PRE-DRIVER EDUCATION AND TRAINING

POLICY PAPER

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EXECUTIVE SUMMARY

To learn to drive in the UK, a person must have a provisional driving licence, which can only be obtained from 17 years of age. However, young people develop their attitudes to driving long before they reach this age. Consequently, many different types of pre-driver education schemes have been developed in an attempt to instill positive attitudes to safe driving and road safety in general in young people before they are old enough to drive.

In fact, many forms of child road safety education incorporate elements of pre-driver education (even if they are not intentionally designed for that purpose). For example, practical child pedestrian and child cyclist training focus on the skills and attitudes that are also necessary for safe driving, such as consideration for other road users, traffic awareness and hazard perception. Pedestrian and cyclist training schemes are crucial in their own right, of course, to help children and young people become safe and responsible pedestrians and pedal cyclists.

There are also many examples of specific pre-driver education interventions. However, they vary widely:

- **They target different age groups**, some from the age of 11 upwards, others targeting the age group just under licensing age and some targeting young people who are old enough to obtain a provisional licence, but who have not yet done so.

- **They are delivered in different ways**, teacher-led, road safety officer-led, theatre in education, multi-media presentations. Some are one-off events, while others comprise a series of lessons.

- **They include differing content**, with some focusing on the legal aspects of driving, such as insurance, the moral responsibility to drive safely and the potential consequences of poor driving. Some programmes focus on particular topics, such as drink driving.

- **Some include actual practical driving** in a car off road; others do not.

Concern has been expressed that some pre-driver education programmes may actually increase young drivers’ risk by enabling them to pass the driving test (when they are old enough) with fewer professional lessons or less private practice. They may even encourage young people to drive before they are legally able to do so. Conversely, it is argued that such programmes improve the knowledge and attitudes of young people before they become drivers, and mean that less time has to be devoted to the mechanics of car control and more time on the more important aspects of driving, such as hazard perception, when they become learner drivers.

In common with much road safety ETP, there is relatively little evaluation of the effectiveness of pre-driver education interventions. Most of the evaluations that have been conducted conclude there is little evidence that they are effective. This is partly because it is unrealistic to expect a short term, small scale, possibly one-off, intervention, that is often delivered years before the participants are likely to be driving, to change their driving behavior. There are far too many other factors that affect the participants’ crash risk to be able to separately identify the effects of the pre-driver intervention.
However, there is some evidence that pre-driver education can improve some aspects of young peoples’ attitudes to driving. However, these improvements are probably short-lived and liable to be swamped by other influences, such as peer pressure. Refresher interventions that seek to reinforce the original road safety education messages may help to sustain the attitude improvements.

A DfT literature review of pre-driver education, a separate DfT review of how children and young people’s attitudes to driving develop as they grow older and RoSPA’s “10 Principles for Effective Safety Education” all provide useful guidance for the design, content and delivery of pre-driver interventions. Based on these guides, RoSPA believes that the following principles will improve the likelihood of pre-driver education being effective.

**Incorporate into a Spiral Curriculum**
Pre-driver interventions should be part of a wider road safety (and indeed health and well-being) curriculum, that starts early in children’s development and continues throughout their childhood, not just in the few years before provisional licensing.

**Set Clear and Realistic Aims and Objectives**
The aims and objectives should be realistic, seeking to increase knowledge, improve attitudes, and affect intended behavior.

**Be Specific**
Pre-driver interventions should target specific behaviours in the circumstances in which they are likely to occur, and encourage positive habits (for example, using seat belts).

**Be Positive**
Pre-driver interventions should highlight the benefits of safe driving, promote the positive behaviour of adolescents and young drivers, and portray ‘peer norms as pro-safety’.

**Focus on Higher Level Factors Rather Than Vehicle Handling Skills**
Pre-driver interventions should focus on higher-level factors that influence young people’s approach to driving, such as traffic awareness, hazard perception and consideration towards other road users.

**Refresh Periodically**
Any improvements from one-off interventions are likely to be short-lived and liable to be swamped by other influences, such as peer pressure, and so refresher interventions should seek to reinforce the original road safety education to sustain the attitude improvements.

**Involve Parents**
Pre-driver interventions should seek to involve parents, and encourage them to reflect on the messages that they give to their children about driving and road safety, and on the impact of their own habits.

**Evaluate**
In common with much road safety ETP, there is relatively little evaluation of the effectiveness of pre-driver interventions. Evaluations should be conducted and published. The E-valu-it Toolkit (www.roadsafetyevaluation.com) is a useful tool to help road safety ETP practitioners to do this.
INTRODUCTION

In order to learn to drive in the UK, a person must have a provisional driving licence, which can only be obtained from 17 years of age. However, it is recognised that young people develop their attitudes to driving long before they reach this age. Research\(^1\) has found that risky driving attitudes are associated with sensation seeking and deviant behaviour in children from 11 to 16 years old, and such attitudes are strongest around the age of 14 years.

