DRIVER EDUCATION AND GRADUATED LICENSING: HOW SHOULD THEY FIT TOGETHER?

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This paper explores the possibilities for effective, practical models for driver education in conjunction with graduated licensing systems. The requirements for better linking of training and licensing must develop against a background of diverse regulatory and safety program initiatives, as well as the past decline of driver education in many North American jurisdictions and recent attempts to revive and "reinvent" it. Program development should take into consideration data and theory in relevant areas: novice drivers' abilities, motives, and influences; developmental and individual differences during adolescence; age and experience factors in crashes; and effectiveness of methods of instruction and legislated influences. Graduated licensing systems have strong implications for driver education markets, business, and governance, as well as for the structure, content, and sequencing of driver education programs.

DRIVER EDUCATION IN A GRADUATED LICENSING WORLD — WHAT? WHEN? AND BY WHOM?

Graduated licensing systems and the publicity surrounding them may be educational in their own right. Legislation, as society's "conscience," and the publicity surrounding introduction of controversial regulation have educational effects and impact on behavior (Bonnie, 1985; Friedland *et al.,* 1990). Declarative effects of legislation may be transient or may add weight to cultural change. A properly managed implementation of a graduated licensing system could help the understanding of the reasons for concern with novice drivers and support development of a stronger culture of responsibility among novice drivers, parents, and the broader community.

Graduated licensing systems will also have substantial direct impacts on the driver education market. A major wave in the market will probably occur as young people rush to get their licenses in advance of the graduated system's implementation. This naturally leaves a trough in demand after the system becomes operative, which may or may not return to the original baseline rate.

Graduated licensing can provide an incentive for novice drivers to take formal instruction, which may ultimately increase driver education markets. These incentives would typically be in the form of a reduced mandatory waiting period for moving between graduated licensing stages. This incentive would also imply some form of government standard or approval for the training that would qualify the student for the incentive.

The design of graduated licensing restrictions and driver education sequencing must consider the needs of novices to practice what they learn and to learn what they are permitted to practice in a timely manner. In the shorter term, graduated licensing complicates the life of the driver educator and the novice driver. Driver education is typically given in courses that take place over a limited time frame, any where from a few days to several months. It is not clear where during a prolonged graduated licensing period a traditional driver education course should be placed.

Over the longer term, graduated licensing should support the reshaping of driver education. Extending the time over which novice drivers learn is a key goal of graduated licensing systems, and it has been seen as desirable in theory among driver educators and researchers as well (Smith, 1994). Coordinating driver training with licensing raises major questions of organization and sequencing of training programs. Specific training modules may need to be delivered "just in time." Since different jurisdictions will require different staging, new driver education curricula will have to be highly flexible and modular.

Lonero *et al.* (1995) suggested dividing driver education into two or more discrete stages, to correspond with graduated driving privileges. However, there is not sufficient data or theory now to say confidently what the most effective content and structure for multi-phase driver education curriculum should be. These should in principle be empirical questions, but it will be difficult to answer them clearly with data until sophisticated research on alternative models is carried out. Meanwhile, multi-stage driver education could be shaped in various ways - by the demands of graduated licensing "exit" testing, by adding later stages based on current "advanced" training, or by a new multi-stage or

continuous-process model based on inference from current knowledge and opinion.

Using the licensing test to shape driver education has considerable appeal. Ideally, the test could serve as the principal standard for driver preparation, if it could validly assess everything we want the new driver to know, do, and be. There are strong natural incentives to learn and teach that which is necessary to pass licensing tests, and new test development may substantially improve reliability of tests. However, while a valid test can measure what drivers are able to do, it cannot measure what they will later choose to do. There will continue to be a need for some form of extrinsic standard to control the materials and experiences that constitute driver education, even given improved license testing.

Using current conceptions of "advanced" driver training as models for multi-stage driver education also has difficulties. Given the ambiguity of its effects, the car-handling approach to advanced training should only be used with caution. The classroom-based Defensive Driving type of advanced driver training seems to have little chance of positive effects. Hybrid approaches, such as training hazard perception and evaluation in the car, have promising potential for beneficial effects in late-stage driver education, but they have not been empirically evaluated yet.

For practical purposes, we need to try out a number of different multi-stage designs that seem, on theoretical and empirical grounds, to have a fair chance of beneficial effects. A large number of approaches are logically possible, and trials of a number of new driver education models explicitly designed for the graduated licensing environment is the most plausible approach. It seems that concrete efforts to develop these models are just now beginning. At this point we are not in a position to positively select from among the many possible options but will outline some representative ones below, in hope of initiating dialogue and stimulating more detailed program design.

