

Road Safety Authority (RSA)

Enhancing Driver Education, Training and Testing in Ireland

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1 INTRODUCTION

1.1 Project aims and objectives

In December 2008, CAS was commissioned by the Road Safety Authority (RSA) to provide it and other stakeholders with an evaluation of the current Irish 'learning-to-drive' experience and international best practice in promoting road safety through driver training and assessment.

The key objectives of the project were to provide RSA with:

- Information on the Irish 'learning-to-drive' experience (including the two years after learners pass their driving test).
- Information on international best practice in driver education, training and testing.
- Appropriate, practical recommendations on the improvements needed in Irish driver education, training and testing to align it more closely with best practice.

1.2 Structure of the report

The report is in two volumes. This report, Volume 1, summarises the work of the project and presents its recommendations with a summary of the rationale for each. A more detailed report, Volume 2, provides a full account of the project research methodology and analysis of findings as well as the full details of all references made in both volumes.

2 PROJECT OVERVIEW

2.1 Methodology

The project comprised three work packages (WP) as follows:

Stage	Description
WP1	Analysing the learning-to-drive experience in Ireland – The aim was to gain a fully rounded view of the attitudes, motivations, experiences and requirements of Irish learner drivers.
WP2	Identifying and reviewing international best practice – The aim was to gather information on best practice at all key stages of the driver education process both within and beyond the driver licensing system, driver testing and licensing and lifelong learning. Information was gathered by a literature review and through discussions with experts in driver education, training and testing internationally.
WP3	Defining the way forward – The aim was to identify the gaps between existing Irish driver education, training and testing and known best practice, draw conclusions and draft recommendations. Irish road safety experts were consulted on the appropriateness and practicality of the draft recommendations and then the final report was produced.

What follows is a summary of the volume and range of evidence gathered by the project.

Full details of the methodology can be found in Volume 2, section 2 and Appendix A.

Stakeholders: A total of 296 individuals participated in the project.

- 12 Workshops were held in which 194 people participated including pre-learners, pre-practical learners, long-term provisional drivers, parents, approved driving instructors, driver testers and Gardai.
- 57 face-to-face interviews were conducted with post-practical drivers, long-term provisional drivers, road safety officers and special interest groups (including MADD, PARC, Irish Insurance Federation, Motorcyclists Action Group, Irish Cycling Group, Sim2Learn, IDEA, AA Ireland, SWOV, Medical Bureau of Road Safety, Trinity College).
- 72 Questionnaire surveys were sent to teachers and RSOs of which 32 were returned

Identification of best practice:

- 274 research papers and guidance documents were reviewed.
- 24 transport organisations' publications and databases were surveyed.
- 20 interviews were conducted with road safety and driving experts.

3 INTERPRETING THE PROJECT FINDINGS

3.1 General approach

The most significant challenge facing this project was deciding how to interpret the evidence it gathered and translate the findings into recommendations. Since all the recommendations require a change to an existing system or process, it made sense for us to consider the evidence in the light of its implications for change management. The recommendations are as much to do with changes in Irish driving culture as with process change so, unless the culture change aspects of the recommendations are taken into account, it is unlikely that they can be successfully implemented.

To help structure our thinking about these issues, two theoretical approaches to culture and change management have been followed.

The first approach is an elaboration of Kurt Lewin's three stage model of change based on refinements suggested by a number of authors (e.g. Schein, 1999, Conger et al, 1999, Bainbridge, 1996). The stages are:

- Unfreezing – determining the need, readiness and preparedness for change.
- Changing – identifying, planning and carrying out the mechanisms which will bring about change.
- Re-freezing – identifying, planning and carrying out ways of consolidating the change.

This report is concerned mostly with the first two of these.

The second approach is concerned with the dimensions of culture and the types of mechanisms which can bring about cultural change. For this we have used the Organisational Safety Culture Analysis (OSCA) model developed by CAS (Johnson, 2008; Luther and Johnson, 2008). It identifies four main types of change mechanism: Incentives, Commitment, Support Systems and Pressures.

The rest of this Section uses these theoretical approaches to set out the case for change and identify the types of mechanism most likely to produce the desired outcomes.

3.2 The case for change

There has been a significant reduction in collisions, deaths and injuries on Irish roads in recent years, as a result of a number of safety initiatives. However, collision rates are still not in the top quartile in comparison to other EU countries, although they are better than the median (EC Transport Statistics, 2009). The RSA wants to bring Ireland's road safety record into line with the best in Europe. By implication, the driving culture in Ireland is still not what is desired.