Consequently, many different types of pre-driver education schemes have been developed in an attempt to instill positive attitudes to safe driving and road safety in general.

There have been calls for pre-driver education to be made mandatory. In 1999, the House of Commons Environment, Transport and Regional Affairs Committee\(^2\) recommended that “The [National] Curriculum should include compulsory lessons which cover the physics of driving, the statistics about the number of accidents involving young people, the penalties for committing road traffic offences, and the consequences of having an accident”.

More recently, as part of its reform of the learning to drive process, the Driving Standards Agency (DSA) has published the safe and responsible driving standard, which sets out the first evidence based standard of skills, knowledge and understanding required to be a safe and responsible driver.

Working with the Scottish Qualification Authority (SQA), the DSA have also developed a foundation course in safe road use: The Safe Road User Award. This is an educational qualification, primarily targeted at young people aged 14 to 17 years, although there are no age restrictions. Underpinned by a syllabus based on the safe and responsible driving standard, the Safe Road User Award aims to influence young people’s general attitudes to road safety and to give them a solid grounding in safe road use before they go on to learn to drive.

As there is an overlap between the syllabus for the Safe Road User Award and the syllabus for the theory test for learner car drivers, candidates who successfully complete the Safe Road User Award will be eligible to take a shorter (and cheaper) theory test for learner car drivers, provided they take the abridged theory test within three years of completing the Award. This is intended to act as an incentive to attract young people to take the qualification.

In Scotland, there are moves to co-ordinate education interventions for young (pre, learner and novice) drivers to ensure a consistent standard of young driver education across the country. A programme to support road safety practitioners who engage with young people and young drivers has been developed, including the “Get Into Gear” website (www.getintogear.org.uk), an online map showing what types of interventions are provided in each area of Scotland (www.road-safety.org.uk/driving/young-drivers/young-driver-interventions/) and a scheme to encourage those who deliver young driver interventions to become an accredited education partner.
Pre-driver Education Schemes
There are many different types of pre-driver interventions seeking to influence young people’s knowledge and attitudes and instill good habits before bad ones develop. However, there is concern that some programmes may actually increase young drivers’ risk by enabling them to pass the driving test, when they are old enough, quicker than they would otherwise have been able to do (with fewer professional lessons or less private practice) but without improving their knowledge, attitudes or driving behaviour. They may even encourage young people to drive before they are legally able to do so.

This reflects wider concern about the need to ensure that road safety education interventions are properly evaluated. A review in 2010 argued that rather than deterring individuals from engaging in the risky behaviour, educational initiatives may make the behaviour seem more attractive or more acceptable, or make individuals think that because they know more about the risks they are better able to handle them.

Conversely, it is argued that such programmes do improve the knowledge and attitudes of young people before they become drivers, and mean that when they become learner drivers less time has to be devoted to the mechanics of car control and more time on the more important aspects of driving, such as hazard perception.

One of the difficulties in assessing whether pre-driver education is effective in improving attitudes to driving, driving behaviour and/or accident risk is the lack of a clear definition of pre-driver education. There are a wide variety of such pre-driver education interventions. They:

- target different age groups, some from the age of 11 upwards, others targeting the age group just under licensing age and some targeting young people who are old enough to obtain a provisional licence, but who have not yet done so.

- are delivered in different ways, teacher-led, road safety officer-led, theatre in education, multi-media presentations. Some are one-off events, while others comprise a series of lessons.

- include differing content, with some focusing on the legal aspects of driving, such as insurance, the moral responsibility to drive safely and the potential consequences of poor driving. Some programmes focus on particular topics, such as drink driving.

A major difference is whether a pre-driver education intervention includes actual practical driving in a car off road.

Many of the evaluations of pre-driver education interventions that have been conducted have attempted to measure their effectiveness by measuring changes in crash involvement. Evaluations of this type are almost always doomed to fail in their attempt to show the intervention is effective because it is rarely possible to directly link an education intervention to changes in crash risk. This is because the interventions tend to be short-term and often one-off and there are a myriad of other factors that influence (for good or bad) an individual’s crash risk, such as driving experience, age, gender, parental and media influences, level of training, and so on.

Nevertheless, a number of research studies and evaluations have been conducted.
RESEARCH AND EVALUATION STUDIES

A report in the Journal of Educational Psychology described two experimental trials to investigate the effectiveness of Safe Drive Stay Alive (SDSA), a road safety education intervention that is widely used across the UK. Safe Drive Stay Alive is a live show featuring a film of a dramatic reconstruction of a fatal car crash involving young people, interspersed with testimonials from members of the emergency services, bereaved parents, and seriously injured victims of road traffic crashes, each describing their personal experience of a fatal road traffic crash.

The content covers key factors associated with crashes involving young drivers (night driving, speeding, overtaking, peer pressure, etc). Both the film and the testimonials are designed to raise awareness that the consequences of fast and dangerous driving can be serious, frightening, and fatal, and to change attitudes to driving.