Two basic approach options for two-stage programs, and a suggestion of more complex multi-stage and continuous-process structures are outlined briefly below.

Option 1 — Stage 1 Comprehensive — Stage 2 Perceptual/Cognitive Advanced

In this approach, Stage 1 resembles a current comprehensive driver education course, which basically teaches the psychomotor mechanics of handling the vehicle and the fundamental of interacting with traffic.

At Stage 2, a focused and intensified "graduate level" package of course material in perceptual and cognitive skills for crash avoidance would follow some time after the comprehensive driver education program. In a successful related approach, a Norwegian night driving module was shown to have a positive effect on male novice drivers (Glad, 1988). Ideally, this stage would also contain some motivational and responsibility oriented group work, emphasizing peer influences, and values development and clarification.

The Stage 2 package would be a cognitively oriented, risk evaluation and decision course. It would extend and reinforce strong motivational, risk-acceptance, and group work components of the comprehensive Stage 1 course, preferably with diagnostic and in-car components for assessment, branching, and remediation.

This Option is likely the gentlest departure from current driver education practice. Nevertheless, considerable difficulty would be experienced by the training industry in retooling for it.

Option 2 — Stage 1 Minimal Pre-driving — Stage 2 Comprehensive

A second option starts with a minimal prelicensing entry course, and provides a comprehensive Stage 2 course. This approach is consistent with one suggested by McKnight (1984), who pointed out that rank beginners are less capable of absorbing some needed information and training. As youth is said to be wasted on the young, much of driver education may be wasted on those who cannot yet drive well enough to fully benefit from it. For the first stage in this proposed approach one would identify a small set of:

- Low level objectives to permit basic car handling;
- A parental training package;
- Practice exercises for driving with parents; and
- Self-instruction, home video, and interactive computer-based learning (CBL) materials.

Many instructional objectives, such as those addressing high speeds, night driving or risk acceptance, could be left out of the Stage 1 package altogether. This is because they either are not needed within the licensing restrictions imposed, can be provided by the required accompanying adult, or because they are judged to be better absorbed at Stage 2. One might also attempt to plant seeds of concepts that may lead to

discovery learning during Stage 1 driving practice and to facilitate later learning at Stage 2.

Stage 2 training in this option would be given at the entry to Stage 2 privileges, as there may be critical gaps in skills, knowledge, and motivation for coping with Stage 2 graduated privileges. Diagnostics, remediation, branching, and self-paced progress would be relatively critical at Stage 2 training in this option, as the range of entry levels competencies would probably have been exaggerated somewhat by the varying amounts of experience and practice during Stage 1.

Option 3 — Multi-Stage, Just-in-time Modular Driver Education

A third option involves more stages, in order to deliver training modules when they are best able to be learned and practised.

3A — The simplest variation on this option would add a third package of modules, for example to produce a sequence:

- Module 1 — Graduated Stage 1 Entry — Pre-Driving
- Module 2 — Graduated Stage 2 Entry — Pre-Solo
- Module 3 — Graduated Stage 2 Exit — Perceptual/Cognitive

This would permit still closer matching of training and opportunity to absorb and use new knowledge and skills over the duration of the graduated time frame. Such a multi-stage approach could also be closely tailored to specific strengths and weaknesses and individual learning styles.

3B — A more complex "just in time" approach would see elimination of fixed time frames of the instruction altogether, making it essentially a continuous process over the graduated period. This approach might be seen as less like taking a discreet, time-limited course and more like joining a sports or other club where skills, self-discipline, commitment, values, personal standards of conduct, and leadership are developed and shared, such as an alpine climbing club or martial arts club. Peer teaching and self-paced, self-directed and computer-based learning could be integral to such an environment, with the in-class teacher serving as facilitator and coordinator. The student could be made responsible for coordinating her/his in-car and other learning experiences. Such an approach would benefit strongly from CBL, self-paced teaching technologies.

HOW COULD EFFECTIVE MULTI-STAGE DRIVER EDUCATION BE DELIVERED?

The practical problems presented by multi-stage driver education are substantial. Even if not much longer in total time than current programs, these new programs would represent a major logistical complication. Adding more teacher time may be cost prohibitive in many settings. While extending the duration of learning to drive may be helpful, it is not clear that simply spreading out current content in multi-staging would be enough more effective to meet safety requirements.