The RSA consultation document on Graduated Driver Licensing Systems identifies speeding, drink / drug driving and fatigue as the major attitudinal problem areas and notes that problems arising from these attitudes are exacerbated by inexperience. It is recognised that these problem areas may be associated with wider cultural problems. For example, drink / drug driving is associated in a significant number of cases with general substance abuse. However, the question for RSA is what specific aspects of driver education, training, testing and licensing can be improved to help deal with these cultural and social problems in the driving context. Our analysis of the current situation suggests the following are the key areas to be addressed:

INCENTIVES

It is not clear to us that the Irish public has a good understanding of, or a belief in, the benefits and disbenefits of adopting the safety initiatives which are already in place or being suggested. The contrast between the generally high acceptance levels for seat belt use and low acceptance of speed limits serves to illustrate the point. The statistics relating to the benefits of seat belt use and control of speed for reducing the severity of collisions are equally compelling. Both have been subject to extensive media campaigns. Both attract penalty points and are subject to significant enforcement, attracting the third highest and the highest number of penalty points respectively (National Safety Council, 2009).

Nonetheless, drivers in Ireland are eight times more likely to be convicted for speeding offences as for seat belt offences. Compliance rates tell a similar story. It is estimated (European Traffic Safety Council, 2007) that in 2005, 86% of Irish front seat occupants wore seat belts. The proportion is almost certainly higher now, particularly amongst younger drivers. Similar research in the UK (TRL, 2008) indicated that 94% of drivers and 97% of front seat passengers wear seat belts. Importantly, 94% of all people stated that they think that wearing seat belts is something they have to do and 90% report that wearing a seat belt makes them feel safer. Many also report that it makes driving more comfortable.

However, although only 20% of cars were observed exceeding the speed limit on motorways in Ireland, 86% - 89% were observed exceeding the speed limit on urban arterial roads (RSA, 2006). Research in the UK presents a slightly different pattern of speeding but still has examples of large proportions of motorists exceeding speed limits. For example, almost 50% of car drivers in the UK exceed the speed limit on built up roads, while 54% exceed the speed limit on motorways. Drivers of heavy goods vehicles are worse with 82% exceeding the speed limit on dual carriageways and non built-up roads (DfT, 2008).

Unlike seat belt use, there seems to be little consensus amongst the driving public that speed control is a good thing in its own right, nor amongst researchers about why people speed (Gwilliam, 2008). Indeed, the public perception seems to be that speed controls are a disbenefit about which the public are inadequately consulted. An article in the Irish Examiner (January 03, 2009) neatly sums up this perception. It quotes AA spokesman Conor Faughnan as saying that “there was a clear confidence gap among motorists because of the past experience of Gardai targeting locations for speeding where there was no justification for road safety concerns”. Mr Faughnan further reports an AA survey which found that 53% of drivers are sceptical about the use of speed cameras, believing them to be “a revenue generating measure”.

The case for speed control is further weakened by the mounting opinion that it is driver error rather than speed that is the problem. An article by Tom McGurk in the Sunday Business Post (February 17, 2008) clearly expresses this view: “worldwide evidence suggests that the largest contributory factor to road deaths is driver error In countries – now decades into strict speed regimes – there has seemingly been no direct and appreciable drop in road deaths.” Indeed, there is now a belief that speed camera systems actually increase collision rates. Paul Smith, writing in the UK Daily Telegraph (June 23, 2007), says “there is something wrong with our policies. Not only do they neglect driver quality, but they are actively making us worse. The dream is that cameras reduce risk, but the reality is that they are reducing the quality of our risk management.” Similarly, Xavier Gallagher in a letter to the UK Independent (May 20, 2009) writes “the overwhelming evidence is that speed cameras reduce accidents in accident hot spots, but cause accidents in other locations. To avoid the automated punishment, drivers brake ‘just in case’, turning readable, predictable situations chaotic and dangerous.”

The point here is not whether these arguments are correct. They almost certainly are not, being an over-simplification of the issues. The problem is that the argument is being lost because:

- The public does not see, or is not convinced, that there are any benefits attached to speed control however
- They are convinced that there are disbenefits (e.g. inconvenience, loss of personal freedoms, a perception of increased collision risk, unfair fines).
- They do not feel engaged, involved or consulted about the introduction of speed control measures.

Winning the argument for speed control requires that such incentives are effectively tackled if they are to be successfully introduced. This holds true for all initiatives that might be considered that either lack popular support or where there would be a significant minority opposed. The feedback to the Graduated Driver Licensing System Consultation Paper (RSA, 2009) suggests this would be an issue for initiatives like introducing a night time curfew and placing restrictions on the power of cars for learner or novice drivers. An example from our own research would be stopping the publication of the UK Theory Test questions and answers.

COMMITMENT

There are three aspects of commitment which have emerged as being of particular importance:

- Consistency.
- Justice and fairness.
- Support and resourcing.