The research used the Theory of Planned Behaviour (TPB) to assess the effectiveness of the intervention to improve attitudes to road safety in pre-drivers. The study deliberately did not attempt to measure the effects of the intervention on subsequent driving performance (e.g., crash involvement), because of the difficulty of isolating the effects of the intervention from the many other factors that influence driving behaviour.

In the first trial, 258 students aged 15 to 16 years from 6 schools completed a questionnaire before the intervention, immediately afterwards and again five months later. The final analysis was conducted on 199 of these students, including 128 males and 71 females. The questionnaire covered 13 factors, such as speed, driving on country roads, peer pressure, intention to conform to the Highway Code and road traffic laws, as well as the participants’ intention to drive within speed limits at all times and whether they thought that exceeding the speed limit sometimes was unavoidable.

The results showed that the intervention resulted in only a small improvement in some, but not all, of the factors. The improvements were short-lived and largely disappeared after five months. Only 4 of the 13 questionnaire items showed a significant improvement in students’ attitudes to speed and road safety immediately after the intervention, but five months later the improvement remained for only one of these factors (expectations of the inevitability of exceeding the speed limit sometimes). Three factors showed a significant deterioration in attitudes five months after the intervention. The students reported a significant decrease in their intention to drive within the law, to keep within the advice of the Highway Code, and in their perceptions of partners, girlfriends or boyfriends disapproving of speeding.

A second study of 531 students aged between 15 and 16 years old from six secondary schools revealed that the intervention significantly improved attitudes on three of the four individual items that showed improvements in the first study (driving within the speed limit at all times, resisting peer persuasion to drive faster, sticking to the speed limit when holding traffic up). This was consistent with a genuine improvement, rather than an experimenter effect or attitude polarization.
The researchers concluded that the results of the first study revealed a small, short-term improvement in some pre-driver beliefs immediately following the intervention, but no effect on other beliefs, and some evidence of unintended outcomes. The small, significant improvements found in the first study were replicated in the second study, which is consistent with there being a genuine effect. However, evidence from both trials suggests the effectiveness of this road safety education intervention were at best short term, and limited to some but not all psychological factors, with some risk of unintended consequences.

The report suggests that a half-day educational intervention may be effective in the following few weeks, but the message may lose its influence over a longer period as competing pressures from other influences take over. In order to compete against more enduring influences, repeated exposure to the safety measure may be more beneficial in order to buffer potential negative influences that occur over time, as well as introducing the interventions to younger children who may have yet to fully develop attitudes towards road safety.

The report also cited previous research that suggested that exposing people to new road safety material related to the original presentation can increase road safety attitudes again and recommended that more research be conducted into the effects of reminders of the original message as a way of maintaining improved attitudes to road safety.

As part of its programme to ensure its road safety initiative are based on evidence that they are likely to be effective, Devon County Council conducted research to examine the evidence that education, training and publicity (ETP) increases young drivers' safety on the roads. This included an exploration of pre-driver interventions and a review of previous research and evaluations of such interventions.

Although the research found some evidence of a pre-driver intervention improving students’ knowledge and attitudes to safe driving, overall it concluded that the evidence suggests that pre-driver training and education has little or no effect on the risk of collisions involving young drivers because of the short duration of courses, a focus on acquiring basic skills, the use of scare tactics to encourage safe driving and safe driving messages being overwhelmed by other influences on driving behaviour, such as peer pressure.

A systematic review by the Cochrane Collaboration concluded that while school based driver education has been promoted as a strategy to reduce the number of road crashes involving teenagers, there is no evidence that it reduces road crash involvement, and some suggestion that it may lead to a modest increase in the proportion of teenagers involved in traffic crashes, as well as early licensing.
The objective of the Cochrane Review was to quantify the effect of school-based driver education on driver licensing and road traffic crashes. It included only randomised controlled trials of school-based driver education versus no driver education involving young people aged 15 to 24 years who had not yet obtained a driver's licence.

However, although the Cochrane Review was published in 2008, it only included three research studies of interventions that were conducted in the 1980s.

The first study involved 779 male learner drivers aged 17 to 19 years, who were randomly assigned to receive one of three driver education courses or to a control group that received no formal training. The proportion of participants who had at least one crash since being licensed was 42% for students who received school-based driver education as compared to 42% in the control group. In other words, almost half of drivers who received an education course and almost half of those who did not go on a course had at least once crash since gaining their licence. There was no difference between the groups.

The second study, widely known as the De Kalb study, involved 16,338 high school students randomly assigned to one of two driver education programmes or to a control group that received no formal driver education. In this trial 87% of students in the driver education group had been licensed since course completion compared to 84.3% in the control group. The number of students who were involved in one or more crashes as a driver was 27.5% in the driver education group compared to 26.7% in the control group.

