Validity

The validity of an instrument is the extent to which it measures what it was intended to measure. In this situation, the intended measure was how much time teachers spent on various driver education topics. The development of the instrument (discussed in an earlier part of this report) and the assistance of the panel of experts assured high construct validity (sometimes called 'face' validity) for this instrument.

Why Medians Were Used

When asking teachers and students how much time they spent (or should have spent) on each topic, an exactly correct answer is difficult, if not impossible, to give for several reasons. One of the main reasons is the overlapping nature of the topics. For example, is the instructor talking about Basic Vehicle Control or Time-Space-Distance Estimates or Fuel-Efficient Driving when the instructor is emphasizing slowing down gradually when approaching a red light? Most people can only give an estimate of how much time was spent. Teachers can presumably provide this information more accurately than students because of the planning that goes into the course delivery.

Another reason for the difficulty in answering exactly is the problem of recalling events that may have occurred a year or two, or in some cases, three years before. Again, the instructor's estimate of time spent would be more accurate than the student's.

The "high" end of the scale was indicated as "5 or more" hours, i.e. a "lot" of time. The panel of experts felt that most topics would have been handled in 5 hours or less and there was no need to add "5 hours, 6 hours, 7 hours, etc." to the response scale.

Because of the "fuzzy" nature of these data, the scale of measurement was considered ordinal. That is, respondents could determine that they spent more time on rules of the road than visual scanning even if they could not determine exactly how many hours more they spent.

With ordinal data, the preferred measure of central tendency is the median - the number below which half of the distribution lies. Consequently, data are reported in frequencies and percents and the medians are provided as an indication of the average value for each topic.

Means could not be calculated since a response of "5 or more hours" would have to be assigned a number of 5 or somewhat larger than 5 and we have no knowledge of what that number should be.

RESULTS

Descriptive and Demographic

Figures 1-26 reflect the results of both the teachers and students' responses to the survey. Hours spent and should spend in high school driver education are shown in percentage of response. The median score for the 7 categories (0, Some <1, 1, 2, 3, 4, and 5 or more) of hours in the driver education program for both students and teachers for hours spent and should spend are also presented.

Figure 1 displays the responses for the topic "Social and Economic Consequences." Of the students, 29.20% indicated that 2 hours were spent on the topic while over 48% said that 3 or more hours should be spent on "Social and Economic Consequences." Over 37% of the teachers had spent one hour on this topic in which 57% felt that 2 or more hours should be spent. The median hours that should be spent response for both students and teachers was 2.

The hours spent and should spend on the topic "Emotions and Driving" is presented in Figure 2. Of the hours spent, students gave the highest response to one hour while also indicating increases in the percent of response for 2, 3, 4, and 5 or more hours on the number of hours that should be spent. The two highest categories of the hours spent response was some <1 (19.39%) hour and 1 (48.67%) for the teachers.

Five hours or more category for the "Rules of the Road" topic had the highest percent of response with 56.57% of the students and 68.20% of the teachers indicating the current driver education program has 5 or more hours. A smaller percent (from 56.57% to 55.53%) of students felt that 5 or more hours should be devoted to "Rules of the Road." More teachers (71.84%) believed that more time should be spent than what is currently spent on this topic. This

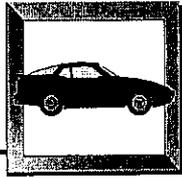
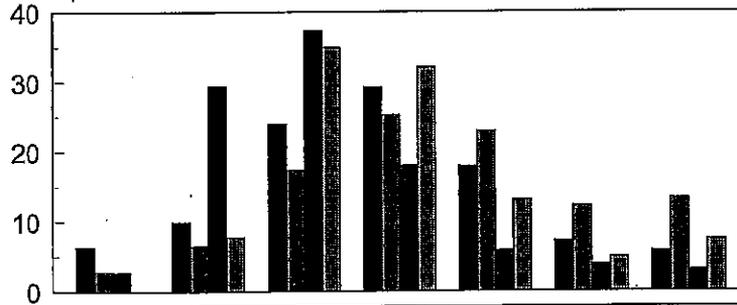


Figure 1. Comparison of Hours Spent vs. Should Spend on Social and Economic Consequence

Percent of Response



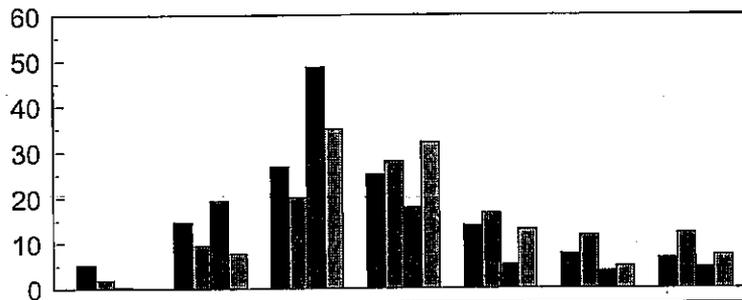
	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	6.30	9.87	23.95	29.20	17.86	7.14	5.67
Students-Should Spend	2.78	6.41	17.31	25.21	22.86	12.18	13.25
Teachers-Hours Spent	2.67	29.39	37.40	17.94	5.73	3.82	3.05
Teachers-Should Spend	0.00	7.72	34.96	32.11	13.01	4.88	7.32

Student Hours Spent: Median = 2 ; Teacher Hours Spent: Median = 1
 Student Should Spend: Median = 2 ; Teacher Should Spend: Median = 2



Figure 2. Comparison of Hours Spent vs. Should Spend on Emotions and Driving

Percent of Response



	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	5.24	14.68	26.83	25.16	13.84	7.55	6.71
Students-Should Spend	1.94	9.50	20.09	28.08	16.63	11.66	12.10
Teachers-Hours Spent	0.38	19.39	48.67	17.87	5.32	3.80	4.56
Teachers-Should Spend	0.00	7.72	34.96	32.11	13.01	4.88	7.32

Student Hours Spent: Median = 2 ; Teacher Hours Spent: Median = 1
 Student Should Spend: Median = 2 ; Teacher Should Spend: Median = 2

information is presented in Figure 3.

Most driver education programs in Illinois devote less than 3 hours to the topic "Physical Limits of Other Driver" as reflected in Figure 4. Almost 25% of students felt that 4 or more hours should be spent on this topic while most teachers felt that 1 or less hour should be devoted to the topic "Physical Limits of Other Driver."

Figure 5 presents the amount of hours spent and should be spent on the topic "Vehicle Dynamics." Almost 22% of the students indicated that 4 or more hours should be spent on this topic while over 9% of the teachers felt the same way. Most teachers (39.6%) believe that only one hour should be spent on "Vehicle Dynamics." The median score for both students and teachers in time that should be spent on this topic was 2.

Most teachers (35.66%) felt that only 1 hour of time should be spent on the topic "Impaired States of Alertness" while 42.37% of the teachers currently spend 1 hour of time on the topic. A greater percentage of students felt that more time should be spent on "Impaired States of Alertness" with over 25% indicating 4 hours or more. These data are presented in Figure 6.

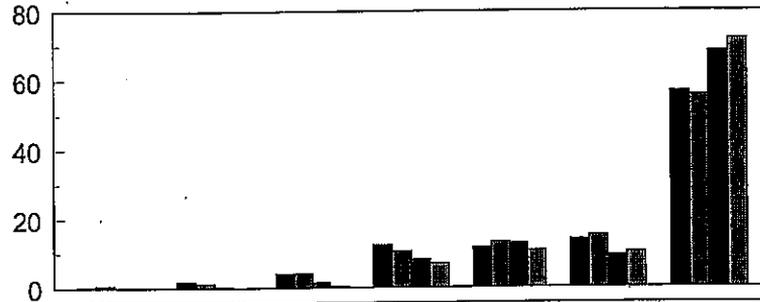
Figure 7 presents the interesting results from the hours spent and should spend on "Basic Vehicle Control." While students about equally indicated that their driver education program had 2 (21.87%), 3 (20.81%) or 5 or more (23.14%) hours on this topic, more students (27.85%) felt that 5 or more hours should be spent on this topic. Teachers tended to show that 2 hours (26.24%) or 5 or more hours (27.76%) was the current practice on this topic. Over 34% of the teachers felt that 5 or more hours should be spent on "Basic Vehicle Control."

The percent of response for the hours spent and should spend for the topic "Visual



Figure 3. Comparison of Hours Spent vs. Should Spend on Rules of the Road

Percent of Response



	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	0.21	1.69	4.03	12.29	11.44	13.77	56.57
Students-Should Spend	0.65	1.30	4.12	10.41	13.02	14.97	55.53
Teachers-Hours Spent	0.00	0.38	1.53	8.05	12.64	9.20	68.20
Teachers-Should Spend	0.00	0.00	0.41	6.94	10.61	10.20	71.84

Student Hours Spent: Median = 5 or more; Teacher Hours Spent: Median = 5 or more
 Student Should Spend: Median=5 or more; Teacher Should Spend: Median=5 or more

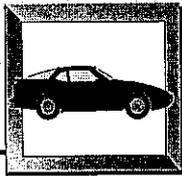
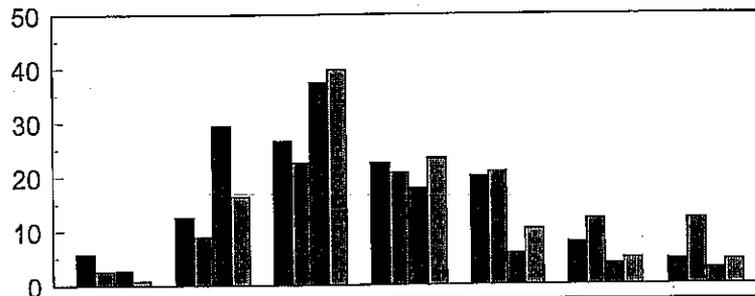


Figure 4. Comparison of Hours Spent vs. Should Spend on Physical Limits of Other Drivers

Percent of Response



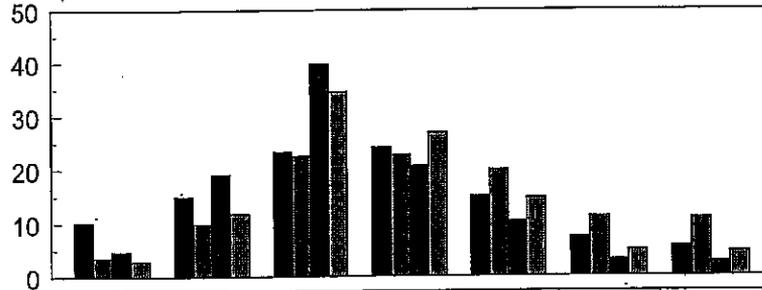
	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	5.74	12.55	26.60	22.55	20.00	7.87	4.68
Students-Should Spend	2.61	8.91	22.61	20.65	20.87	12.17	12.17
Teachers-Hours Spent	2.67	29.39	37.40	17.94	5.73	3.82	3.05
Teachers-Should Spend	0.82	16.39	39.75	23.36	10.25	4.92	4.51

Student Hours Spent Median = 2; Teacher Hours Spent Median = 1
 Student Should Spend Median = 2; Teacher Should Spend Median = 1



Figure 5. Comparison of Hours Spent vs. Should Spend on Vehicle Dynamics

Percent of Response



	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	10.02	14.93	23.24	24.09	14.93	7.25	5.54
Students-Should Spend	3.49	9.80	22.44	22.66	19.83	11.11	10.86
Teachers-Hours Spent	4.58	19.08	39.69	20.61	10.31	3.05	2.67
Teachers-Should Spend	2.85	11.79	34.55	26.83	14.63	4.88	4.47

Student Hours Spent: Median = 2 ; Teacher Hours Spent: Median = 1
 Student Should Spend: Median = 2 ; Teacher Should Spend: Median = 2