Consistency and justice and fairness are closely related concepts. Inconsistency is often used as an indicator of unfair decisions. The recent controversy surrounding the Eddie Halvey drink driving prosecution is a case in point, as is the outrage expressed by Shane Phelan in the Irish Independent (May 6, 2009) because, it is claimed, two-thirds of motorists receiving speeding summonses escape the penalties on technicalities. It is also being widely suggested that it is the wrong people who are being punished by safety cameras. For example, in the Tom McGurk article mentioned previously, he states that the principal result of speed cameras “is adding penalty points to the licences of those who are least likely to cause road accidents.” Concern about commitment to road safety legislation appears from our own research to be widespread. For example, it is worrying to hear so many representatives from organisations like the Gardai saying that they do not believe the

Judiciary are committed to enforcing drink driving legislation. The belief that any new legislation, restrictions or impositions on motorists will be applied fairly and consistently will be key to their successful implementation and acceptance.

One of the most common themes to emerge from both our own research and from the feedback to the Graduated Driver Licensing System Consultation Paper (RSA, 2009) is the difficulty the Gardai will experience in enforcing any new legislation or restrictions. This concerns the willingness of motorists to comply as well as whether or not the Gardai have the resources to undertake the task properly. For example, it has been suggested that, for ease of enforcement, engine size should be used as the measure if restricted car power were introduced for learner drivers even though it is recognised that power output would be a more appropriate measure. The practicality of measures needs to be taken into account in any recommendation since the perception of very low enforcement rates will undermine any initiative.

SUPPORT SYSTEMS

Under this heading we include all of those systems which impact on training, education, development and licensing. Although a significant number of advances have been made in systems in Ireland in recent years, there are still a many areas where improvements are desirable.

Foremost among these is to determine what sort of Graduated Driving Licensing System (GDLS) will work best in Ireland and, as a pre-requisite for that, determine the characteristics of a competent driver within the Irish context. Note that being safe and being responsible are not competence characteristics, they are ultimate goals. The competence description needs to indicate how drivers can behave safely and responsibly and provides a specification of the end goal of the licensing process, namely, what a fully licensed driver is able to do reliably. With this in place, it will be possible to demonstrate where and how the various parts of the GDLS fit together and what specific approaches, procedures and tools, such as the Theory Test, contribute to achieving the goals of the licensing system.

At the moment, our conclusions are that the learning-to-drive process does not have sufficient quality assurance in it. Too many learner drivers are taking their practical test and, often, passing before they are ready to drive unaccompanied. In particular:

- Too many learners regard the Theory Test as a hurdle involving the memorising of questions and answers which has little consequence for later learning stages, the practical test or driving once licensed.
- The practical driving test is too narrowly focused on performing manoeuvres and following test routes which are learned in the days immediately preceding the test.
- Too many pre-learner and learner drivers believe that, despite the six-month learner permit period, they will only need five or six hours of practice before being competent to hold a driving licence.

Improving this situation will involve:

- Introducing a cost-effective role for Approved Driving Instructors (ADIs) in the GDLS.
- Improving the content and the use of the Theory Test.
- Redesigning both the assessment process in the practical driving test and the way it is conducted so that it meets not only EU requirements but also relevant competence requirements.
- Ensuring that learner drivers get sufficient practice of the right quality before acquiring a full licence.

Any suggestions for such improvements will, of course, need to take into account the availability and cost of necessary resources and equipment.

Thought also needs to be given to lifelong learning and how this integrates with the GDLS. A significant amount of educational, developmental and promotional material is already available. However, this material does not seem to us to fit into a coherent model of continuing driver development. Indeed, in some cases, approaches are being put forward which are attention grabbing or engaging for participants but which the research evidence suggests are ineffective at best and counter-productive at worst. An example is including practical, off road driving experiences for school pupils who have not yet started the learn-to-drive process. An end-to-end analysis is needed to identify where all such conflicts arise.

As part of the lifelong learning process, thought needs to be given to how competence is maintained over time. Our adult workshop participants were often keenly aware of the fact that they had not kept fully up-to-date with changes to legislation and the rules of the road, often didn't properly understand the meaning or implications of changes when they did know about them, and were developing poor driving habits or failing to adjust their driving

behaviour as they got older. A mixed package of communication, promotion, refresher training, re-assessment and, where necessary, remedial training may be necessary but the key issue is how to motivate older, more experienced drivers to engage in these activities.

BARRIERS

Three main factors seem to act as barriers to improvements in driving behaviours:

- Openness to change.
- Cynicism.
- Peer pressures.

There is a long history of relatively unregulated driving with low enforcement rates in Ireland. This situation may have changed substantially in recent years but has undoubtedly left a legacy of non-compliance amongst older drivers which they then communicate to younger and novice drivers. In addition, there is a degree of cynicism about the motives behind some initiatives and the likelihood of their success.

