

Traffic Safety Facts

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Evaluating Driver Education in America

Driver education has long been in the forefront of ways to deal with the young-driver problem. It enjoys wide popular support and it is generally assumed that driver education graduates are superior drivers. In many States, driver education graduates can be licensed at 16, whereas without driver education, 18 is the minimum age. Despite widespread appeal of driver education, scientific evaluations indicate that it does not produce safer drivers; that is, drivers less likely to be in crashes than comparable drivers without formal training.

Given the history of driver education and attempts to conduct valid assessments over the years, the National Highway Traffic Safety Administration reviewed driver education in America, and in other countries, critically analyzed numerous evaluations, and conducted a feasibility study of research design approaches to evaluate a popular driver education curriculum.

Driver Education History

The first known driver education programs were developed between 1910 and 1920, but it was not until the 1930s that formal courses were actually offered. In 1949, the standard formula of 30 hours of classroom instruction and 6 hours of behind-the-wheel education was put forward. The early growth and popularity of driver education were fueled by studies reporting it to be effective in reducing crashes. Many of these studies failed to control for differences between students who received the training and those who did not. Later studies that took these differences into account did not yield positive findings. This led to a period of uncertainty about driver education efforts.

The DeKalb Study

In an attempt to reduce this uncertainty, NHTSA embarked on a major long-term program to develop and evaluate a state-of-the-art driver education program in the late 1970s and early 1980s. This resulted in the “Safe Performance Curriculum” (SPC), which involved over 70 hours of instruction allocated between classroom, simulator, closed course behind-the-wheel training, and on-road training (some at night). The total hours and behind-the-wheel experience far exceeded the typical driver education course. A second driver education program was also developed and evaluated, the “pre-driver licensing curriculum” (PDL) which provided

minimal training in skills required to pass the licensing test (20 hours of classroom and 1 hour of on-road instruction).

The study design was based on random assignment of students in DeKalb County, Georgia, to the SPC and PDL groups, and a control group receiving no formal education. This was an expensive project, costing more than \$4 million with a large sample size. The assignment procedure resulted in 5,464 students in the SPC group, 5,430 in the PDL group, and 5,444 controls, for a total of 16,338 students.

The DeKalb data have been analyzed by several sets of researchers. Studies based on those assigned to the groups report no effects or negative effects. When crashes and violations were analyzed per licensed driver, the results did favor driver education in the first months after the courses were taken, but not after that. At six months, the mean crash rate for both the SPC and the PDL groups was virtually the same, and both were lower than the controls. However, these comparisons do not provide a valid test of driver education, because students were self-selected into the analysis by their decisions about when to obtain licenses, a serious research design flaw.

Post-DeKalb Studies

Many studies have been undertaken since the seminal DeKalb experiment, using a variety of research designs that can be considered for evaluating the new curriculum. These include three additional random assignment studies; studies in which one type of driver education program is compared with another; studies involving statistical matching of non-random groups; studies of laws changing driver education requirements; and studies of newly introduced driver education programs. With rare exceptions, these studies have not found positive effects. Some ways that previous studies have evaluated driver education programs are shown in the following table.

Driver Education Issues

Although it may be “common sense” to think that driver education is the preferred way to learn how to drive, the notion that a traditional driver education course by itself can produce safer drivers is optimistic. Generally, the courses are taught over short periods of time, and most of that time has to be spent teaching basic vehicle handling skills. Safety mes-

| Random Assignment | Program Comparison | Comparison of Non-Random Groups | Introduction of New Law | Introduction of a New Driver Ed. Program |
|--|--|--|---|---|
| Randomly assigning students to treatment versus control groups | Comparing students who completed high school driver education with students who completed commercial courses | Comparing different types of driver education while controlling for extraneous variables | Pre- and post-comparisons after a new law pertaining to driver education was introduced | Comparisons of teen crash rates before and after implementation of a new driver education program |

sages can be overwhelmed by attitudes, motivations, peer influences, and cognitive decision making skills that shape driving styles and crash involvement.

Studies have failed to show that driver education courses produce safer drivers. If driver education fosters earlier licensing, it could lead to additional crashes and injuries through greater exposure.

Trends in Driver Education

The 30+6 formula fit the high school curriculum format, and for many years, driver education was primarily taken in high schools, but that is not the case today. Commercial programs are more varied, and developments in computer technology have led to changes in the way driver education is delivered. These changes feature simulator technology and computer-assisted learning, and often involve interactive programs. Other countries such as Sweden, Finland, and Australia are also trying out new forms of driver education.

Experimental Design Alternatives

The latest version of the American Driver and Traffic Safety Education Association (ADTSEA) driver education program, one of the more popular programs widely available today, expands the formula to 45 hours of classroom and 8 hours of driving. The driving segment is still quite limited. It is being introduced, somewhat, in States that have graduated licensing systems that provide motivation to apply safe driving practices and has a parent component to encourage their involvement in supervised driving and in enforcing graduated licensing rules.

Factors to consider when designing an evaluation of the new ADTSEA program should gather information on passing the driving test, knowledge about driving rules and safety issues, safe driving attitudes, on-road skills performance, and learner and parent satisfaction with the education, as well as crashes and violations. Time to licensure should be measured. Ideally, the new program would be introduced in a setting in which driver education does not encourage early licensure.

There are basically two design alternatives: a random assignment study, as in DeKalb, which is preferable, and some variation of a quasi-experimental design. The most likely quasi-experimental design candidates involve comparing non-random groups across ADTSEA and non-ADTSEA schools or communities; a before and after study of ADTSEA schools or communities; or a combination of the two: a before-after study involving both ADTSEA and non-ADTSEA programs.

Presently the ADTSEA program cannot be evaluated because it has been utilized in piecemeal fashion. Thus it would be necessary to introduce the program systematically in schools or communities in a way that facilitates scientific evaluation, a difficult task. Large sample sizes would be required that increase costs and administrative burdens.

Conclusions

An evaluation of the ADTSEA program is contingent on it being introduced in schools and communities so it can be evaluated properly. This is not presently the case. Convincing schools or communities to introduce the ADTSEA program in such a way that facilitates a proper research design will be a challenge. Evaluating the program will be a high-cost venture requiring large sample sizes. Since prior driver education program evaluations have found zero effects, or even negative effects due to early licensure, the possibility of repeating these types of outcomes need to be considered. Steps to reduce the earlier licensing effect would need to be stringently enforced.

How to Order

To order *Feasibility Study on Evaluating Driver Education Curriculum*, prepared by Preusser Research Group, write to NHTSA, NTI-111, 1200 New Jersey Avenue SE., Washington, DC 20590, fax 202-366-7394 or download from www.nhtsa.dot.gov. Patty Ellison-Potter, Ph.D., was the Contracting Officer's Technical Representative for this project.



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