The third study involved 848 secondary school students aged 15 to 18 years, randomly assigned to attend an AA driver training programme or to a control group that were left to their own devices to learn to drive. The number of days from trial enrolment until obtaining a driving licence was significantly shorter in the driver education group (111 days in males receiving driver education compared with 300 days in males who did not, and 105 days in females receiving driver education compared with 415 days in females who did not) although there was insufficient data to calculate the statistical significance of the difference between the groups. The number of students who were involved in crashes was 16% in students who received driver education as compared to 14.5% in the control group, although this difference was not statistically significant.

The Cochrane Review concluded that there is no evidence that driver education reduces teenage involvement in road traffic crashes, but because it encourages earlier licensing it may lead to a modest increase in the number of teenagers involved in road traffic crashes. The Review itself recognizes that the three trials of driver education were conducted in Australia, USA and New Zealand, between 1982 and 1984, and so their results may not be relevant to contemporary driver education programmes in the UK.

In 2006, Road Safety Scotland developed Crash Magnets, a road safety education resource for 14 to 17 year olds, as part of its programme to co-ordinate and standardise young driver education across Scotland. Crash Magnets is a toolkit comprising a DVD with five short programmes, packs of activity cards, further student activities and teacher notes, providing teaching materials covering at least 10 lessons.
An evaluation in 2009, using qualitative research methods to explore the views of young people, teachers and road safety professionals towards the resource, included interviews with 23 Road Safety Officers across Scotland, and with teachers and pupils in 11 case study schools and one youth group. Interviews were also conducted with national stakeholders, such as Road Safety Scotland and Her Majesty’s Inspectorate of Education.

It found that distributing Crash Magnets to Schools via the network of Road Safety Units after they had been trained in the use of the resource by Road Safety Scotland, worked well, with Road Safety Officers then providing training for teachers and distributing copies of the toolkit. Road Safety Officers were confident that every mainstream secondary school in their area received at least one copy of Crash Magnets, although distribution to schools for pupils with additional support needs, youth groups and colleges was more varied. However, promoting Crash Magnets and providing active support to schools on an ongoing basis was more difficult, with some schools, especially where new teachers had come into post, being unaware of Crash Magnets.

The difficulty of designing an intervention for a wide age range was illustrated by some of the feedback from the pupils. They appeared to engage well with the activities, but seemed to engage better with the more hard hitting real life stories in the DVD, than with the rest of them. Some younger pupils felt that the content was aimed at an older age group because it focused strongly on driving, but conversely some older pupils felt that parts of the design were too juvenile for their age group. Many young people expressed a preference for real life situations. For some young people, the use of cartoons created a mismatch between the content (seen as appropriate for an older age group) and the design (seen as appropriate for a younger age group).

Research commissioned and published by the Department of Transport in 2007 to assess the provision and effectiveness of pre-driver education in Great Britain contained a detailed summary of several evaluation studies of pre-driver education in the UK and in other countries. Full details of the evaluation studies, the methods used and the results can be found in the DfT report. The main results are summarised below.

**Scottish Executive New Driver Project**
An evaluation of a classroom-based pre-driver training involving one afternoon of classroom work, covering issues such as motor insurance; vehicle maintenance, social issues; attitudes, pressures and social standards. 451 drivers from across Scotland aged 17 to 21 years, who held a provisional driving licence but had had less than two hours of professional driving instruction, were randomly allocated into three groups:

Group 1 (Control Group) acquired their driving licence in the manner that was most suitable for them
Groups 2 did the same, but also attended a one afternoon classroom-based ‘standardised’ pre-driver training programme, and
Group 3 did the same as Group 1 but also attended a one afternoon classroom-based post-test course
The evaluation used self-report measures of driving knowledge, behavioural intentions, attitudes, subjective norms, and perceived behavioural control before the intervention, immediately afterwards, and three and nine months later. Those who attended the classroom-based pre-driver education intervention did not score significantly higher on a driving knowledge test. The training programme had no effect on additional motives (e.g. impressing peers) or behavioural intentions.

Nine months after passing their driving test, no differences were found between groups in terms of their attitudes towards driving violations and other motivations associated with the driving task. The study concluded that new drivers had already formed their attitudes, beliefs and intentions towards the driving by the time they started learning to drive.

The Use of Theatre Tours in Road Safety Education: Drinking, Driving and Young People. Edinburgh: Scottish Council for Research in Education
An evaluation comparing the effectiveness of three delivery modes for drinking and driving road safety interventions delivered to pupils in upper secondary classes. The interventions had similar basic messages regarding drinking and driving but different modes of delivery:

- a play, “Too Much Punch for Judy”, performed by a touring theatre company, which lasted about 50 minutes, and was followed by a workshop led by one of the acting company
- a presentation by two RSOs (uniformed police officers) who both used a video taken from a World in Action documentary, followed by a discussion led by the RSO
- a presentation by a teacher from the Personal and Social Development (PSD) team in the students' own school, using the video “It Could Happen to You”, followed by group discussion/workshop activities led by the same teacher.