Peer pressure also plays its part. One of the main reasons for considering restrictions on passenger numbers is the pressure put on young drivers by their peers, either directly or through perceived driving norms, to drive in risky ways. Changing this is difficult and will take time, but the sorts of changes being envisaged elsewhere, particularly those relating to incentives and commitment, can help set the process of change in motion.

4 RECOMMENDATIONS

4.1 Introduction to the Recommendations

Following the approach set out in Section 3, we have identified a number of ways in which RSA can enhance Irish driver education, training and testing to produce safer and more responsible drivers and align these processes more closely with recognised best practice. Our recommendations have been drafted and refined in consultation with RSA to ensure their appropriateness and practicality in the Irish context.

We have made three main recommendations, as follows:

Main Recommendation 1: Implement a Graduated Driver Licensing System (GDLS)

There is considerable evidence that the introduction of a GDLS brings significant benefits in both safer and more responsible driving and should be fully implemented in Ireland. The benefits are most apparent with novice drivers but there is also evidence of a longer lasting effect. However, the success of a GDLS is dependent on the quality of the approaches taken at each stage of the process. In particular, it is very important to have a clear idea of what it means to be a competent driver and to make sure that all aspects of the GDLS support the achievement of this. Nineteen sub-recommendations have been produced setting out a GDLS approach for Ireland.

Main Recommendation 2: Clarify and support the roles of ADIs and accompanying drivers

As well as ensuring that the structure and content of a GDLS is right, all the participants in the learning-to-drive process need to know the part they will play in it and have the knowledge and skills to play that part effectively. This means that suitable guidance material, training and advice needs to be available to ADIs, accompanying drivers and other “driver educators” so that they can plan driving lessons, assess progress and give feedback.

Main Recommendation 3: Improve and integrate the role of education outside of Driver Licensing

Although there have been many initiatives worldwide, there is little evidence to support the lasting value of education in learning to drive. The problem is that too many of these

initiatives use one-off interventions. Existing and novel interventions need to be integrated into a coherent lifelong learning process aimed at producing drivers who are safe and responsible for the whole of their driving lives. The integration has to include training, assessment, development, motivation and, where appropriate, enforcement.

Each main recommendation has a number of sub-recommendations associated with it.

Table 1 on the following page presents a summary of all the recommendations.

Sections 4.2 - 4.9 set out our recommendations in full and show how and where they are supported by the evidence gathered in the project.

We recognise that it is impractical or unrealistic to act on all the recommendations simultaneously. Where appropriate we have indicated where one recommendation needs to precede another and where there are inter-dependencies between recommendations. We have also noted where recommendations may be alternatives to each other.

Nonetheless, we consider that successful introduction of any one of the recommendations will give RSA greater assurance that individuals who are awarded a driving licence are safer, more responsible drivers than is currently the case. There are several reasons for this. Perhaps the most significant one is that the introduction of a GDLS delays the time when a learner driver can drive unaccompanied which means they will be more mature and more experienced when that time comes. However, it should also be noted that GDLS work best when the full set of complementary measures are introduced. This emphasises the fact that a systems approach needs to be taken since the eventual success of any one part of the GDLS will depend to some extent on whether it is properly supported by other parts.

Table 1: Breakdown of Main and Sub Recommendations

Reference	Recommendations and Sub-Recommendations
1	Implement a Graduated Driver Licensing System
1.1	Develop a definition of a competent driver in Ireland
1.2	Implement a GDLS which is based on a progressive, multi-stage process
1.3	Introduce a requirement for a minimum amount of practice in a range of driving situations before learners can take their practical test
1.4	ADI should sign the logbook as each level is attained
	Test enhancements: Restructure the theory test
1.5a	Do not publish the theory test questions and answers
1.5b	Re-design guidance and training materials to aid the learner driver's preparation
	Alternative theory test options
1.5c	Partial publication of the item bank
1.5d	Develop item writing algorithms to automatically change multiple-choice test content
1.5e	Re-structure the existing guidance and training materials
	Theory test formats
1.6	In the longer term, develop a theory test which does not rely solely on multiple choice questions
1.7	Integrate the learning processes for the theory test, school-based education and practical driving education
1.8	Candidates should take their final theory test and practical test as close together in time as possible

	Test enhancements: Introduce a hazard perception test
1.9	Introduce a Hazard Perception test for all learner drivers
	Test enhancements: Restructure the practical driving test
1.10	Revise the conduct and the assessment of the practical driving test
1.11	Develop training for Driver Testers in carrying out competence-based assessment
1.12	Increase the length of the practical driving test
1.13	Introduce an element of independent driving to the practical test
1.14	Adopt a new approach to selecting driving routes during the practical driving test
1.15	Give all driving test candidates an acceptable amount of good quality feedback
	The intermediate licence
1.16	Apply two restrictions to intermediate driving licences
1.17	Allow Individuals to have exemptions to restrictions where there are valid reasons
1.18	Incentivise learners to obtain their full licence
1.19	Allow learner drivers to accumulate fewer penalty points before taking action
2	Clarify and support the roles of ADIs and accompanying drivers
2.1	Develop an explicit programme to support ADIs and accompanying drivers in their role as safe and responsible 'driver educators'
2.2	Train ADIs to undertake formative assessments of competence

