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Synthesis of results from international literature

Summary

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Summary

This report provides an exploratory review of literature relating to Graduated Driving License (GDL) systems which are implemented in a number of countries around the world. The report focuses essentially on the principles and the impact of such systems but it also provides recommendations that could be useful for a reform of the current system for driving education (Category B driving license, cars). An ideal model for driver education by combining the advantages of GDL systems and current systems used throughout Europe is proposed.

Graduated Driving License (GDL) systems

GDL systems are since many decades applied in North America, Australia and New Zealand. The basic concept of these systems is a gradual learning process aimed at an introduction to driving in relatively safe circumstances and then progressing gradually to more complex situations that involve a greater degree of risk. The objective of this phased approach is to tackle the principal risk factors behind accidents, associated in particular with age and a lack of experience, or the tendency that is prevalent among young and novice drivers to take risks. The system offers new drivers the opportunity to limit their exposure to risky situations and enables them to confront increasingly difficult situations progressively thanks to the experience and maturity they acquire. Traditional GDL systems include the following phases:

- ▶ Accompanied learning phase: during this phase learner drivers may only drive a vehicle under the supervision of an experienced driver. This enables them to accumulate experience in different driving situations and in safe conditions. The duration of this period varies mostly between 6 and 12 months.
- ▶ The unaccompanied practical phase: at the end of the accompanied learning phase, the learner driver has the opportunity to drive alone, but is subject to strict restrictions. The objective is to limit risks while enabling them to acquire driving experience and to reach a stage where driving skills become automatic. Restrictions generally include zero tolerance towards alcohol, a ban on transporting passengers of the same age group and a ban on night time driving. The duration of this period generally varies between 6 and 12 months.
- ▶ Full driving license: at the end of the two preceding phases, drivers are granted a full driving license without any restrictions.

Graduated Driving Education Systems in Europe

We also see increased interest in graduated driving education in Europe over the past few decades – with the aim of accumulating experience in low-risk situations. However, there is still a predominance of classic education models (more theory). Some countries are moving nevertheless to systems that are similar to GDL and focusing on driving experience as a prerequisite to autonomous, unrestricted driving (full driving license):

- ▶ Extension of the learning phase: several countries have opted for a substantial increase in the number of compulsory practical driving lessons. Many driving skills require a high degree of automation so that drivers can focus sufficient attention on what is happening in the traffic rather than focusing on the act of driving the vehicle itself. Moreover, the models in countries like the Netherlands, Austria and Norway include cooperation between an official driving instructor, whose principal role is to teach new manoeuvres and how to evaluate new situations correctly, and non-certified supervisors who are responsible in the main for consolidating the skills that have been acquired and ensuring that these skills are practiced sufficiently. In this respect, we note that European countries that have introduced an accompanied learning phase have also lowered the age of entry for driving education (e.g. the Netherlands – 16.5 years) without changing the age at which a full license may be obtained.
- ▶ Provisional driving license with restrictions: while the autonomous practical phase is not explicitly included in most European systems the first years of a full driving license are often accompanied by a probation period during which learner drivers are subject to several

restrictions and/or are liable to heavier penalties in the event of serious infractions. In most countries, restrictions relate only to driving under the influence of alcohol. Tougher penalties in the event of infractions may include an increase in the number of demerit points (given or removed depending on the system) or an order to retake the driving test.

- ▶ Ongoing education: some countries organise ongoing education or refresher days during the accompanied driving phase with non-certified supervisors as well as during the first years after obtaining a full license. The Austrian L17 system for instance includes feedback sessions on the quality of the driving skills as well as a brief training session on advanced skills (e.g. risk perception) facilitated by a psychologist. Other countries limit this complementary training to a half-day that is dedicated essentially to risk awareness.