Focus groups with students who had experienced one of the three interventions and discussions with teachers and course providers were conducted after the intervention and again three months later. A questionnaire survey was conducted in the five intervention schools and in a further four schools to measure students' knowledge about, and attitudes towards, drinking and driving.

Results indicated that while students appeared to prefer the play more than the other presentation modes, their knowledge and attitudes on key issues was positively affected by all three-presentation modes. It seems that all interventions positively affected the attitudes and behaviour of the young people involved. However, the study design precludes any detailed quantitative evaluation of the extent of the impact.

Evaluation of Pre- Driver Education Program
This evaluation compared the effectiveness of pre-driver education programmes with an in-car component to those without, in an attempt to measure the net effects of the in-car component of pre-driver education courses. A self-completion questionnaire was sent to 2,000 people aged 18–29 years in Victoria, Australia who lived either in areas where it was known that schools provided pre-driver education programmes with an in-car component (the case group) or in areas where they were not likely to have done so (the control group).
The questionnaire covered driver education background, licensing, exposure, accidents, traffic infringements and driving-related attitudes (speed, aggression, perceived responsibility for accidents, extent to which driving is used to reduce tension or increase feelings of personal efficacy and power, and driving inhibition). Completed questionnaires were received from 687 respondents, 234 cases and 453 controls (a 34% response rate).

The main results arising from the study were:

- participants in pre-driver education courses with an in-car component obtained learner and probationary licences significantly earlier than controls
- there was no difference between cases and controls in terms of the number of hours of on- and off-road driving they undertook before a learners permit was obtained
- a 20% reduction in crash risk was found for young drivers who had completed a pre-driver education course with an in-car component, but this was not statistically significant
- an approximately 20% reduction in injury crash risk was found for young drivers who had completed a pre-driver education course with an in-car component, but this was not statistically significant
- a 30% reduction in single vehicle crash risk was found for young drivers who had completed a pre-driver education course with an in-car component, but this was not statistically significant
- a 12% increase in risk of having at least one speed offence for those who had completed a pre-driver education course with an in-car component, but this was not statistically significant
- a 19% increase in risk of having at least two speed offences for those who had completed a pre-driver education course with an in-car component, but this was not statistically significant
- no significant results were found for the effect of pre-driver education courses with an in-car component on driver attitude

The results suggested that young drivers who had completed a pre-driver education course with an in-car component obtained their learner and probationary driving licences significantly earlier than those who took the course that did not include driving practice, but were also less likely to have had a crash although more likely to have speed offences. No differences were found between the attitudes of the two groups. However, none of the differences reached statistical significance, perhaps due to the low response rate from those who had undergone pre-driver education with an in-car component.

**Future on the Road: A Road Users Education Project for Primary and Secondary Schools: Final Report**

This study evaluated the ‘future on the road’ traffic programme, which was provided to students aged 13–19 in Sweden. The education programme had a broader perspective than traditional traffic education programmes, and its purpose was to influence values and attitudes regarding car usage and choice of transport modes in order to influence youngsters so that they were more inclined to protect the environment, improve safety in traffic and reduce the communities’ costs through undesired effects of the transport system. The programme consisted of 20 lectures per year (120 in total across six years).
The study covered six years and approximately 500 students. Students from other municipalities who did not receive the programme were used as controls. The results showed an improvement in traffic safety behaviour and attitudes towards road safety amongst the primary school students, but very few such effects amongst the secondary school students.

**Evaluation of Tasmania's Pre-driver Education Programme**

Two studies published in 1997 and 1998. The aim of the first was to determine whether either of two school-based pre-driver education programmes in Tasmanian schools decreased the probability of having a road accident during the first three years of driving. The aim of the second study was to evaluate the effectiveness of these pre driver education programmes in terms of their impact on at-risk driving and accidents rates.

The two courses were:

- a defensive driving course (12 one-hour lessons on the theory of defensive driving) for Year 10 students in Tasmanian secondary schools, delivered by the Department of Transport’s road safety education officers
- a more comprehensive driver education programme, which included the above course, followed by 12 one-hour lessons delivered by teachers and aimed at developing skills and attitudes leading to more responsible road-user behaviour

In the first study, every year between 1987 and 1991, all Tasmanian Year 10 students (34,159 in total) who completed at least one formal school certificate subject were allocated to one of three groups:

- Group 1 = students who studied driver education as a formal school subject
- Group 2 = students who received defensive driver training only
- Group 3 = students who received neither driver education nor driver training

The results showed that students who enrolled in driver education as a formal school certificate subject had significantly fewer accidents during their first year of driving, but the difference was no longer significant during the second year and disappeared during the third year. Students who had enrolled in driver education but not as a formal school certificate subject had fewer accidents during each of their first three years of driving but the differences were not statistically significant. Those who enrolled in driver education obtained their licences at an earlier age than those without driver education, although student records could not be linked to licensing records in 33% of cases.