2.3	Develop guidance material for accompanying drivers to help them understand and plan the practice sessions envisaged in the GDLS
3	Improve and integrate the role of education outside of Driver Licensing
3.1	Introduce a coherent programme of road safety education at various stages in the school curriculum
3.2	Develop a system to manage lifelong learning beyond the boundaries of the GDLS
3.3	Develop a specific lifelong learning programme aimed at older drivers (defined as being over the age of 60 years)
3.4	Develop an attitude based intervention programme for delinquent drivers

4.2 Implement a Graduated Driver Licensing System (GDLS)

4.2.1 Background

We have taken the following as our working definition of a GDLS:

‘A GDLS is a learning-to-drive system that requires the individual to progress through a number of successive stages, some of which are marked by different types of licence. Each stage must be completed before progressing to a full licence.’

(Senserrick and Haworth, 2005)

There is evidence to suggest that using a GDLS significantly reduces crash likelihood post test (Begg and Stephenson; 2003). However, there is little or no evidence that formal teaching of driving within a GDLS makes people safer drivers. It has been argued that a GDLS reduces crash risk post test because of the extra practice that learner drivers have to complete before they take their driving test. Someone who has just passed their test in a GDLS is likely to have had more experience driving on the road in a range of situations than a newly qualified person within a standard learning-to-drive system.

A number of countries both in Europe and elsewhere in the world have implemented GDLS. These systems often require the learner driver to show evidence that they have driven successfully in a range of driving situations. For example, learner drivers in Finland are required to have a number of compulsory lessons with ADIs for various high-risk elements of learning-to-drive (such as driving on ice, on motorways or at night). The ADI who gives the lesson is responsible for signing off the learner as competent. The learner has to produce evidence of their competence before they can book their first practical driving test. After the practical driving test, learner drivers are required to gain experience and develop their ability to judge their own performance. There then follows a second assessment - two driving sessions with an instructor in traffic and six sessions on a driving course. For more information on the Finnish GDLS refer to Section 3.8, Volume 2.

4.2.2 Recommendations

Main Recommendation 1: Implement a Graduated Driver Licensing System

Recommendation 1.1: Develop a definition of a competent driver in Ireland

This recommendation is very important since an explicit definition of what it means to be a competent driver should underpin the precise approach that is taken to implementing all the recommendations. The definition should clearly describe what skills a safe and responsible

driver needs to have and how well they need to be demonstrated. It should also include an explicit description, in the form of a competence framework, of what a safe and responsible driver should be able to do, know and understand which can set the overall goal for the other recommendations. Furthermore, we envisage that, in the longer term, RSA will use the competence framework to develop an integrated competence-based approach to acquisition of the driving licence and the driver education and training system. This should make it possible to identify how each part of the GDLS contributes to producing and maintaining driver competence. This is the approach adopted in most safety-critical industries to identifying training, development, assessment and licensing needs.