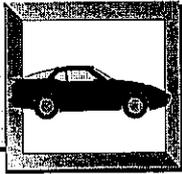
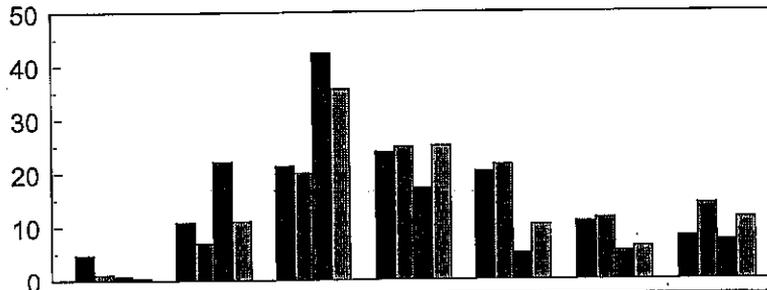


Figure 6. Comparison of Hours Spent vs. Should Spend on Impaired States of Alertness

Percent of Response



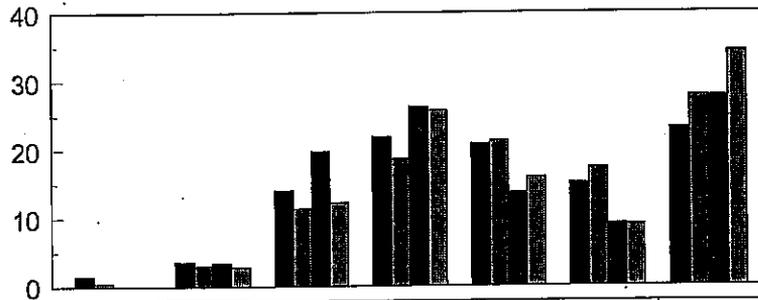
	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	4.69	10.87	21.32	23.88	20.26	10.87	8.10
Students-Should Spend	1.09	6.96	20.00	24.78	21.52	11.52	14.13
Teachers-Hours Spent	0.76	22.14	42.37	17.18	4.96	5.34	7.25
Teachers-Should Spend	0.41	11.07	35.66	25.00	10.25	6.15	11.48

Student Hours Spent: Median = 2 ; Teacher Hours Spent: Median = 1
 Student Should Spend: Median = 2 ; Teacher Should Spend: Median = 2



Figure 7. Comparison of Hours Spent vs. Should Spend on Basic Vehicle Control

Percent of Response



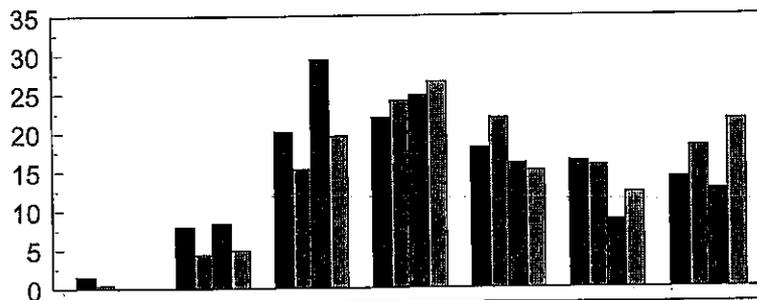
	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	1.49	3.61	14.01	21.87	20.81	15.07	23.14
Students-Should Spend	0.44	3.07	11.40	18.64	21.27	17.32	27.85
Teachers-Hours Spent	0.00	3.42	19.77	26.24	13.69	9.13	27.76
Teachers-Should Spend	0.00	2.86	12.24	25.71	15.92	8.98	34.29

Student Hours Spent: Median = 3 ; Teacher Hours Spent: Median = 3
 Student Should Spend: Median = 3 ; Teacher Should Spend: Median = 3



Figure 8. Comparison of Hours Spent vs. Should Spend on Visual Scanning

Percent of Response



	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	1.50	7.94	20.17	21.89	18.03	16.31	14.16
Students-Should Spend	0.44	4.38	15.32	24.07	21.88	15.75	18.16
Teachers-Hours Spent	0.00	8.40	29.39	24.81	16.03	8.78	12.60
Teachers-Should Spend	0.00	4.90	19.59	26.53	15.10	12.24	21.63

Student Hours Spent: Median = 2 ; Teacher Hours Spent: Median = 2
 Student Should Spend: Median = 3 ; Teacher Should Spend: Median = 2

Scanning" is presented in Figure 8. Most current driver education programs, as reported by both students and teachers, spend 2 hours or less on this topic. The students median score for what the driver education programs should spend is 3 hours. Almost 49% of the teachers indicate that 3 or more hours should be spent on "Visual Scanning."

The median score of the number of hours that teachers indicate is spent on "Hazard Identification and Recognition" is one, while students' median response is 2. Both students and teachers believe that 3 or more hours (as reflected by the median of 3) should be spent on "Hazard Identification and Recognition." These data are presented in Figure 9.

The topic "Time-Space-Distance Estimates" hours spent in the driver education program was 2 (students) and 1 (teachers). Figure 10 displays this information. Students believe that more hours (3 vs. 2) should be spent on "Time-Space-Distance Estimates) than do teachers. Over 50% of the students believe that 3 or more hours should be taught on this topic in the driver education program.

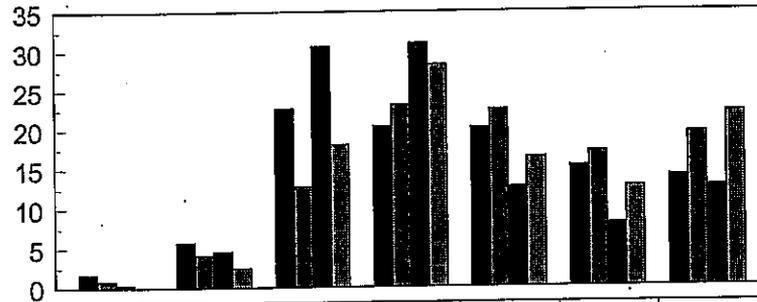
More teachers (33.33%) indicated that their driver education program had one hour of instruction on the topic "Predicting the Action of Others" than they other 5 hour categories. Students were more likely to want more hours on this topic than teachers. This is reflected in that 51.75% of the students wanted 3 or more hours, while 46.75% of the teachers wanted 3 or more hours taught on this topic. Figure 11 shows the results of this topic.

Figure 12 relates the responses of the students and teachers concerning the topic "Decision Making in Traffic." Both students and teachers want more hours as shown by an increase in 4 hours and more, percentage wise. The highest response percent for should spend was 5 or more hours by both students and teachers.



Figure 9. Comparison of Hours Spent vs. Should Spend on Hazard Identification/Recognition

Percent of Response



	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	1.70	5.73	22.72	20.38	20.17	15.29	14.01
Students-Should Spend	0.87	4.11	12.77	23.16	22.51	17.10	19.48
Teachers-Hours Spent	0.38	4.60	30.65	31.03	12.64	8.05	12.64
Teachers-Should Spend	0.00	2.46	18.03	28.28	16.39	12.70	22.13

Student Hours Spent: Median = 2 ; Teacher Hours Spent: Median = 1
 Student Should Spend: Median = 3 ; Teacher Should Spend: Median = 3

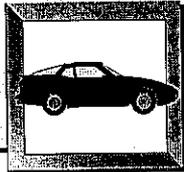
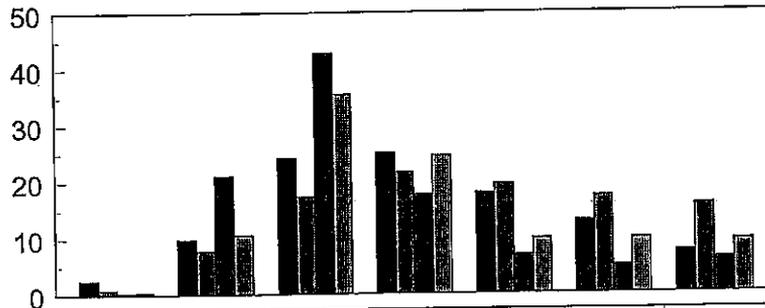


Figure 10. Comparison of Hours Spent vs. Should Spend on Time-Space-Distance Estimates

Percent of Response



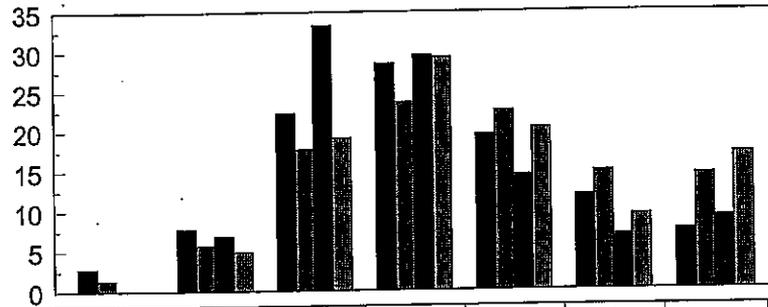
	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	2.51	9.81	24.22	25.05	17.95	12.94	7.52
Students-Should Spend	0.86	7.78	17.28	21.60	19.44	17.28	15.77
Teachers-Hours Spent	0.38	21.07	42.91	17.62	6.90	4.98	6.13
Teachers-Should Spend	0.41	10.61	35.51	24.49	9.80	9.80	9.39

Student Hours Spent: Median = 2 ; Teacher Hours Spent: Median = 1
 Student Should Spend: Median = 3 ; Teacher Should Spend: Median = 2



Figure 11. Comparison of Hours Spent vs. Should Spend on Predicting the Action of Others

Percent of Response



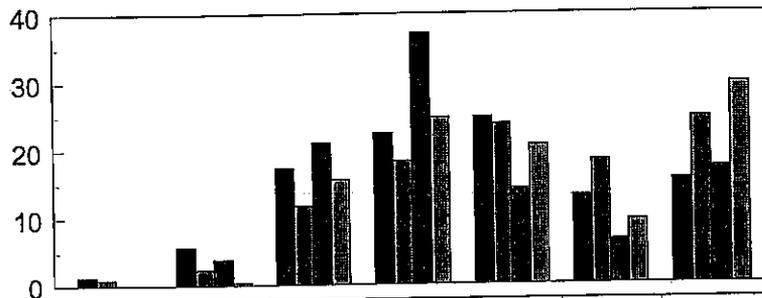
	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	2.78	7.71	22.27	28.48	19.49	11.78	7.49
Students-Should Spend	1.31	5.68	17.69	23.58	22.49	14.85	14.41
Teachers-Hours Spent	0.00	6.82	33.33	29.55	14.39	6.82	9.09
Teachers-Should Spend	0.00	4.88	19.11	29.27	20.33	9.35	17.07

Student Hours Spent: Median = 2 ; Teacher Hours Spent: Median = 2
 Student Should Spend: Median = 3 ; Teacher Should Spend: Median = 2



Figure 12. Comparison of Hours Spent vs. Should Spend on Decision Making in Traffic

Percent of Response



	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	1.27	5.71	17.34	22.41	24.74	13.11	15.43
Students-Should Spend	0.87	2.40	11.76	18.30	23.75	18.30	24.62
Teachers-Hours Spent	0.00	3.83	21.07	37.16	14.18	6.51	17.24
Teachers-Should Spend	0.00	0.41	15.64	24.69	20.58	9.47	29.63

Student Hours Spent: Median = 3 ; Teacher Hours Spent: Median = 2
 Student Should Spend: Median = 3 ; Teacher Should Spend: Median = 3

The responses for the topic "Speed Control" is presented in Figure 13. Currently 43.46% of teachers indicate that schools spend one hour in the driver education on "Speed Control", while 28.21% of the students indicate two hours. Over 30% of the students believe that 4 or more hours should be spent on this topic. Only 17.22% of the teachers indicated that 4 or more hours should be spent on "Speed Control."