Owing to these methodological concerns, a second evaluation was conducted to assess the effectiveness of the programmes on at-risk driving and accident rates, using a new process for matching academic and driving records. The results showed that students who studied driver education as a school certificate subject consistently performed better (but not by much) than students with no driver education, but the cumulative difference was not statistically significant at any stage. Students who studied driver education but not as a school certificate subject consistently performed worse than students with no driver education, but with one exception, the differences were not statistically significant. Therefore, this study failed to find any benefit of pre-driver education on accident rates and did not provide support for the findings of the first study.
Monitoring and Evaluation of Safety Measures for New Drivers

This TRL study evaluated a range of measures to improve the safety of younger drivers, including the pre-driver education programme, ‘DRIVE’, which comprises a video, a teacher/student booklet and a self-help booklet available to RSOs, and through them, to schools, colleges and other interested organisations.

A questionnaire assessing knowledge of driving safety and attitudes towards driving which was completed before and after taking the DRIVE course by 546 students at 19 schools. A control group of 641 students who had not completed the courses also completed the questionnaires at the same time. The majority of students were aged 16–17 years.

The results showed that DRIVE significantly improved both students’ knowledge of driving safety and their attitudes towards driving. Students who had taken the course had higher scores on questions about driving safety and were more likely to rate driving as dangerous after the course. In addition, DRIVE was well received by RSOs, teachers and students.

The evaluation did not indicate how longer the improvements were maintained after the course, and the TRL report noted that “Changes in knowledge of and attitudes towards driving and the driving tests showed improvements following the presentations. However the supplementary materials provided to schools were under-utilised. Lack of time in schools for preparatory work prior to the presentations and follow up work with pupils was a problem. Time pressures in schools would appear to be a major problem for school based pre-driver education programmes”.

The Effectiveness of a Year 10 Traffic Safety Programme

This study examined the impact of a traffic safety programme ‘Risk Management and Road Safety’ in New Zealand. The programme comprised lessons, compatible with the social studies curriculum, and delivered by teachers. The first six lessons were on risk analysis and encouraged students to analyse the motivations people have for risk and risk taking. The second six lessons involved lessons from a pre-driver/driver education course, covering driver inexperience, road crash statistics, peer pressure, speeding, drugs/alcohol and unlicensed driving.

The attitudes and self-reported behaviours of the students who took the programme were compared with randomly selected students who did not take it. Both groups completed a questionnaire before and immediately after the intervention, and again six months later. The questionnaire covered attitudes towards drinking and driving, frequency of being, and intention to be, a passenger of a drunk driver in the previous three months, frequency of front and back seat-belt wearing, fastest acceptable speed in 50 kph and 100 kph speed zones and the acceptability of various unsafe and illegal driving behaviours. 151 students were involved in the study (61 from the intervention school and 90 from the control school). All completed the initial pre- and post-test questionnaire, but only 79% completed the six-month follow-up questionnaire. The average age of participants was 14 years.
There were significant improvements in attitudes on four items in the acceptability of various unsafe and illegal driving behaviours amongst the students who took the programme, but not amongst students in the control group. However, months later there were no longer any significant differences between the groups, suggesting that the improvements in the intervention group immediately after receiving the programme were not sustained. The report authors stated that, while the improvements were not maintained at re-testing six months later, this could indicate the need for further ‘injections’ of safety messages when adolescents are in the process of developing driving habits.

**Evaluation of the Rotary Youth Driver Awareness (RYDA) Road Safety Education Programme**

This study examined the effectiveness of a youth driver awareness programme developed by the Rotary community organisation in Australia. The programme aims to provide practical road safety and other information relevant to an overall responsible approach to the driving experience for Year 11 students.

The evaluation comprised a student survey conducted before the intervention, immediately afterwards and three months later, a survey of teachers who attended the programme and interviews with key road safety experts familiar with the programme. Approximately 1,200 students from 17 schools took part in the surveys, thirty-two teachers completed surveys, and interviews were conducted with eight road safety experts.

The results showed that the programme achieved positive changes in knowledge and attitudes in almost all areas immediately after the conclusion of the programme, but there was little evidence that the programme had a long-term impact or actually changed risk-taking behaviour.

**SMARTRISK UK Heroes Evaluation Report**

This study examined the effectiveness of the SMARTRISK UK Heroes programme, which is a multimedia presentation designed to appeal to young people of secondary school age, and involving an audiovisual presentation, a presentation by an injury survivor describing how the injury changed their lives, and a question and answer session with the injury survivor. The programme promoted five key strategies to avoid serious injury and death: buckle up, drive sober, look first, wear the gear and get trained.