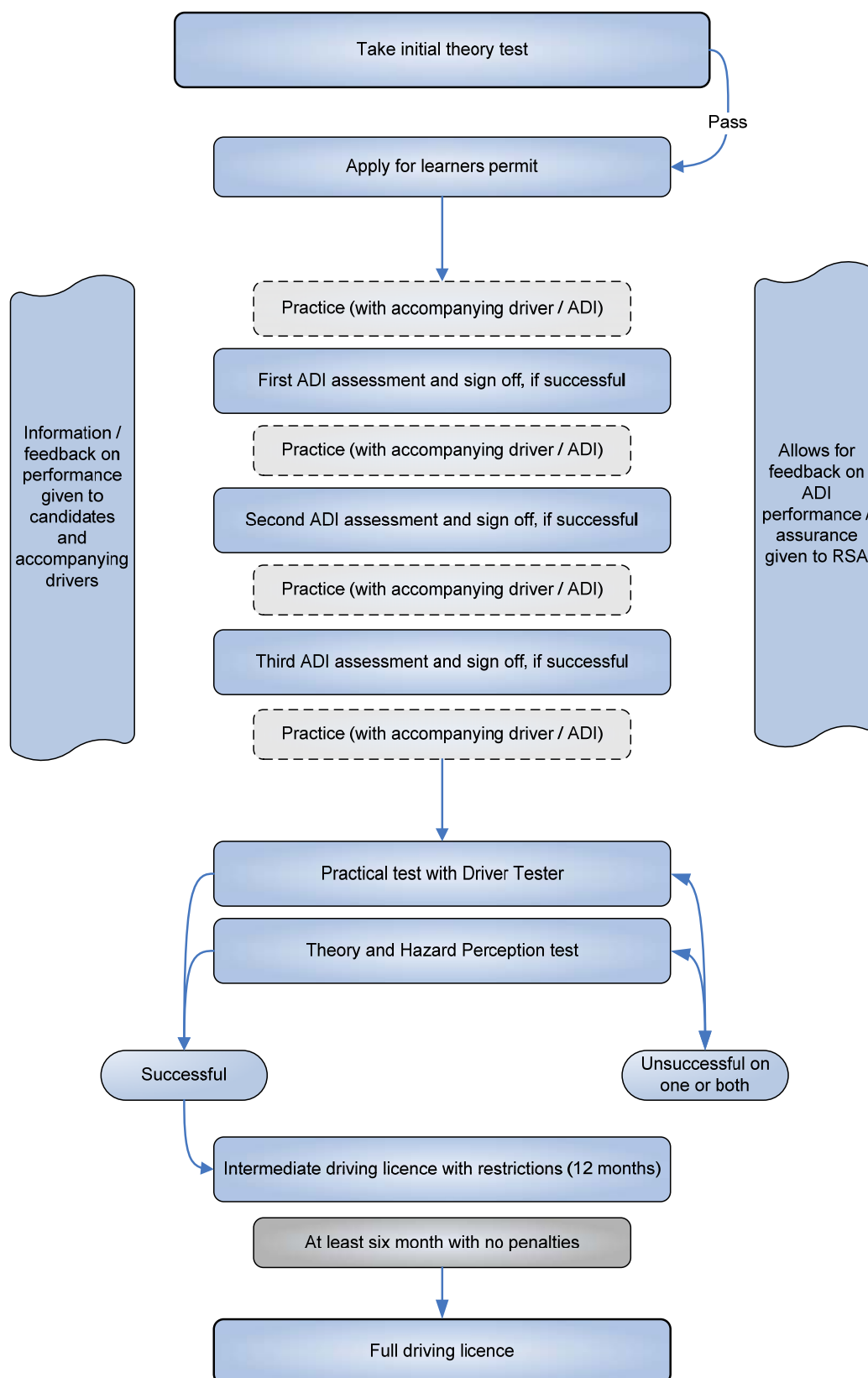
Recommendation 1.2: Implement a GDLS which is based on a progressive, multi-stage process

Table 2 sets out the sort of progressive, multi-staged process we envisage although the precise number of stages may vary. Its main features are:

- A requirement to pass an initial theory test before being granted a learner's permit.
- A planned progression through verified learning stages.
- A final theory test taken as close to the date of the practical driving test as possible.
- Restrictions on the time for which test results remain valid.
- Recommended volume of practice spread out over at least six months.
- An intermediate licence subject to restrictions and other requirements.
- Acquisition of a full licence subject to successful completion of 12 months' driving while holding an intermediate licence (although see recommendation 1.18 for circumstances in which a full licence might be gained after 6 months).

As noted, the evidence suggests (Senserrick & Haworth, 2005) that the main reason why a GDLS reduces crash risk in novice drivers is the increased amount of driving practice that individuals have whilst learning-to-drive. In fact, VicRoads (Australia) has recommended that an individual should have a minimum of 120 hours accompanied practice before booking their practical driving test.

Table 2: Proposed GDLS



4.3 Driving practice and accompanied driving

Recommendation 1.3: Introduce a requirement for a minimum amount of practice in a range of driving situations before learners can take their practical test

We envisage that one accompanying driver will take responsibility for verifying that a learner driver has completed the minimum amount of practice required before sitting the practical test (at least 60 practice sessions with each session at least 1 hour long on average). This person will sign-off practice even when the learner driver practices with a different accompanying driver. The practice would be recorded in a logbook containing a checklist of driving situations, procedures and activities in which the learner has to experience and demonstrate competence. Individuals will be expected to progress through the situations in the logbook, building on skills and experience gained in previous sessions. Completion of the logbook and the signing off of practice by the accompanying driver should be compulsory. For more information on the logbook system see Section 3.7, Volume 2.

As well as setting out the stages in the learning-to-drive process, the logbook would be used as a record of the formative assessments of the learner driver's driving competence carried out by an ADI (see Recommendation 1.4). An example of what a logbook might look like is provided in table 3.

An important point to note is that provision is made in the later stages of the logbook for learners to drive accompanied on National Routes and, if at all possible, on motorways. Before doing so, all the preceding progress stages should be signed off and the necessary formative assessments carried out and passed. Driving on such roads forms part of the third formative assessment in the example logbook. It is a key concept in the proposed GDLS that learners gain experience of driving on roads with higher speed limits before passing their test and being allowed to drive on them unsupervised. This is particularly important in areas where it is difficult to include such roads in the practical driving test. However, in the model we do not insist on experiencing motorway driving since we recognise the difficulty many learners in Ireland will have in accessing them.