Currently, 42.91% of the teachers spend one hour on the topic "Vehicle Positioning," while 36.89% feel that they should spend 2 hours on the topic. The median number of hours that should be spent was 2 as reported by both teachers and students. Figure 14 reports that results of hours spent and should spend for the topic "Vehicle Positioning."

While students felt that more hours (3) should be spent on the topic "Handling Driving Emergencies" than what was currently being spent, the teachers had the same median number of hours for what is currently being spent and what should be spent for the same topic. Almost 22% of the students and almost 14% of the teachers felt that 5 or more hours should be spent on this topic. The results of teacher and student responses to the topic "Handling Driving Emergencies" is shown in Figure 15.

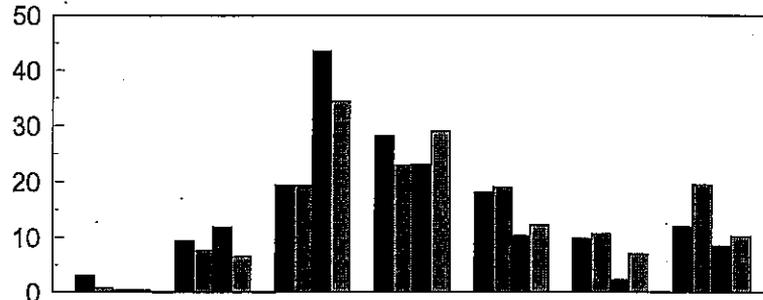
Again, students felt that more hours should be spent on the topic "Handling Special Situations" than did teachers (median hours of 3 for students vs. 2 hours for teachers). Only 29.1% of the teachers felt that 3 or more hours should be spent on topic "Handling Special Situations", as shown in Figure 16.

Figure 17 reflects the responses to the topic "Vehicle Maintenance." Currently both students and teachers indicate that the median number of hours taught is one. Over 50% of the students felt that at least 2 hours should be spent on this topic, while over 42% of the teachers



Figure 13. Comparison of Hours Spent vs. Should Spend on Speed Control

Percent of Response



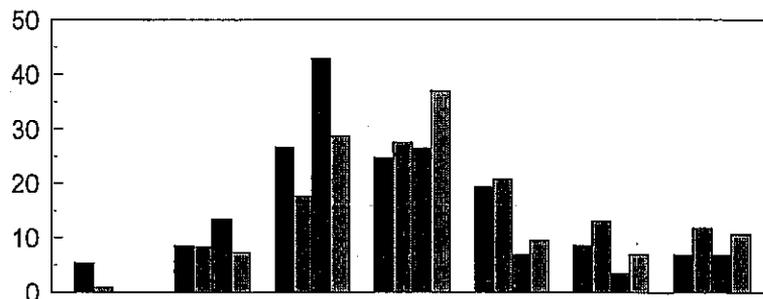
	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	2.99	9.40	19.44	28.21	18.16	9.83	11.97
Students-Should Spend	0.87	7.59	19.31	22.99	19.09	10.63	19.52
Teachers-Hours Spent	0.38	11.92	43.46	23.08	10.38	2.31	8.46
Teachers-Should Spend	0.41	6.56	34.43	29.10	12.30	6.97	10.25

Student Hours Spent: Median = 2 ; Teacher Hours Spent: Median = 1
 Student Should Spend: Median = 2 ; Teacher Should Spend: Median = 2



Figure 14. Comparison of Hours Spent vs. Should Spend on Vehicle Positioning

Percent of Response



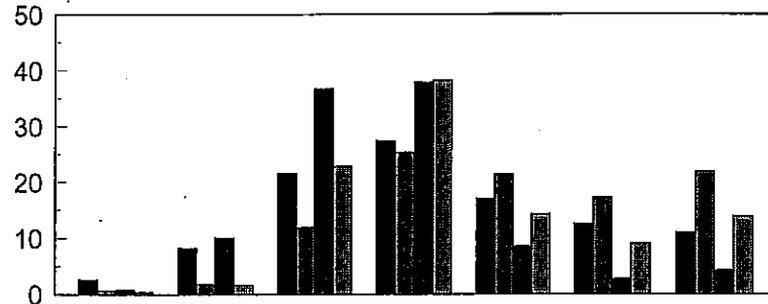
	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	5.36	8.58	26.61	24.68	19.31	8.58	6.87
Students-Should Spend	0.87	8.30	17.69	27.51	20.74	13.10	11.79
Teachers-Hours Spent	0.00	13.41	42.91	26.44	6.90	3.45	6.90
Teachers-Should Spend	0.00	7.38	28.69	36.89	9.43	6.97	10.66

Student Hours Spent: Median = 2 ; Teacher Hours Spent: Median = 1
 Student Should Spend: Median = 2 ; Teacher Should Spend: Median = 2



Figure 15. Comparison of Hours Spent vs. Should Spend on Handling Driving Emergencies

Percent of Response



	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	2.58	8.17	21.51	27.31	16.99	12.47	10.97
Students-Should Spend	0.66	1.76	11.89	25.33	21.37	17.18	21.81
Teachers-Hours Spent	0.77	10.04	36.68	37.84	8.49	2.70	4.25
Teachers-Should Spend	0.41	1.63	22.76	38.21	14.23	8.94	13.82

Student Hours Spent: Median = 2 ; Teacher Hours Spent: Median = 2
 Student Should Spend: Median = 3 ; Teacher Should Spend: Median = 2

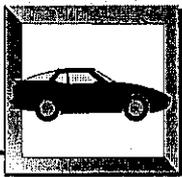
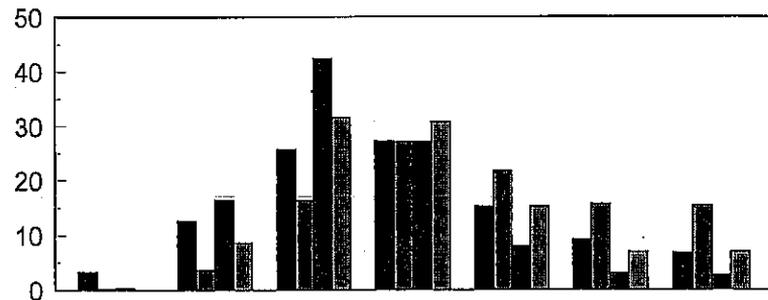


Figure 16. Comparison of Hours Spent vs. Should Spend on Handling Special Situations

Percent of Response



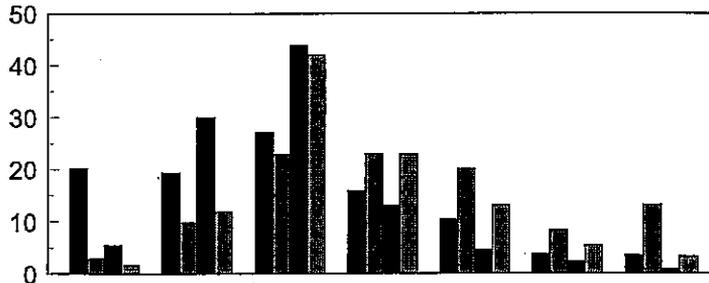
	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	3.27	12.64	25.71	27.23	15.25	9.15	6.75
Students-Should Spend	0.22	3.58	16.33	27.07	21.70	15.66	15.44
Teachers-Hours Spent	0.38	16.41	42.37	27.10	8.02	3.05	2.67
Teachers-Should Spend	0.00	8.61	31.56	30.74	15.16	6.97	6.97

Student Hours Spent: Median = 2 ; Teacher Hours Spent: Median = 1
 Student Should Spend: Median = 3 ; Teacher Should Spend: Median = 2



Figure 17. Comparison of Hours Spent vs. Should Spend on Vehicle Maintenance

Percent of Response



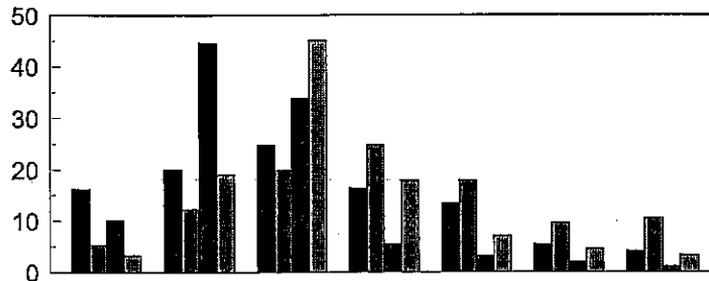
	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	20.17	19.31	27.11	15.84	10.41	3.69	3.47
Students-Should Spend	2.90	9.80	22.94	22.94	20.04	8.24	13.14
Teachers-Hours Spent	5.38	30.00	43.85	13.08	4.62	2.31	0.77
Teachers-Should Spend	1.63	11.84	42.04	22.86	13.06	5.31	3.27

Student Hours Spent: Median = 1 ; Teacher Hours Spent: Median = 1
 Student Should Spend: Median = 2 ; Teacher Should Spend: Median = 1



Figure 18. Comparison of Hours Spent vs. Should Spend on Self-Assessing of Driving Performance

Percent of Response



	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	16.13	20.00	24.73	16.34	13.33	5.38	4.09
Students-Should Spend	5.35	12.25	19.82	24.72	17.82	9.58	10.47
Teachers-Hours Spent	10.08	44.57	33.72	5.43	3.10	1.94	1.16
Teachers-Should Spend	3.31	19.01	45.04	17.77	7.02	4.55	3.31

Student Hours Spent: Median=1; Teacher Hours Spent: Median=Some <1
 Student Should Spend: Median = 2 ; Teacher Should Spend: Median = 1

felt that one hour is enough.

Teachers currently spend one hour on the topic "Self-assessment of Driving Performance", and feel that only one hour is necessary. Over 45% of the teachers believed that one hour is the appropriate number of hours to spend on the topic "Self-assessment of Driving Performance." On the other hand students were more likely to support more hours on this topic. Over 62% of the students wanted 2 or more hours of time devoted to "Self-assessment of Driving Performance." The results of this topic is presented in Figure 18.

Figure 19 displays the results about the number of hours spent and should be spent on the driver education topic "Alcohol, Drugs, and Driving." Both students and teachers indicate that currently 3 hours (median) are spent on teaching this topic. Almost 52% of the teachers felt that 5 or more hours should be taught on this important topic. Over one-third of the students felt that 5 or more hours should be spent on this topic.

On the topic "Driving Responsibility," 42.15% of the teachers currently spend one hour of their time. The median score in hours for students was 2. Teachers felt that 2 hours (median score) should be spent on this topic, while 3 hours was indicated by students. Figure 20 presents the results of the hours for "Driving Responsibility."

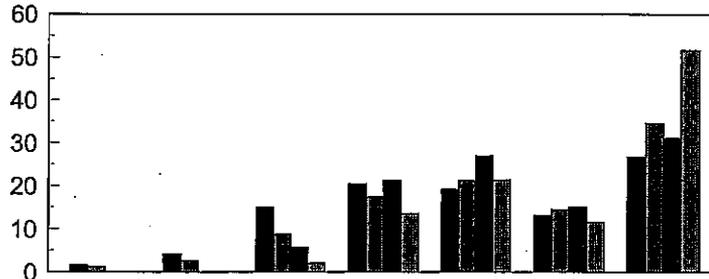
The hours spent and should be spent on "Occupant Protection" is shown in Figure 21. Both students and teachers believed that 2 hours (median) should be spent on this topic. However over 62% of the teachers felt that one or two hours only be spent on this topic. Almost 48% of the students felt that 3 or more hours should be spent on the topic "Occupant Protection."