A simple two-stage program, with short, coventional course modules, might be readily delivered by many existing commercial driving schools. Because of limitations of space and other facilities, it is harder to see them delivering a more complex model, with very much self-paced learning, peer teaching, or group work. There are, however, schools that use and even develop some rather sophisticated and high-tech methods, so one should not be too quick to assume that the industry will not be able to meet the considerable challenges presented. A great deal of costly reorganization, retooling, and instructor training would seem to be required for most of the commercial driver education industry to deliver effective multi-stage training. Economics will presumably rule, and if the graduated licensing incentive to take formal training is strong enough, then the market will support the needed reorganization in the industry.

Multi-stage or continuous-process driver education might fit better in the high schools, where, at least, the students are present over an extended period. It may, however, be that many students would graduate from high school before their graduated licensing periods had run their course, limiting their access to training over the whole period. Early school leavers would be left out nearly from the start, and their disadvantage would be greater than in the current system, where they might be able to complete a single stage course before leaving.

Family and community influences are critically important to personal and social values, self-esteem, empowerment, optimism, community cohesion, and health protection. These are important motivators for both community-minded, pro-social behaviours and individualistic self-protective behaviours. Active participation, peer influences, community education programs, and incentives can all contribute to a stronger impact on novice drivers' behavior, and these motivators can be designed in to a new driver education/graduated licensing model.

At present, parents may inadvertently contribute to the apparent failure of driver education by giving better-trained novices more freedom and less supervision, leading to earlier licensing, more exposure to risk, and subsequent crashes. Parents need skills and motivation to take a more active, effective role in their novice drivers' progress to mature driving (*e.g.*, Beck & Lockhart, 1992; Gregersen, 1994). New materials and approaches for parent participation are under development in various locations. The declarative effects of graduated licensing programs may support stronger parental involvement and encourage use of these materials.

With sufficient support from education programs, family and community programs, and enforcement, well-designed and carefully-implemented graduated licensing systems may have a chance of shifting novice drivers' motivational balance toward safer choices. However, so much faith is being placed in graduated licensing that the disappointment potential seems quite high. To have a lasting effect on safety, we believe it is necessary to enhance positive motivation and values through understanding of the reasons for safe behavior and establish good habits through practice and reinforcement. Driver education, public education, and graduated licensing can be mutually supportive. It is important that new drivers fully understand these systems, the reasons for them, and the benefits for themselves and the wider community.

SUMMARY

The best way to ensure effectiveness of graduated licensing is to support these systems with other coordinated influences, including more effective driver education, parent involvement, and community influences. Graduated licensing permits, and even necessitates, a coordinated, multi-stage structure for driver education, which raises many questions of content, structure, and sequencing. Achieving effective multi-stage training will require a broad and flexible partnership among government, schools, driving schools, communities, and families, as well as insurance and other businesses. However, many similar organizational changes will also be needed for achieving safety effectiveness in driver education, even without the graduated license linkage and added complexity of multi-stage structures.

REFERENCES

Beck, K.H. & Lockhart, S.J. (1992). A model of parental involvement in adolescent drinking and driving. *Journal of Youth and Adolescence, 21*, 1, 35-51.

Bonnie, R.J. (1985). The efficacy of law as a paternalistic instrument. *Nebraska Symposium on Motivation, 33*, 131-211.

Friedland, M.L., Trebilcock, M., & Roach, K. (1990). Regulating traffic safety. In M.L. Friedland (Ed.), *Securing compliance: Seven case studies* (pp. 165-324). Toronto, Ontario: University of Toronto Press.

Glad, A. (1988). *Phase 2 driver education effect on the risk of accident.* Oslo, Norway: Norwegian Center for Research.

Gregersen, N.P. (1994). Systematic cooperation between driving schools and parents in driver education: An experiment. *Accident Analysis and Prevention*, 26, 4, 453-461.

Lonero, L.P., Clinton, K.M., Brock, J.F., Wilde, G.J.S., Laurie, I., Black, D. (1995). *Novice Driver education model curriculum outline.* Washington, D.C.: AAA Foundation for Traffic Safety, Washington, D.C.

McKnight, A.J. (1984). Driver education - when? *Journal of Traffic Safety Education*, January, 13-15.

Smith, M.F. (1994). *Research agenda for an improved novice driver education program: A report to Congress.* Washington, D.C.: National Highway Traffic Safety Administration, U.S. Department of Transportation.