The evaluation involved three activities a literature review of previous evaluations of the programme, interviews with key informants and observations of the programme. The results showed that the programme achieved short-term gains in knowledge, attitudes and behavioural intentions, but the changes were not sustained three months after the intervention.
DeKalb Study of Novice Driver Education.
The DeKalb study was conducted in the USA in 1983 to evaluate school-based driver training. Around 16,000 high school students were randomly allocated to one of three groups:

- Group 1 received a full ‘state of the art’ course of driver education
- Group 2 received only the minimum education necessary for a licence
- Group 3, the control group, received no formal driver education

The results showed that students in groups 1 and 2 had significantly fewer accidents and fewer violations during the first six months of driving than students from group 3, the control group. However, after a further 18 months of driving, the differences had completely disappeared. Further analysis showed that driver education led to earlier licensing which meant more crashes per capita for the two experimental groups. The conclusion was that neither form of driver education is an effective road safety countermeasure.

A report published in the Lancet reviewed several research studies into the effectiveness of driver education programmes in Australia, New Zealand and the USA, and stated that the programmes (all of which involved practical driving) resulted in the participants gaining their driving licences sooner than similar young people who had not been involved in the programmes, but did not result in lower accident involvement.

In the UK there have been attempts to link pre-driver education more directly with the learning to drive process and the driving test. In 1997, the Driving Standards Agency launched its Schools Programme, which involved driving examiners giving a presentation about the theory and practical driving tests and road safety issues at schools (and other places such as Young Offenders Institutes). It did not include driving practice. An evaluation of the Programme assessed 32 presentations involving 947 students (mostly aged 16 and 17 years) who completed questionnaires before and immediately after the presentation and three months later. Knowledge and attitudes about driving and the driving test improved and students tended to accept that they still had much to learn about driving after passing their test, and that novice drivers take longer to react to hazards than experienced ones.
GOOD PRACTICE IN PRE-DRIVER EDUCATION

The DfT Literature Review\(^4\) considered the need for a good practice guide in pre-driver education to be developed, but noted that there are significant gaps in knowledge to underpin the development of such good practice. Specific knowledge gaps included evidence about the amount of time it takes to change attitudes and the factors that affect whether attitudes are retained over time. The report stated that:

"An understanding of those factors influencing attitude retention is fundamental to the development of guidance on course design and delivery and policy relating to the need for pre-driver education to ‘refresh’ the target audience."

Nevertheless, based on the Literature Review, the report’s authors suggested a number of points that should be considered when developing good practice in pre-driver education, including:\(^6\)

- Developing a definition of ‘Pre-driver education’
- Delivering pre-driver education within a ‘Learning Pipeline’ commencing early in children’s development, rather than just 2 - 3 years before provisional licensing
- Pre-driver education should be used in conjunction with other strategies – parental education, legislation and enforcement, policy, environmental measures
- Specific unsafe behaviours demonstrated by young drivers, and the circumstances in which they are likely to occur, should be addressed by pre-driver education
- Learning objectives should be defined and related ultimately to an educational goal
- Evaluation methods should be included in any good practice guide

Further guidance on the development of pre-driver education schemes can be drawn from the findings of a review of effective safety education conducted by RoSPA in collaboration with the PSHE Association.\(^7\) The Purpose of the review was to:

a) Identify the key requirements of effective safety/risk education materials/resources for school-age children (5 – 16 years old)
b) Identify principle safety/risk education materials/resources available to schools in England and examine the extent to which they reflect the evidence around effectiveness
c) Help practitioners (primarily teachers, LA Advisers and Safeguarding Boards) become more informed ‘purchasers’ and users of safety/risk education materials/resources

Based on the findings, “10 Principles for Effective Safety Education”\(^8\) were developed which are designed to help teachers and others choose the best resources for their circumstances and to help those who develop resources to adopt an evidence-based approach to their work.
A review of evidence about how children and young people’s attitudes to driving develop as they grow older suggested that pre-driver interventions that target general attitudes towards driving and road safety are unlikely to be effective. It found that concentrating on vehicle handling skills fails to address higher-level factors that influence young people approaching the age of learning to drive.

The review recommended that pre-driver interventions should target specific behaviours in specific contexts by specific types of individuals, highlight the perceived benefits of safe driving, encourage positive habits (for example, ‘clunk click’), promote the positive behaviour of adolescents and young drivers, and portray ‘peer norms as pro-safety’.

The review also stressed the important long-term influence of parents on young drivers’ behaviour, and the need to encourage parents to reflect on the messages that they give to their children about driving and road safety, and on the impact of their own habits.

The review concluded that one overriding task to which pre-driver education should contribute is the fostering of a safety culture with respect to road behaviour, by encouraging parental role modelling, discouraging the association of images of risky driving with masculine identity, and enlisting positive youth attitudes towards driving responsibly.
CONCLUSION

Given that attitudes to driving form well before a person reaches the age at which they can start learning to drive, it is entirely sensible to attempt to influence those attitudes at an early stage. Hence, a range of pre-driver education interventions have been developed and are delivered to varying groups of young people.