On the topic "Having a Positive Attitude", 34% of the students indicated that driver education programs spent zero time or less than one hour. Almost 28% of the teachers indicated



Figure 19. Comparison of Hours Spent vs. Should Spend on Alcohol, Drugs and Driving

Percent of Response



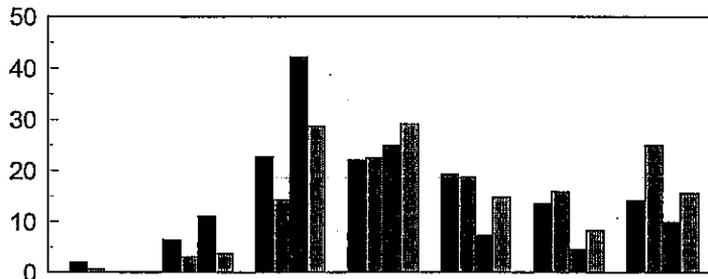
	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	1.51	4.09	15.05	20.43	19.14	13.12	26.67
Students-Should Spend	1.09	2.62	8.73	17.47	21.18	14.41	34.50
Teachers-Hours Spent	0.00	0.00	5.77	21.15	26.92	15.00	31.15
Teachers-Should Spend	0.00	0.00	2.05	13.52	21.31	11.48	51.64

Student Hours Spent: Median = 3 ; Teacher Hours Spent: Median = 3
 Student Should Spend: Median=3; Teacher Should Spend: Median=5 or more



Figure 20. Comparison of Hours Spent vs. Should on Driving Responsibility

Percent of Response



	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	1.93	6.42	22.70	22.06	19.27	13.49	14.13
Students-Should Spend	0.66	3.08	14.32	22.47	18.72	15.86	24.89
Teachers-Hours Spent	0.00	11.11	42.15	24.90	7.28	4.60	9.96
Teachers-Should Spend	0.00	3.69	28.69	29.10	14.75	8.20	15.57

Student Hours Spent: Median = 2 ; Teacher Hours Spent: Median = 1
 Student Should Spend: Median = 3 ; Teacher Should Spend: Median = 2

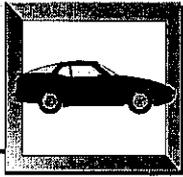
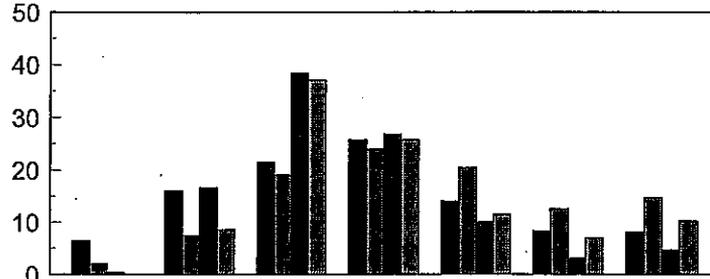


Figure 21. Comparison of Hours Spent vs. Should Spend on Occupant Protection

Percent of Response



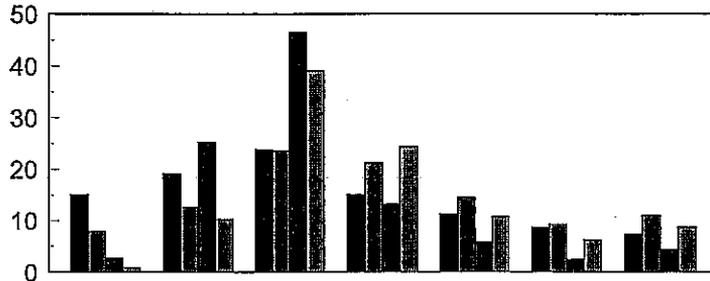
	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	6.38	15.96	21.49	25.74	14.04	8.30	8.09
Students-Should Spend	1.97	7.46	19.08	23.90	20.39	12.50	14.69
Teachers-Hours Spent	0.39	16.67	38.37	26.74	10.08	3.10	4.65
Teachers-Should Spend	0.00	8.57	37.14	25.71	11.43	6.94	10.20

Student Hours Spent; Median = 2 ; Teacher Hours Spent; Median = 1
 Student Should Spend; Median = 2 ; Teacher Should Spend; Median = 2



Figure 22. Comparison of Hours Spent vs. Should Spend on Having a Positive Attitude

Percent of Response



	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	15.02	19.10	23.82	15.02	11.16	8.58	7.30
Students-Should Spend	7.88	12.69	23.63	21.23	14.44	9.19	10.94
Teachers-Hours Spent	2.71	25.19	46.51	13.18	5.81	2.33	4.26
Teachers-Should Spend	0.82	10.29	39.09	24.28	10.70	6.17	8.64

Student Hours Spent; Median = 1 ; Teacher Hours Spent; Median = 1
 Student Should Spend; Median = 2 ; Teacher Should Spend; Median = 1

the same thing. This information is presented in Figure 22. Over 55% of the students felt that 2 or more hours should be spent on "Having a Positive Attitude", while also 50% of the teachers felt the same way.

Most driver education programs spend one or two hours on the topic "Communication Techniques." Teachers were more likely to indicate that less time should be spent on this topic than students (48.95% of the teachers vs. 31.72% of the students for one hour or less). Figure 23 presents this information.

Over 50% of both students and teachers indicated that one hour or less was spent on the topic "Fuel-Efficient Driving." Over 50% of the students felt that 2 or more hours should be spent on this topic. Only 24.9% of the teachers felt that 2 or more hours should be devoted to this topic. The most occurring response by teachers on the amount of time to spend on this topic was one hour (46.12%). Figure 24 displays the results on the number of hours for the topic "Fuel-Efficient Driving."

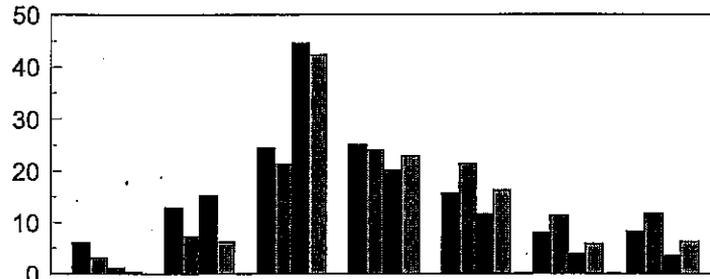
While students and teachers agree that in the current driver education programs in Illinois, over 50% of the schools provide one or less hour of instruction on the topic "Vehicle Ownership Responsibility," students were more likely to indicate that more hours should be spent on this topic. Over 64% of the students felt that 2 or more hours should be spent on this topic, while less than 50% (49.18) of the teachers indicated the same. Figure 25 reflects the results on the topic "Vehicle Ownership Responsibility."

Figure 26 displays the results on the topic "Driving in Adverse Conditions." Most students felt that more hours should be spent on this topic than did teachers. Almost 66% of the students felt that 3 or more hours should be spent on this topic, while only 40.49% of the teachers



Figure 23. Comparison of Hours Spent vs. Should Spend on Communication Techniques

Percent of Response



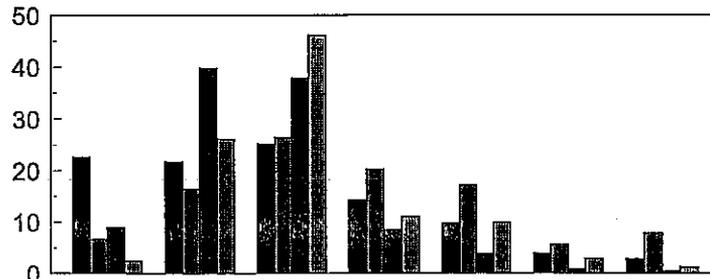
	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	6.00	12.85	24.41	25.05	15.63	7.92	8.14
Students-Should Spend	3.08	7.27	21.37	24.01	21.37	11.23	11.67
Teachers-Hours Spent	1.16	15.12	44.57	20.16	11.63	3.88	3.49
Teachers-Should Spend	0.41	6.22	42.32	22.82	16.18	5.81	6.22

Student Hours Spent: Median = 2 ; Teacher Hours Spent: Median = 1
 Student Should Spend: Median = 2 ; Teacher Should Spend: Median = 2



Figure 24. Comparison of Hours Spent vs. Should Spend on Fuel-Efficient Driving

Percent of Response



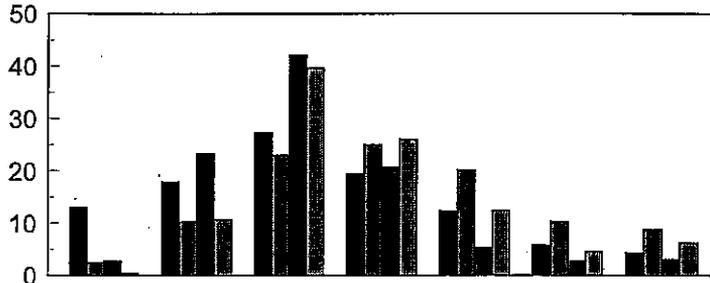
	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	22.58	21.72	25.16	14.19	9.68	3.87	2.80
Students-Should Spend	6.59	16.48	26.37	20.22	17.14	5.49	7.69
Teachers-Hours Spent	8.88	39.77	37.84	8.49	3.86	0.77	0.39
Teachers-Should Spend	2.45	26.12	46.12	11.02	9.80	2.86	1.22

Student Hours Spent: Median = 1 ; Teacher Hours Spent: Median = 1
 Student Should Spend: Median = 2 ; Teacher Should Spend: Median = 1



Figure 25. Comparison of Hours Spent vs. Should Spend on Vehicle Ownership Responsibility

Percent of Response



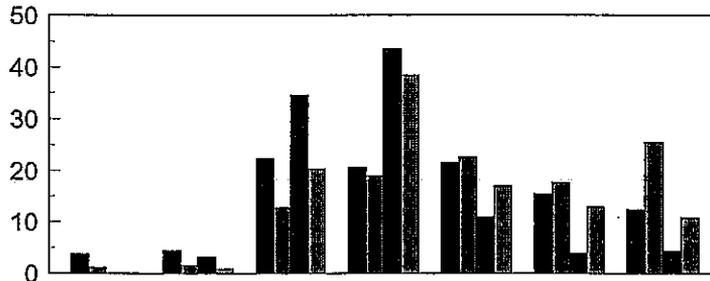
	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	13.01	17.91	27.29	19.40	12.37	5.76	4.26
Students-Should Spend	2.41	10.31	23.03	25.00	20.18	10.31	8.77
Teachers-Hours Spent	2.68	23.37	42.15	20.69	5.36	2.68	3.07
Teachers-Should Spend	0.41	10.74	39.67	26.03	12.40	4.55	6.20

Student Hours Spent: Median = 1 ; Teacher Hours Spent: Median = 1
 Student Should Spend: Median = 2 ; Teacher Should Spend: Median = 1



Figure 26. Comparison of Hours Spent vs. Should Spend on Driving in Adverse Conditions

Percent of Response



	0	Some <1	1	2	3	4	5 or more
Students-Hours Spent	3.68	4.33	22.29	20.56	21.43	15.37	12.34
Students-Should Spend	1.12	1.56	12.72	18.97	22.54	17.63	25.45
Teachers-Hours Spent	0.00	3.10	34.50	43.41	10.85	3.88	4.26
Teachers-Should Spend	0.00	0.83	20.25	38.43	16.94	12.81	10.74

Student Hours Spent: Median = 2 ; Teacher Hours Spent: Median = 2
 Student Should Spend: Median = 3 ; Teacher Should Spend: Median = 2

felt the same way.

Other topic areas were identified by both students and teachers. A listing of these other topics are presented in the appendix. Many of the items listed were in reality a part of the 26 topics listed on the survey sheet. However, important topics identified by both students and teachers included the use of cellular phones, car jacking prevention, emergency off-road recovery, and standard transmission shifting.