Table 3: Example Logbook¹

Lesson	Number of sessions	Session Length (hrs)	Total hours	Accompanying Driver's Signature
1. Basic driver skills (steering, brake control, etc)	3	1	3	
2. Driving in light traffic (local & quiet residential roads) – daylight	5	1	5	
3. Driving in moderate traffic (urban arterial & residential roads) and on regional roads – daylight	6	1	6	
1 st Formative assessment (ADI)	Progress to next stage on sign off			
4. Driving in light traffic (local & quiet residential roads) – night time	5	1	5	
5. Driving in moderate traffic (urban arterial & residential roads) and regional roads– night time	5	1	5	
6. Driving in adverse conditions - daylight	3	1	3	
2 nd Formative assessment (ADI)	Progress to next stage on sign off			
7. Driving in adverse conditions – night time	3	1	3	
8. Driving in complex driving environments (town centres, busy urban roads) and on national routes and/or motorways - daytime	6	1	6	
9. Driving in complex environments and on national routes and/or motorways – night time	6	1	6	
10. Independent decision making	4	2	8	
3 rd Formative assessment (ADI)	Progress to next stage on sign off			
11. Final practice in a mixture of driving environments (Using feedback from ADI assessment)	4	1	4	
Final practical driving test (DT)	Until pass achieved (subject to timescales)			
Theory Test / Hazard perception test	Until pass achieved (subject to timescales)			
Successful completion of the practical driving test and the Theory Test would result in the award of an intermediate driving licence.				

¹ This logbook has been adapted from a current example used in Maryland, USA. We do not recommend that these are the actual lessons that are included in the RSA logbook, only that this should be used as an example of the sort of content that may be included.

It is assumed in the example logbook that independent driving will form a part of both the learning process and the practical test. If this is true, guidance and training materials explaining the principles and approaches to independent driving should be developed for ADIs and accompanying drivers (for more information see Recommendation 1.13).

Recommendation 1.4: ADIs should sign the logbook as each level is attained

Although we have not recommended that it should be compulsory to have driving lessons with an ADI, we do think there is an important, formal role for ADIs in the learning-to-drive process. Their greater experience of learner drivers and expertise in driver training mean that they are much better placed than other accompanying drivers to assess whether learners are making sufficient progress and whether they are ready to both undertake the practical driving test and begin the process of driving independently. By signing off the formative assessments in the logbook, they will indicate that they are confident that the learner driver has demonstrated their competence in the given range of situations.

We envisage that an ADI would need to carry out at least three formative assessments within the learning-to-drive process although the precise number would depend on the range of situations that are eventually included in the logbook. In addition, accompanying drivers would sign the logbook to confirm that the minimum amount of practice required has been undertaken before ADIs carry out the more formal formative assessments (shown after practice lessons 3, 6 and 10 in Table 3). It should be emphasised that these are minimum practice requirements and that learner drivers should be encouraged to get as much practice as possible.

We also envisage that sign off periods would be separated by a minimum amount of elapsed time, perhaps one or two months depending on the situations which have to be practised. This would allow the learner driver time to work on ADI feedback between formative assessments and ensure that individuals would come to their practical driving test with at least six to eight months of driving experience.

The recommended GDLS would allow learners to make their own decisions about who should give them driving instruction but would require ADIs to sign off their progress at the appropriate check points. This addresses three issues that arose from the project findings, namely:

- There is no evidence in the research literature to suggest that formal ADI instruction is more likely than accompanied driver instruction to produce safe drivers. What formal ADI instruction does do, however, is increase the chances of an individual passing the

practical test. Therefore, we see no argument for making it compulsory for learner drivers to have a fixed number of lessons with ADIs beyond the formal assessment role outlined above. A large percentage of post-practical test drivers interviewed said that one disadvantage of using ADIs would be the cost involved. This system allows for the bulk of the learning-to-drive process to be carried out in a cost effective way but insists on a small number of one-hour long sessions with an ADI to provide assurance that the learner driver is progressing effectively. Given that almost all the post-practical test drivers we spoke to had had at least two lessons with an ADI before they took their practical driving test, we do not envisage this system adding substantially to the costs for the learner driver. Incidentally, there would be no requirement for learners to use the same ADI to sign them off at all the assessment points. This would allow learners to change ADIs if they were dissatisfied with their ADI. However, in most cases it would make sense, for reasons of consistency and allowing the learner and ADI to build a relationship, to continue with the same ADI. For more information on the role of the ADI see Section 3.2 Volume 2.