However, in common with much road safety ETP, there is relatively little evaluation of their effects. Most of the evaluations that have been conducted conclude there is little evidence that pre-driver education is effective in improving knowledge and attitudes amongst young drivers, and certainly not in reducing their crash rates. This is partly because it is unrealistic to expect that a short term, small scale, possibly one-off, intervention, often delivered years before the participants are likely to be driving unsupervised, is likely to change their driving behavior. There are far too many other factors that affect the participants’ crash risk to be able to separately identify the effects of the pre-driver intervention.

There is some evidence that pre-driver education can improve some aspects of young peoples’ attitudes to driving. However, these improvements are probably short-lived and liable to be swamped by other influences, such as peer pressure. Refresher interventions that seek to reinforce the original road safety education messages may help to sustain the attitude improvements.

There is little evidence to show whether including practical off-road driving within a pre-driver intervention is beneficial. It may attract young people to participate in the intervention in the first place, and some argue that when they become learner drivers, less time needs to be spent on car control, enabling more time to be devoted to higher level skills, such as traffic awareness and hazard perception. However, others argue that it is actually harmful because it helps young people to reach driving test readiness with fewer lessons and less practice when they eventually become learner drivers. It may even encourage unlicensed driving.

Research into the development of children and young people’s road safety attitudes, and into the effectiveness of different approaches to safety education provide a number of recommendations on which pre-driver education and training interventions should be based.

The aims and objectives of pre-driver interventions should be realistic, seeking to increase road safety knowledge, and improve attitudes, and perhaps affect intended behavior. Interventions that are effective in improving knowledge about, and attitudes towards, safe driving, and intentions to drive safely will contribute towards the goal of reducing crashes and casualties involving young and novice drivers.

In common with much road safety ETP, there is relatively little evaluation of the effectiveness of pre-driver interventions. Evaluations should be conducted and published. The E-valu-it Toolkit (www.roadsafetyevaluation.com) is a useful tool to help road safety ETP practitioners to do this. The evaluation results (good, bad or indifferent) should be published so that lessons can be shared, which in turn helps to inform the design and delivery of future interventions.
PRE-DRIVER EDUCATION: RoSPA POLICY

Attitudes to driving form well before a person reaches the age at which they can start learning to drive, therefore, it is entirely sensible to attempt to influence those attitudes at well before young people are old enough to obtain a provisional driving licence.

Many forms of child road safety education incorporate elements of pre-driver education (even if they are not intentionally designed for that purpose). For example, practical child pedestrian and child cyclist training focus on the skills and attitudes that are also necessary for safe driving, such as consideration for other road users, traffic awareness and hazard perception. Pedestrian and cyclist training schemes are crucial in their own right, of course, to help children and young people become safe and responsible pedestrians and pedal cyclists.

Research into the development of children and young people’s road safety attitudes, and into the effectiveness of different approaches to safety education provide a number of recommendations on which pre-driver education and training interventions should be based:

Incorporate into a Spiral Curriculum
Pre-driver interventions should be part of a wider road safety (and indeed health and well-being) curriculum, that starts early in children’s development and continue throughout their childhood, not just in the few years before provisional licensing.

Set Clear and Realistic Aims and Objectives
The aims and objectives should be realistic, seeking to increase knowledge, improve attitudes, and affect intended behavior. Interventions that do so successfully will contribute to the overall goal of reduced casualties, but it is unrealistic to expect to be able to measure the effect of a pre-driver intervention directly on casualty numbers or rates.

Be Specific
Pre-driver interventions should target specific behaviours in the circumstances in which they are likely to occur, and encourage positive habits (for example, ‘clunk click’). The behaviours and circumstances targeted should be based on evidence and data showing that they are connected with young driver crashes and casualties, and that the intervention is likely to change them in a positive way.

Be Positive
Pre-driver interventions should highlight the benefits of safe driving, promote the positive behaviour of adolescents and young drivers, and portray ‘peer norms as pro-safety’.

Focus on Higher Level Factors Rather Than Vehicle Handling Skills
Pre-driver interventions should focus on higher-level factors that influence young people’s approach to driving, such as traffic awareness, hazard perception and consideration towards other road users. Vehicle handling skills should only be incorporated, if necessary, as a means of attracting young people to participate if they would be unlikely to do so otherwise.
Refresh Periodically
Any improvements from one-off interventions are likely to be short-lived and liable to be swamped by other influences, such as peer pressure. Refresher interventions that seek to reinforce the original road safety education messages may help to sustain the attitude improvements.

Involve Parents
Pre-driver interventions should seek to involve parents, and encourage them to reflect on the messages they give to their children about driving and road safety, and on the impact of their own habits.

Evaluate
In common with much road safety ETP, there is relatively little evaluation of the effectiveness of pre-driver interventions. Evaluations should be conducted and published. The E-valu-it Toolkit (www.roadsafetyevaluation.com) is a useful tool to help road safety ETP practitioners to do this. The evaluation results (good, bad or indifferent) should be published so that lessons can be shared, which in turn helps to inform the design and delivery of future interventions.
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