Figures 27-34 present some of the various demographic information provided by the teachers and the students on the survey form. For the teachers the information relates to driver education teaching experience, time spent teaching driver education, total number of hours in driver education program, and school characteristics of teachers who responded to survey. Students' information includes gender, total number of hours in driver education program, number of months holding driver's license, and crashes reported to police.

Of the teachers, 20.23% had 7 years or less of teaching driver education, 29.37% taught 8-19 years, 35.71% taught 20-28 years, and 14.68% taught 29 or more years. Figure 27 shows these results.

Figure 28 displays the percent of time that teachers spent teaching driver education. The median amount of time spent was 70% and the mean was 65.79%. Over one-third of the teachers spend over 95 percent of their time teaching driver education.

Almost 54% of the teachers indicated that the total number of hours in their driver education program was 45. Figure 29 also shows that over 30% of the programs have less than a 37.5 hour program.

With the teachers who responded to the survey, 29.7% were from large, urban schools,

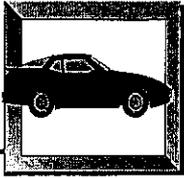
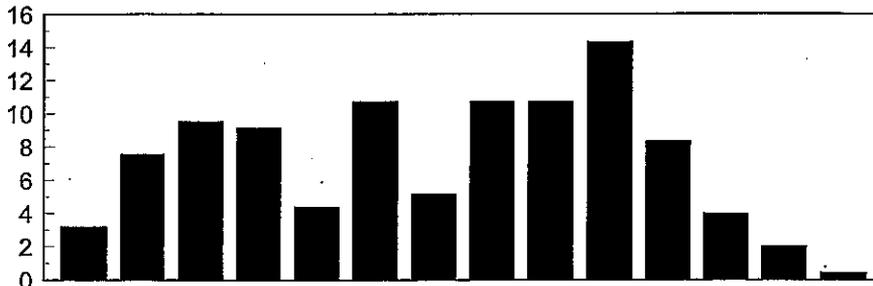


Figure 27. Teachers' Years of Driver Education Teaching Experience

Percent of Response



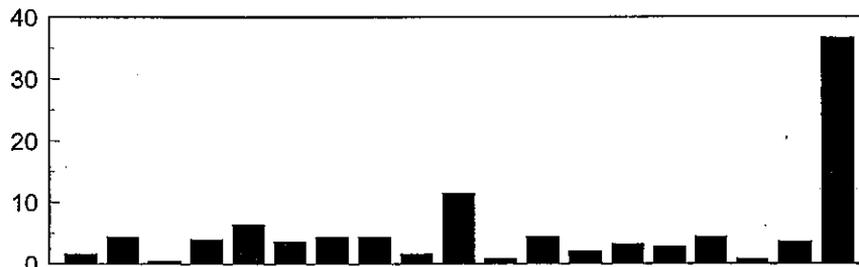
	0-1	2-4	5-7	8-10	11-13	14-16	17-19	20-22	23-25	26-28	29-31	32-34	35-37	38-40
Years	3.17	7.54	9.52	9.13	4.37	10.71	5.16	10.71	10.71	14.29	8.33	3.97	1.98	0.40

Mean=17.92 (SD=9.72), Median=20



Figure 28. Teacher Time Spent Teaching Driver Education

Percent of Response

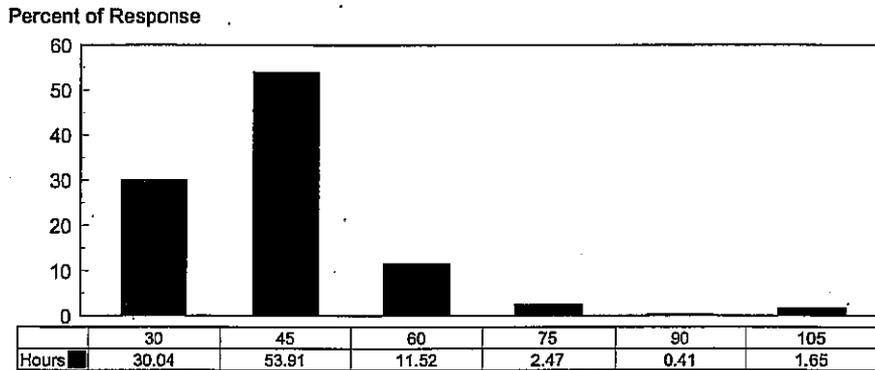


	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95
Time Spent	1.57	4.33	0.39	3.94	6.30	3.54	4.33	4.33	1.57	11.42	0.79	4.33	1.97	3.15	2.76	4.33	0.70	3.54	36.61

Percent of time shown at midpoint of response category
 Mean=65.79 (SD=31.44), Median=70



Figure 29. Number of Total Hours in Driver Education Program as Indicated by Teachers



Hours shown at midpoint of response category
 Mean=45.03 (SD=11.97), Median=42

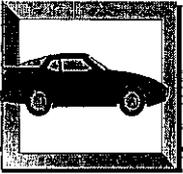


Figure 30. School Characteristics of Teachers Who Responded to Survey

	Large Schools		Small Schools		Total	
	No.	Percent	No.	Percent	No.	Percent
Urban Schools	76	29.7	21	8.2	97	38
Rural Schools	11	4.3	147	57.4	158	62
Total	87	34.1	168	65.9		

4.3% were from large, rural schools, 8.2% were from small, urban schools, and 54.7% were from small, rural schools. These results are shown in Figure 30.

Of the students who participated in the study, 50.98% were male and 49.02 were female. Figure 31 reflects these results.

Figure 32 shows the outcome of the total number of hours in the driver education program as reported by students. Almost 48% of the students indicated that they had completed a high school driver education program that had 45 hours in the total program. The mean and the median percent was 47.

Over 35% of the students had held their driver's license for 13-23 months. Other responses were 0-6 months, 24.66%, 7-12 months, 25.56 and 24 or more months, 14.57%. These results are shown in Figure 33.

Figure 34 reflects the number of student crashes reported to police. Over 80% of the students had no involvement in traffic crashes. One crash was reported by 15.26% of the students.

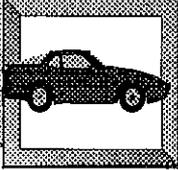


Figure 31. Gender of Students Participating in Study

Percent of Response



	Male	Female
Gender	50.98	49.02

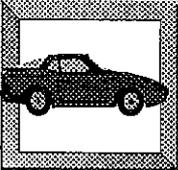
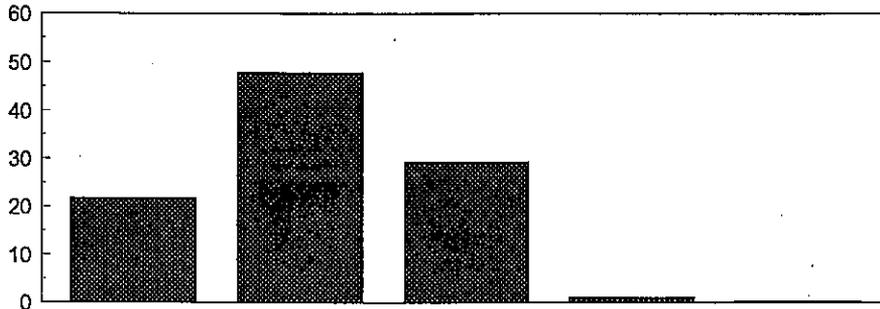


Figure 32. Number of Total Hours in Driver Education Program as Indicated by Students

Percent of Response



	30	45	60	75	90
Hours	21.71	47.80	29.27	0.98	0.24

Hours shown at midpoint of response category
Mean=46.90 (SD=11.20), Median=47

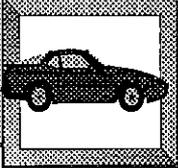


Figure 33. Number of Months Students Held Driver's License

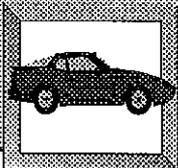
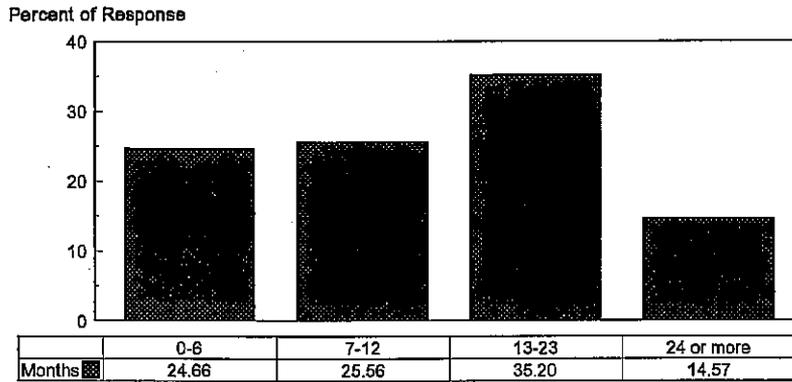
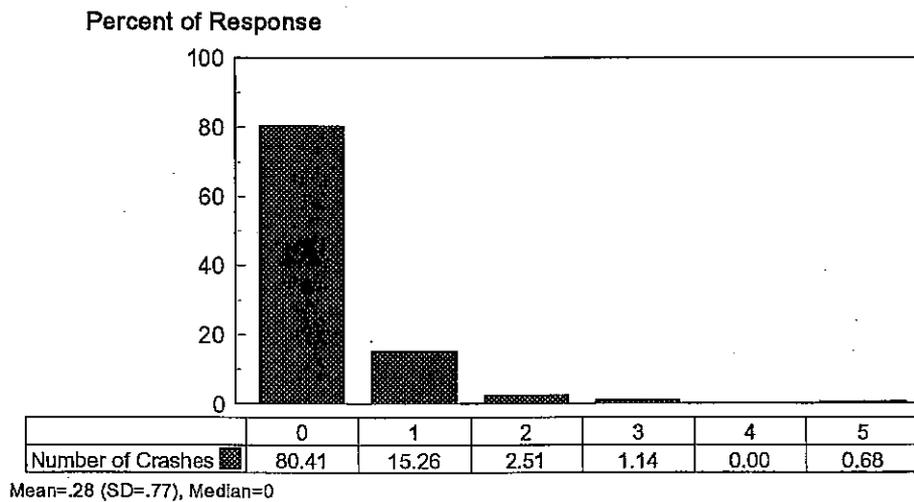


Figure 34. Number of Student Crashes Reported to Police



Interpretation of Results

Table 1 compares the median time spent (in hours) on each topic to the median time the teachers would like to spend. The median time (spent or should be spent) is at least one hour for each topic. For 15 of the 26 topics the teachers would like to spend more time--approximately one hour more. For one topic (Topic 19: Alcohol, Drugs and their Effects on Driving) the typical instructor would like to spend at least two more hours, as indicated by an increase in two categories in the medians of the "time spent" and "should be spent" responses. This is strong indication that the teachers would like to spend more time on these topics, for a total of at least 15 hours more instruction.

The students are somewhat more restrained in their eagerness to spend more time learning about these topics. On only 12 topics (8, 9, 10, 11, 14, 15, 16, 17, 18, 20, 22, 26) do the students indicate that they would like more time spent (again, approximately one hour more). These results are shown in Table 2.

Tables 1 and 2 have shown that more time should be spent on most of the topics according to either the teachers or the students or both. In fact, on only five topics do neither the teachers nor the students indicate that more time should be spent. These topics are Rules of the Road (Topic 3), Physical Limits of other Drivers (Topic 4), Basic Vehicle Control (Topic 5), Fuel-Efficient Driving (Topic 24) and Driving in Adverse Conditions (Topic 26).

The schools of the participating teachers were classified according to being urban or rural. The researchers were able to assign schools to either rural or urban settings through the use of Standard Metropolitan Statistical Area data. A Standard Metropolitan Statistical Area is considered urban if the community has a population of 50,000 or greater. The schools were also

Table 1. Median Time (in hours) for “How much time INSTRUCTORS spent” on each item and “How much time they should spend.”