Principal effects

In those countries where it is possible to drive unaccompanied at a young age, the introduction of the GDL system has led to an important reduction in the number of accidents among young drivers (16 and 17 year olds). The global effectiveness of GDL systems can be seen principally among drivers in the phases of their driving education prior to obtaining the full license, namely the accompanied learning phase and the autonomous practice phase where the exposure to risk is at its lowest. However, as soon as these young people have their full license, the beneficial effect of the GDL system tends to fall sharply and even disappear altogether. It is for this reason that we have seen a growing interest in official driving education (provided by professionals) that insists on the most advanced skills for driving such as risk perception and self-evaluation.

Studies on the effects of GDL have revealed that the most advanced systems are generally the most effective. Based on these results, recommendations have been formulated for the GDL elements that offer the greatest degree of effectiveness. The most effective elements seem to be the prolongation of the accompanied learning phase to at least 12 months that also includes an increased number of supervised driving hours (80 – 120 hours), combined with an autonomous learning phase with restrictions: ban on night time driving and on transporting teenager passengers and a zero tolerance towards alcohol. Some systems offer a reduction in the learning/and or practical phase subject to the learner drivers following programmes or specific training sessions; however, such bonus systems seem to be counterproductive.

An evaluation of European systems suggests that there is much to be gained from prolonging the supervised learning phase by combining supervision by a professional driving instructor with the accompaniment of a non-certified supervisor. Slightly lowering the entry age for driving education (younger age) seems to have no clear negative impact on road safety. And finally, the studies suggest that compulsory refresher courses or advanced training sessions for novice drivers that focus on higher order driving skills result in a reduced risk of accidents.

This review in general indicates that there is a mutual rapprochement between the GDL systems in the other continents and the systems currently used in Europe, with increasing integration of each other's strong elements.

Recommendations

Considering the statistics on road safety in our country, a change in driving education is necessary and this seems to be particularly true for the Category B driving license. In this respect, our analysis of the different GDL systems and the current approaches applied in Europe provide us with sufficient opportunities to envisage an ideal model with the following principal characteristics:

- ▶ **An accompanied/supervised learning phase** during which learner drivers (minimum age 17 who have passed a theory test) learn to handle vehicles in different traffic situations under the supervision of a professional driving instructor and/or non-certified supervisor.
 - This phase should start with a brief compulsory training session of at least one full day, in which the non-certified supervisor must also participate. The official driving instructor monitors the further process until the practical driving test via different feedback moments. He or she takes on the role of coach for the learner driver as well as for the non-certified supervisor.

- It is required to drive a minimum number of hours (or kilometres) as well as to drive in several specific traffic situations; this information must be noted in a logbook. The classic L plate must be visible on the vehicle throughout this phase.
- After minimum nine months, the professional driving instructor evaluates if the learner driver has sufficient basic skills to qualify for the unaccompanied practice phase. If the evaluation is positive, the learner driver is awarded a certificate of competence, but may only move on to the next phase – the unaccompanied practical phase, if s/he also passes a risk perception test.
- ▶ An **unaccompanied practice phase** of at least six months during which the learner drivers can drive ‘alone’ on the public highway. They are subject however to several restrictions that prevent them from being confronted with very complex and higher-risk situations. The three most effective restriction are:
 - No passengers from the same age group (under 24) ;
 - Zero tolerance for alcohol. Analogous with the European directive, we propose a norm of 0,2 g/L ;
 - Ban on night time driving (between 22h00 and 06h00).

In order to make it easier to carry out (police) checks, a distinctive sign should be fixed to the vehicle. After a minimum of six months the learner drivers can take an official driving test. If they pass this test they can obtain their full driving license.

- ▶ **Full driving license.** After a minimum of six months after obtaining a full license, novice drivers should follow a brief training session. This training session concentrates on driving attitude and on self-reflection. It includes final feedback on the driving behaviour.

In the scope of a reform in driving education we recommend implementing adaptations that are as much as possible in line with the proposed ideal model, taking into account the budgetary implications and the priorities of the regions.



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