Topic Number and Description	Hours Spent (Hours)	Should Spend (Hours)	Increase time?
1 Social/Economic Consequences	1	2	Yes
2 Emotions and Driving	1	2	Yes
3 Rules of the Road	5 or more	5 or more	
4 Physical Limits of Other Drivers	1	1	
5 Vehicle Dynamics	1	2	Yes
6 Impaired States of Alertness	1	2	Yes
7 Basic Vehicle Control	3	3	
8 Visual Scanning	2	2	
9 Hazard Identification/Recognition	2	3	Yes
10 Time-Space-Distance Estimates	1	2	Yes
11 Predicting the Action of Others	2	2	
12 Decision Making in Traffic	2	3	Yes
13 Speed Control	1	2	Yes
14 Vehicle Positioning	1	2	Yes
15 Handling Driving Emergencies	2	2	
16 Handling Special Situations	1	2	Yes
17 Vehicle Maintenance	1	1	
18 Self-Assessing of Driving Performance	Less than 1	1	Yes
19 Alcohol, Drugs and Driving	3	5 or more	YES!
20 Driving Responsibility	1	2	Yes
21 Occupant Protection	1	2	Yes
22 Having a Positive Attitude	1	1	
23 Communication Techniques	1	2	Yes
24 Fuel-Efficient Driving	1	1	
25 Vehicle Ownership Responsibility	1	1	
26 Driving in Adverse Conditions	2	2	

Table 2. Median Time (in hours) for "How much time STUDENTS spent" on each item and "How much time they should spend."

Topic Number and Description	Hours Spent (Hours)	Should Spend (Hours)	Increase time?
1 Social/Economic Consequences	2	2	
2 Emotions and Driving	2	2	
3 Rules of the Road	5 or more	5 or more	
4 Physical Limits of Other Drivers	2	2	
5 Vehicle Dynamics	2	2	
6 Impaired States of Alertness	2	2	
7 Basic Vehicle Control	3	3	
8 Visual Scanning	2	3	Yes
9 Hazard Identification/Recognition	2	3	Yes
10 Time-Space-Distance Estimates	2	3	Yes
11 Predicting the Action of Others	2	3	Yes
12 Decision Making in Traffic	3	3	
13 Speed Control	2	2	
14 Vehicle Positioning	1	2	Yes
15 Handling Driving Emergencies	2	3	Yes
16 Handling Special Situations	2	3	Yes
17 Vehicle Maintenance	1	2	Yes
18 Self-Assessing of Driving Performance	1	2	Yes
19 Alcohol, Drugs and Driving	3	3	
20 Driving Responsibility	2	3	Yes
21 Occupant Protection	2	2	
22 Having a Positive Attitude	1	2	Yes
23 Communication Techniques	2	2	
24 Fuel-Efficient Driving	1	1	
25 Vehicle Ownership Responsibility	1	2	Yes
26 Driving in Adverse Conditions	2	2	

classified as being either large or small. The researchers were able to divide the schools that responded to the survey into large or small with the aid of the Illinois High School Association's Member School Directory. Schools were considered large if they were listed as Class AA. Schools were considered small if they were listed as Class A.

The researchers studied the differing responses of teachers from rural and urban schools using the Wilcoxon Test (Table 3). The results of this test show that in almost all cases teachers from the larger schools, thought there should be more time spent on the topics. Also, the urban schools teachers thought that more time was spent and should be spent than the rural teachers. The topics with medians significantly different at the .05 level are indicated in bold type in Table 3. If the p-value is greater than .050, no difference between the medians was found. In other words, there is no evidence that the typical instructor from the large (or urban) school differs from the instructor from the small (or rural) school in amount of time spent or should be spent.

The only topic for which this pattern does not hold is topic #3, " Rules of the Road". In this case, the teachers in the small schools spent more time and the teachers in the rural schools spent more time and thought they should spend more time.

While most of the students (80.4% from figure 34) did not report any crashes , an interesting correlation arises about the relationship between the number of crashes the students have reported to the police and their age. The Pearson correlation between the number of crashes and the student's age is -0.32 ($p < .0001$). This may be interpreted as younger students report more crashes or as the students get older, there are fewer crashes reported. This confirms the common knowledge that students with less driving experience (read 'younger') have the greatest frequency of crashes. Part of this significant finding may also be due to faulty/selective memory:

Table 3. Comparisons of medians of INSTRUCTORS from Large/Small Schools and Urban/Rural Schools on Time Spent and Time Should Spend using Wilcoxon Test (p-value in cell with the larger median).

Topic	DID Spend		SHOULD Spend		DID Spend		SHOULD Spend	
	Large	Small	Large	Small	Urban	Rural	Urban	Rural
1	.0623		.0583		.2886		.2161	
2	.0300		.0004		.0496		.0016	
3		.0387		.1565		.0030		.0477
4	.3111		.1839		.2779		.1032	
5	.0020		.0013		.0225		.0176	
6	.0404		.0059		.2338		.1052	
7		.6249	.4557		.8680		.1919	
8	.0004		.0001		.0001		.0001	
9	.0004		.0001		.0010		.0001	
10	.0753		.0043		.1435		.0011	
11	.0027		.0002		.0024		.0002	
12	.0522		.0086		.0087		.0001	
13	.1573		.0736		.1592		.0209	
14	.0001		.0087		.0001		.0031	
15	.0395		.0714		.0069		.0526	
16	.3424		.8595		.6115			.8562
17	.1254		.0720		.2922		.0134	
18	.1189		.4182		.0619		.2025	
19	.0205		.3146		.0269		.0906	
20	.4388		.4240		.2234		.3211	
21	.0239		.0150		.0399		.0226	
22	.4188		.2632		.1676		.0725	
23	.0534		.0273		.0695		.0131	
24	.3837		.3648		.3870		.1423	
25	.0805		.0191		.0961		.0156	
26	.0213		.0053		.0301		.0025	

Note: BOLD indicates results significant at .05 level.

Older students may not remember those fender-benders during the first year or two after obtaining their driver's license.

Discussion

For the first time, this study provided an opportunity to explore what is currently being taught and the time spent on topics in high school driver education in the State of Illinois.

While the best wisdom in years past thought that the minimum program of 30 hours of classroom and 6 hours of laboratory instruction (30 and 6) was sufficient (NHTSA, 1994), this study found that because of the desires of both high school driver education teachers and students who had completed high school driver education it is essential that driver education programs have more hours within their curriculum. Overall, students felt that the driver education program should be at least 64 hours, while teachers felt the program should be at least 53 hours. These number of hours should be broken down into both classroom and laboratory hours, i.e., 45 hours for classroom instruction and 10 hours of laboratory instruction (to reflect a point between 53 hours indicated by teachers and 64 hours shown by students). These hours are more in line with the recommendations of Quensel (1994) and Jones (1994) at least a 40 and 8 program.

The results from this study indicate that driver education teachers and students want a complete broad-based curriculum that focuses on all issues of driving. This focus on safe driving attitudes, developing good behavioral patterns, and training beginning drivers to recognize and respond to hazards in their ever changing environment is consistent with what is indicated in the literature (AAA Foundation for Traffic Safety, 1995; Mintz, 1995; Dennis, 1994; Crowe, 1994; Quensel, 1995; Mottola, 1995).

This study also confirmed the current thinking in driver education that a major focus of driver education programs should be on vision skill development, judgement development and enhancement, and development of decision making skills (Worzbyt, 1994; Carney, 1994). Students would like to spend at least 19 hours on these skills and teachers would like to spend at least 16 hours on these skills.

The findings mentioned above are in line with the concepts of graduated licensing for novice drivers (Robinson, 1995). Such a program would require more time being spent with beginning or novice drivers. Having more classroom and driving time in a 2-3 level driver education program would help phase drivers into the driving environment while being properly educated and trained (Robinson, 1995; NAIH, 1994; AAA Foundation for Traffic Safety, 1995).

Conclusions

Teachers who teach in and students who have completed high school driver education programs want more hours devoted to most of the topics covered in the program. Teachers and students want more time spent on social and economic consequences of driving, emotions and driving, vehicle dynamics, impaired states of alertness, hazard identification and recognition, time-space-distance estimates, decision making in traffic, speed control, vehicle positioning, special situations, self-assessing of driving performance, alcohol, drugs, and driving, driving responsibility, occupant protection, and communication techniques. More specifically, both teachers and students want a lot more time spent on alcohol, drugs and driving. Finally students, in particular, want more time devoted to the various topics in the driver education program than do teachers.

Recommendations

The recommendations that follow are based upon the results of this study:

1. Illinois must consider strengthening the minimum requirements of high school driver education, which should include basic driver education and further enhanced driver education.
2. Raise the minimum time spent in Illinois high school driver education from the current 30 hours of classroom instruction and 6 hours of laboratory instruction to 45 hours of classroom instruction and 10 hours of laboratory instruction. In most topic areas, both teachers and especially students believe that more hours should be spent on preparing a high school student to drive.
3. Because of the need for additional hours and the need to strengthen the driver education program, the State of Illinois needs to consider additional funding of high school driver education through increased driver licensing fees, fines for persons put on court supervision, etc.
4. The Illinois high school driver education course should particularly increase the number of hours devoted to instruction on alcohol, drugs and their effects on driving.
5. Other areas that need to be given specific consideration for increased instruction include:
 - a. social and economic consequences of driving
 - b. emotions and driving
 - c. vehicle dynamics
 - d. impaired states of alertness
 - e. hazard identification and recognition

- f. decision making in traffic situations
- g. speed control
- h. vehicle positioning
- i. handling special situations
- j. driving responsibility
- k. occupant protection
- l. communication techniques

Most of the above listed topics need to be discussed and practiced in the classroom and follow-up activity and practice in the laboratory.

- 6. Illinois high school driver education courses should consider including instruction on the use of cellular phones, car jacking prevention, emergency off-road recovery, and standard transmission shifting.
- 7. In order to strengthen the high school driver education program in the State of Illinois, the following groups/agencies should assume the roles as indicated.
 - a. National Highway Traffic Safety Administration -
 - 1) give grants to the State of Illinois to fund Driver Education and Graduated Licensing programming/activities
 - b. Division of Traffic Safety, Illinois Department of Transportation-
 - 1) provide grants to Illinois State Board of Education and universities to develop new/necessary driver education and graduated licensing materials/learning packages/ curriculum support
 - 2. provide grants for Illinois State Board of Education and Illinois Secretary of State to assist them in developing graduated licensing program materials that can be used by high schools to increase the probability of students being successful, crash free, and violation

free drivers.

- 3) hire a driver education specialist can work with the various state agencies, professional organizations, high schools, and universities. This person would assist these groups with improving driver education and graduated licensing programs.
- 4) create a research agenda that includes the following:
 - a) explore causal factors underlying crash experience of young drivers
 - b) identify the characteristics of a novice driver that could lead to good driver behavior and performance
 - c) evaluate emerging driver education practices and programs
 - d) develop driving performance and assessment standards for youthful drivers
 - e) identify and evaluate incentive programs that will encourage good youthful driver performance
- 5) since there is low awareness of the need for changes in driving skills and attitudes as they relate to reducing crashes that result in injuries and deaths of youthful drivers, the Division of Traffic Safety should identify the appropriate targeted audiences and then develop methods (focused and cost-effective advertising campaign) by which they can be made aware of the problem. Press and public relations materials should be developed and made available and

feature stories and editorials developed and placed in the state print and non-print media.

c. Illinois State Board of Education-

- 1) provide strong support and commitment for an enhanced driver education curriculum, including the current driver education program and graduate licensing program.
- 2) continue to have at least one full-time person devoted to supervising driver education in Illinois.

d. Illinois Secretary of State-

- 1) provide strong support and commitment for an enhanced driver education curriculum, including current driver education program and graduated licensing program.
- 2) continue supporting alcohol, drugs, and driving programs in high school driver education.

e. Illinois High School and College Driver Education Association-

- 1) continue to support effective high school driver education programs.
- 2) give support to increasing the number of classroom hours to 45 and the number of laboratory hours to 10.

f. High School teachers-

- 1) continue to be devoted to high quality high school driver education.

2) teach a broad based driver education program.

g. Universities-

1) those universities with a teacher preparation program in driver and traffic safety education should continue to provide a quality program.

2) recruit new students into completing the teacher preparation program.

3) topics highlighted in numbers 2 and 3 above should be taught to future high school driver education teachers.

4) universities need to promote enhanced driver education programming and the need for more classroom and laboratory instruction in high school driver education.

h. Schools and School Administrators-

1) support an enhanced high school driver education program.

i. Vehicle Procurement-

1) work with automobile dealerships/leasing programs to make affordable vehicles available for use in training.

Limitations of the Study

The following limitations are recognized for this study:

1. The hour category of 5+ puts a limit on the actual number of hours students/teachers had in the driver education program and the number of hours they would like to see.

2. Some people had trouble determining the actual hours spent in the driver education program due to the overlapping of some of the topics on the questionnaire.
3. Students who had completed driver education courses several years ago had trouble remembering what topics they had in the driver education course and classifying topics into appropriate areas.
4. The response rate for the questionnaires mailed to the schools was not as high as desired, resulting in fewer teacher responses.

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Appendices

TECHNICAL REVIEW PANEL

STATUS STUDY OF DRIVER EDUCATION PROGRAMS PROJECT

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Mailcode 6731
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17 August 1995

MEMORANDUM

To: ADTSEA attendee

From: Dale O. Ritzel
Center for Injury Control and Worksite Health Promotion

Re: Driver Education Survey

I hoped that you enjoyed the ADTSEA convention in Huntsville as much as I did. The sessions were great and it was great to see old friends and meet new people.

One of the things that Dan Shannon and I did while in Huntsville was to distribute a copy of the enclosed survey to some of the people that we met. We were unable to give copies of the survey to as many of the people attending that we wanted and are therefore using this means to request that you take a few minutes of your time and complete the four questions asked. As the background information and directions to completing the questionnaire indicate, we will use your responses in developing a survey that will be given to high school driver education teachers and students who have recently completed driver education in Illinois.

We hope that you take the time to respond to this request. Thank you.

**Driver Education Survey -
Given at ADTSEA Convention, Huntsville, AL, August 1995**

Background information: Southern Illinois University at Carbondale is currently conducting a study for the Illinois Department of Transportation relating to a Status Study of Comprehensive and Relevant Driver Education Program in the State of Illinois. One of the tasks of the project is to develop a questionnaire that will be given to high school driver education teachers and students who have recently completed driver education in Illinois. This questionnaire will determine the topics currently being covered in driver education, what should be covered in driver education, and the time frame for each. In order to help us with this survey we would like to have you help us by responding to following questions.

Directions to completing this questionnaire: We would like to have you provide as much information on each of the following questions. There are no correct and incorrect responses. We will use your responses to aid us in developing a questionnaire that will be given to high school driver education teachers and students.

1. What are the five (5) critical topics that should be covered in a high school driver education course?

Topics	Why one of the most critical?	Time (in hours) that should be spent on this topic

2. What are five (5) critical topics that should be covered in the classroom program of a high school driver education course?

Topics	Why one of the most critical?	Time (in hours) that should be spent on each

3. What are five (5) critical topics that should be covered in the laboratory program of a high school driver education course?

Topic	Why one of the most critical?	Time (in hours) that should be spent on this topic

4. What are five (5) topics that are currently covered in high school driver education, but are not essential to educating a beginning or novice driver?

TOPICS

Thanks for your help. Please return to:
 Dale Ritzel or Dan Shannon
 Center for Injury Control and Worksite Health Promotion
 Southern Illinois University
 Carbondale, IL 62901-6731

SIUC HSC FORM A

REQUEST FOR APPROVAL OF RESEARCH ACTIVITIES
INVOLVING HUMAN SUBJECTS

This approval is valid for one (1) year from the approval date. Researchers must request a renewal to continue the research after that date. This approval form must be included in all Master's theses/research papers and Doctoral dissertations involving human subjects to be submitted to the Graduate School.

PROJECT TITLE: STATUS STUDY OF COMPREHENSIVE
AND RELEVANT DRIVER EDUCATION
PROGRAM IN THE STATE OF
ILLINOIS

CERTIFICATION STATEMENT:

In making this application, I(we) certify that I(we) have read and understand the University's policies and procedures governing research activities involving human subjects, and that I(we) shall comply with the letter and spirit of those policies. I(we) further acknowledge my(our) obligation to (1) accept responsibility for the research described, including work by students under my(our) direction, (2) obtain written approval from the Human Subjects Committee of any changes from the originally approved protocol **BEFORE** making those changes, (3) retain signed informed consent forms, in a secure location separate from the data, for at least **three** years after the completion of the research, and (4) report immediately all adverse effects of the study on the subjects to the Chairperson of the Human Subjects Committee, Carbondale, Illinois, (618) 453-4533, and to the Director of the Office of Research Development and Administration, Southern Illinois University at Carbondale, (618) 453-4531.

DALE O. RITZER *DALE O. RITZER*

RESEARCHER(S) or PROJECT DIRECTORS

Please print or type out name below signature

5 FEB 1996

DATE

RESEARCHER'S ADVISOR (required for all student projects)

Please print or type out name below signature

DATE

The request submitted by the above researcher(s) was approved by the SIUC Human Subjects Committee.

Robert C. Roatke
CHAIRPERSON, SOUTHERN ILLINOIS UNIVERSITY HUMAN
SUBJECTS COMMITTEE

2/14/96
DATE



Southern Illinois University at
Carbondale
Carbondale, Illinois 62901-6731

Center for Injury Control and Worksite Health Promotion

Dale O. Ritzel, Ph.D., Director
Mark Kittleson, Ph.D., Associate Director

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618-453-2080 FAX 618-453-2879

Dear High School Student:

The Center for Injury Control and Worksite Health Promotion (formerly Safety Center), in cooperation with the Illinois Department of Transportation, is conducting a study to determine the specific safety subject areas covered in driver education courses in the State of Illinois as well as the amount of time spent in each. We are asking that you complete the enclosed Driver Education Program Survey (Student Version).

The survey should take about 15-20 minutes of your time. You will note that enclosed materials include a survey form which asks for the amount of time you spent on 26 different driver education topics. Also, the survey asks that you indicate the amount of time you should have spent with the same topics. We have also included a complete description of each of the 26 topics. Please follow the instructions for completing the survey form.

Even though we ask for the name of your school, we will only be reporting the results of this project in group form. Your participation and responses will be kept confidential, the school name will only be known by the project staff, and data will be reported in the aggregate.

The school which you attend has given permission for you to complete this study. This project has been reviewed and approved by the SIUC Human Subjects Committee. The Committee believes that the research procedures adequately safeguard the participant's privacy, welfare, civil liberties and rights. The Chairperson of the Committee may be reached through the Office of Research Development and Administration, Southern Illinois University at Carbondale, Carbondale, IL 62901-4709. The telephone number of the office is (618)453-4533.

The following instructions should help you in completing the survey.

1. Please read the Survey Topic Explanations prior to, or along with the completion of the survey.
2. The hours spent per topic includes the total of both classroom and laboratory (in-car, simulation, and/or driving range). These hours, when totalled, **should** equal approximately the number of hours spent for the total driver education course since these hours reflect the time that you actually spent in the course.
3. The hours that you think should (right side) be spent on each topic may be more or less than

you actually spent. These hours also include both classroom and laboratory.

4. 0 means no time at all spent on a particular topic.
5. Less than 1 means some portion of one hour.
6. 5+ means 5 or more hours spent on a topic.

If you have any questions about the instructions or the survey itself, please ask the person administering the survey. If you have other questions about this survey, you may contact Dan Shannon or Dale Ritzel at 618-453-2080 or by mail at Center for Injury Control and Worksite Health Promotion, Southern Illinois University, Carbondale, IL 62901-6731.

Your time and effort are very much appreciated.

Sincerely,

Dan V. Shannon
Driver Education Status Study Project
Center for Injury Control and Worksite Health Promotion
Southern Illinois University
Carbondale, IL 62901-6731



Southern Illinois University at
Carbondale
Carbondale, Illinois 62901-6731
Center for Injury Control and Worksite Health Promotion

Status Study of Driver Education Project
Funded by Illinois Department of Transportation
Dan V. Shannon, Project Coordinator
Dale O. Ritzel, Project Director

618-453-2080 FAX 618-453-2879

Dear Driver Education Teacher:

The Center for Injury Control and Worksite Health Promotion (formerly Safety Center), in cooperation with the Illinois Department of Transportation, is conducting a study to determine the specific safety subject areas covered in driver education courses in the State of Illinois as well as the amount of time spent in each. We are asking that you complete the enclosed Driver Education Program Survey (Instructor Version).

The survey should take about 15-20 minutes of your time. You will note that enclosed materials include a survey form which asks for the amount of time you spend on 26 different driver education topics. Also, the survey asks that you indicate the amount of time you should spend with the same topics. We have also included a complete description of each of the 26 topics.

Even though we ask for your name and the name of your school, we will only be reporting the results of this project in group form. Your participation and responses will be kept confidential, will only be known by the project staff, and data will be reported in the aggregate. As we receive the completed survey forms, we will check-off those that are return which will provide us with a means of following-up with those schools who do not respond.

This project has been reviewed and approved by the SIUC Human Subjects Committee. The Committee believes that the research procedures adequately safeguard the participant's privacy, welfare, civil liberties and rights. The Chairperson of the Committee may be reached through the Office of Research Development and Administration, Southern Illinois University at Carbondale, Carbondale, IL 62901-4709. The telephone number of the office is (618)453-4533.

The following instructions should help you in completing the survey.

1. A driver educator, representing the school, should complete the survey.
2. Please read the Survey Topic Explanations prior to, or along with the completion of the survey.

3. The hours spent per topic includes the total of both classroom and laboratory. These hours, when totalled, should be approximately the number of hours spent for the total driver education course (i.e. 36 hours for a 30 and 6 program) since these hours reflect what you are actually teaching.
4. The hours that you think should (right side) be spent on each topic may be more or less than you are actually spending. These hours also include both classroom and laboratory.
5. 0 means no time at all spent on a particular topic.
6. Less than 1 means some portion of one hour.
7. 5+ means 5 or more hours spent on a topic.

If you have other questions about this survey, you may contact Dan Shannon or Dale Ritzel at 618-453-2080 or by mail at Center for Injury Control and Worksite Health Promotion, Southern Illinois University, Carbondale, IL 62901-6731.

We would appreciate your returning your completed survey by April 17, 1996, in the enclosed, self-addressed, stamped envelope.

Your time and effort are very much appreciated.

Sincerely,

Dan V. Shannon

Dan V. Shannon
Driver Education Status Study Project/IHSCDEA Region 10 Director
Center for Injury Control and Worksite Health Promotion
Southern Illinois University
Carbondale, IL 62901-6731

SURVEY TOPIC EXPLANATIONS

1. **Social and Economic Consequences** - This unit of instruction would be concerned with the social consequences of crashes such as losing one's driver's license, causing death or injury to self and others, etc. and the economic consequences such as higher insurance, property damage costs, etc.
2. **Emotions and Driving** - This unit would explore what emotions are and how, if uncontrolled, they can have a serious effect on one's driving ability.
3. **Rules of the Road** - This unit would be concerned with traffic laws (safety belts, DUI, speeding, etc.), roadway markings, signs, signals, etc.
4. **Physical Limitations of OTHER Drivers** - This unit would be concerned with strategies to employ that would make up for other drivers not being alert, disobeying traffic signs and signals, etc.
5. **Vehicle Dynamics** - This unit would be concerned with physical forces that are placed upon a vehicle in motion such as inertia, kinetic energy, traction, friction, etc.
6. **Impaired States of Alertness** - This unit would focus on driving impairment due to such things as fatigue, illness, etc.
7. **Basic Vehicle Control** - This unit would deal with the basics of moving a vehicle from one point to another. Starting, shifting, steering, and stopping are the key elements.
8. **Visual Scanning** - This unit would be concerned with teaching proper scanning techniques that would include "keeping the eyes moving" and mirror checks.
9. **Hazard Identification and Recognition** - This unit would teach about prioritizing hazards and distinguishing between potential and immediate hazards.
10. **Time-Speed-Distance-Estimates** - This unit would work on developing an understanding of speed and its relation to the driving task. Students would learn how to convert speed to feet per second and how to estimate stopping distance for various speeds.
11. **Predict the Actions of Others** - This unit would focus on "predicting the worst" in traffic situations so that appropriate actions can be undertaken.
12. **Decision Making in Traffic Situations** - This unit would dwell on proper decision making in traffic to separate, compromise, and/or minimize hazards.
13. **Speed Control** - This unit would focus on the importance of selecting safe and proper speeds for a variety of traffic situations and conditions.
14. **Vehicle Positioning** - This unit would be concerned with teaching good driving strategies that would allow a driver to "leave themselves an out" in traffic.

15. **Handling Driving Emergencies** - This unit would teach emergency driving skills such as skid control, evasive driving techniques, emergency off-road recovery, and controlled braking for crash avoidance.
16. **Handling Special Situations** - This unit could include advice on railroad crossing safety, gravel road driving, pedestrians, bicyclists, etc.
17. **Vehicle Maintenance** - This unit would instruct the student on how to perform basic vehicle maintenance such as oil change, tuneup, and other minor repairs.
18. **Self-Assessing of Driving Performance** - This unit would be concerned with self evaluating of one's performance to determine if one is "fit to drive" under various circumstances such as anger, loss of a loved one, etc. that would affect driving performance.
19. **Alcohol, Drugs, and Their Effects on Driving** - This unit would be concerned with understanding the effects of alcohol, prescription, and non prescription drugs on driving performance and steps to take to avoid driving "under the influence" and/or riding with someone who is "under the influence."
20. **Driving Responsibility** - This unit would focus on respecting other highway users, courtesy, and resisting peer pressure to disobey traffic rules and regulations.
21. **Occupant Protection** - This unit would promote safety belt usage and teach about child safety seats and air bags.
22. **Having a Positive Attitude** - This unit would discuss the role of attitude in safe driving performance.
23. **Communication Techniques** - This unit would teach good communication skills such as turn signal use, proper horn usage, headlights, brake lights, etc.
24. **Fuel-Efficient Driving** - This unit would focus on ways to save fuel and would include information on proper acceleration techniques, trip planning, ride sharing, etc.
25. **Vehicle Ownership Responsibilities** - This unit would outline procedures for buying and insuring an automobile.
26. **Driving in Adverse Conditions** - This unit would develop strategies for safer vehicle operation in snow, rain, fog, etc.

Driver Education (DE) Program Survey (Student Version)

Name of School _____ Age _____ Gender: M F
 How long have you had a valid license? 0-6 months 7-12 months 13-24 months More than 2 years.
 How long ago did you finish your DE course? 0-6 months 7-12 months 13-24 months More than 2 years.
 Number of crashes you have had which have been reported to the police. _____
 How many hours were in your DE program? Classroom _____ Lab (including in car, simulation, and range) _____

Indicate the time spent on each topic by shading the number within the circle. Be sure the hours add to the total above.

How much time in the course DID you spend on the topics at the right? (in HOURS)

How much time in the course SHOULD you spend on the topics at the left? (in HOURS)

Topics (See explanations)	0	<1	1	2	3	4	5+
1. Social and economic consequences	0	<1	1	2	3	4	5+
2. Emotions and driving	0	<1	1	2	3	4	5+
3. Rules of the road	0	<1	1	2	3	4	5+
4. Physical limitations of OTHER drivers	0	<1	1	2	3	4	5+
5. Vehicle dynamics	0	<1	1	2	3	4	5+
6. Impaired states of alertness	0	<1	1	2	3	4	5+
7. Basic vehicle control	0	<1	1	2	3	4	5+
8. Visual scanning	0	<1	1	2	3	4	5+
9. Hazard identification and recognition	0	<1	1	2	3	4	5+
10. Time-space-distance estimates	0	<1	1	2	3	4	5+
11. Predict the action of others	0	<1	1	2	3	4	5+
12. Decision making in traffic situations	0	<1	1	2	3	4	5+

Driver Education (DE) Program Survey (Student Version-Page 2)

How much time in the course
SHOULD you spend on the topics
at the left? (HOURS)

How much time in the course
DID you spend on the topics
at the right? (HOURS)

Topics (See explanations)

0	<1	1	2	3	4	5+		0	<1	1	2	3	4	5+
0	<1	1	2	3	4	5+	13. Speed Control	0	<1	1	2	3	4	5+
0	<1	1	2	3	4	5+	14. Vehicle positioning	0	<1	1	2	3	4	5+
0	<1	1	2	3	4	5+	15. Handling driving emergencies	0	<1	1	2	3	4	5+
0	<1	1	2	3	4	5+	16. Handling special situations	0	<1	1	2	3	4	5+
0	<1	1	2	3	4	5+	17. Vehicle maintenance	0	<1	1	2	3	4	5+
0	<1	1	2	3	4	5+	18. Self-assessing of driving performance	0	<1	1	2	3	4	5+
0	<1	1	2	3	4	5+	19. Alcohol, drugs and their effects on driving ..	0	<1	1	2	3	4	5+
0	<1	1	2	3	4	5+	20. Driving responsibility	0	<1	1	2	3	4	5+
0	<1	1	2	3	4	5+	21. Occupant protection	0	<1	1	2	3	4	5+
0	<1	1	2	3	4	5+	22. Having a positive attitude	0	<1	1	2	3	4	5+
0	<1	1	2	3	4	5+	23. Communication techniques	0	<1	1	2	3	4	5+
0	<1	1	2	3	4	5+	24. Fuel-efficient driving	0	<1	1	2	3	4	5+
0	<1	1	2	3	4	5+	25. Vehicle ownership responsibilities	0	<1	1	2	3	4	5+
0	<1	1	2	3	4	5+	26. Driving in adverse conditions	0	<1	1	2	3	4	5+
0	<1	1	2	3	4	5+	27. Other (specify): _____	0	<1	1	2	3	4	5+
0	<1	1	2	3	4	5+	28. Other (specify): _____	0	<1	1	2	3	4	5+

Number of Schools and Population in Illinois by IHSCDEA Region

20 March 1996

Region	N of Schools	Population	Pop. Ratio*	Pop./School	
1	23	2783726	0.256	121032	
2	50	1677088	0.1542	33542	
3	66	1553037	0.1428	23531	
4	104	1649326	0.1517	15859	
5	73	548018	0.0504	7507	
6	82	805348	0.0741	9821	
7	42	439098	0.0404	10455	
8	48	296657	0.0278	6180	
9	60	769785	0.0708	12830	
10	57	352680	0.0324	6187	
Total	605	10874763		x= 17975	
Private Sch.	26				

*Population Ratio for Each Region = $\frac{\text{Population for Region}}{\text{Total Population for Illinois}}$

OTHER TOPIC AREAS

Discussion of Teacher Responses

The table that follows shows the variety of responses that were indicated by teachers on other topics not listed as a part of the survey. The major topic areas listed by the teachers included:

1. MapReading/Trip Planning
2. Interaction with Other Vehicles such as Semis and Motorcycles
3. Cellular Phone Safety
4. Railroad Crossing Safety
5. Vehicle Insurance

Map reading/trip planning were sometimes listed separately but were usually listed together. This activity was the most commonly listed topic not included in the survey. Interaction with other vehicles was the next most listed topic. It was sometimes included with railroad crossing safety. Both topics should have been answered as part of the main survey under the area of handling special situations. Cellular phone safety was also listed as a topic not covered in the main survey. Auto insurance was listed often as a topic not included in the main survey; however, it was clearly explained under the area of vehicle ownership responsibilities. Generally, the teachers listed the above mentioned topic areas as topics that they covered and felt that the time spent per topic (usually about one hour) was either adequate or slightly less time than they would like to spend.

Two topic areas that were only listed once, but which might be quite useful for students to learn about in driver education (if time were available), are operation of vehicles with manual transmissions and car jacking prevention.

Other Topic Areas as Listed by Both Teachers and Students (Shown by each person who responded and in hour [s])

DID TEACH	TOPIC	SHOULD TEACH
1	Cellular Phone Safety	<1
2	Road Sharing with Motorcycles & Trucks	2
0	Parent/Community/Responsibility	5
2	Map Reading	2
2	Intersections	2
1	Permit Paperwork	1
1	Map Reading	2
1	Motorcycle Safety	1
5	Basic Maneuvers	?
1	Auto Insurance	1
1	Motorcycle Safety	1
2	Tests	2
1	Expressway Driving	2
2	Parking	2
2	Motorcycles/Insurance/Railroad Speakers	3
1	Cellular Phone Safety	2
1	Trip Planning	?
2	Defensive Driving	2
1	Map Reading	1
1	Determining Gas Mileage	1
1	Semi-Trailer Truck Interaction	?

1	Railroad Crossing Safety	?
1	Insurance	1
1	Adaptive Equipment Modifications	<1
<1	Driving on Snow and Ice	?
1	Interaction with Other Vehicle Types	1
<1	Map Reading	1
1	Motorcycle Safety	2
0	Cellular Phone Safety	2
0	Car Jacking Prevention	2
<1	Motorcycle Safety	2
<1	Interaction with Trucks	2
3	Expressway Driving	3
2	Parking	2
2	Insurance	2
1	Cellular Phone Safety	1
<1	Highway Transportation System	<1
2	Accident Prevention	5
2	Map Reading/Trip Planning	1
1	Map Reading	1
2	Trip Planning	2
0	Past Student Surveys	1
<1	Cellular Phone Safety	1
1	Railroad Crossing Safety	1
2	Railroad Crossing Safety	2
1	Organ/Tissue Donation	2

2	Insurance	3
<1	Map Reading/Trip Planning	2
1	Expressway Driving	1
2	Intersections	2
<1	Speaker (State Trooper)	1
1	Map Reading	1
1	Cellular Phone Safety	3
<1	Interaction with Trucks	<1
1	Motorcycle Safety	2
1	Railroad Crossing Safety	2
1	Cellular Phone Safety	1
1	Railroad Crossing Safety	1
1	Manual Transmission Driving	1
1	Motorcycle Safety	1
2	Map Reading	?
<1	Cellular Phone Safety	1
1	Tire Changing	1
1	Motorcycle Safety	?
2	Motorcycle Safety/Railroad Safety	3
2	Speakers	3
2	Map Reading/Trip Planning	2
<1	Tire Changing	<1
<1	Cellular Phone Safety	2
2	Skid Control	4
2	Police Work	4

4	Speakers	4
3	Map Reading/Trip Planning	2
1	Jump Starting	1
0	Field Trip to Car Dealership	2
3	Car Buying	?
1	Map Reading	?
2	Car Buying	3
0	Emergency Recovery	5
1	Permit Test	?
<1	Driving Test	?
2	Parking	2
1	Motorcycle Safety	1
2	NSC Defensive Driving Skills	5