- There are a number of practical implications of introducing a GDLS of this sort which would need to be addressed. Requiring ADIs to act as assessors introduces a need for them to be trained in assessment and for their assessments to be quality assured. Not all ADIs may wish to act as assessors, so the possibility of having two levels of ADI arises. There would, however, be an obvious motivation for ADIs to attain the ‘assessor level’ since it would bring with it a high probability of undertaking assessment sessions and, possibly, of additional instruction.
- Quality assurance of the formative assessment process will be important. Making it a requirement that the logbook is presented to the Driver Tester will help the RSA evaluate whether the GDLS is being adhered to and how valid ADI assessments are. This implies that records should be kept of which ADI has signed off a particular learner as competent. To deal with more extreme cases, the RSA may need to develop a complaints and/or appeals system which would allow the learner to dispute a decision that had been made. However, it may be that allowing learners to, firstly, choose their ADI and, secondly, to use different ADIs throughout their progression makes this unnecessary.

4.3.1 Benefits of implementing a GDLS

An assessment process requiring several formative assessments in addition to a final practical examination will give more valid results than a one-off assessment. In accordance with good practice assessment (Fletcher, 1997), the recommended approach allows multiple assessments by multiple assessors. In addition, having a number of formative assessments before the formal practical driving test would go some way to reduce the nervousness of candidates. Interviews with long-term provisional drivers suggested that one of the main reasons they believe they failed their tests was that their nervousness affected them detrimentally.

A GDLS would also give RSA more assurance that people who pass their test meet an equivalent standard of competence across the country. The system builds on low level assurance (accompanying driver signing off practice hours) with additional higher levels of assurance (ADI formative assessments) before the Driver Tester verifies that the learner is of an acceptable standard to hold an intermediate driving licence. In addition, it counters the limitation that a Driver Tester can only test a subset of driving performance in the time allowed for a practical driving test. The recommended GDLS gives the Driver Tester some assurance that all skills have been performed to an adequate level (for example, have been signed off by an ADI) which allows them to focus on those aspects of driving which are associated with the highest risk and which it is feasible to observe in the practical test. Furthermore, we envisage that this structured system will increase practical driving test pass rates, as in France, which reported a 22% increase in practical test pass rates following the introduction of a more structured, progressive approach to learning-to-drive (Manchu, 2007). The GDLS also allows for better feedback for the learner driver, the accompanying driver and the ADI. As noted, it also provides RSA with an effective record of ADI quality since the Driver Tester would have a record of ADI assessments of learner competence against which to compare their own assessments.

4.4 Test enhancements: Restructure the Theory Test

4.4.1 Background

A commonly expressed opinion in the consultation was that novice drivers did not view the current Theory Test as a useful assessment. The bank of questions and answers is currently published and available to all. Almost without exception, learner drivers had memorised questions and answers in order to pass the test rather than learning and trying to understand

the information. People saw the theory test as a hoop they needed to jump through before taking their practical driving test. In addition, there was some confusion regarding the contents of the theory test. People incorrectly reported that some test items were irrelevant to the category of licence being applied for. This confusion is thought to have occurred from the structure of the theory test learning materials (see Recommendation 1.5e).

4.4.2 Recommendations

Improvements are needed to change the emphasis of the Theory Test from a memory based assessment to an assessment of driver knowledge and understanding. The test as it stands asks questions which can assess understanding but, because of the availability of test items, is largely a test of memory. Furthermore, although the test covers a number of content domains, including risk assessment and hazard awareness as well as knowledge of signs and rules of the road, the question and answer formats are not ideal for assessing observational, comprehension or decision making skills.

The most significant recommendation is to stop the publishing of the real Theory Test questions and answers (Recommendation 1.5a). However, consultation with RSA and other stakeholders suggests this will be an unpopular recommendation. We have, therefore, offered alternative ways in which the memorisation component could be reduced should RSA decide against the recommendation to cease publishing the theory test questions and answers.

Recommendation 1.5a: Do not publish the theory test questions and answers

This is regarded as poor practice in most countries in Europe and derives from a misplaced notion of test fairness. Fairness is achieved by allowing all test takers an equal opportunity to prepare and by ensuring that the wording of the test questions and answers do not result in adverse impact on specific (minority) groups. There are a number of reasons why it is regarded as poor practice:

1. It encourages memorisation of answers rather than understanding.
2. There is a danger that learners, through exposure to distracter response options may begin over time to associate these wrong answers with the questions and get them confused with the correct answers.
3. It encourages learners to treat the theory test as a hurdle which has no connection to the “real” practical skill of driving.

4. It is very likely to compromise the criterion-related validity of the test (e.g. safety outcomes), although it is worth noting that there is no research evidence relating performance on theory tests to future driving performance. The content validity of well developed theory tests is assured by the use of subject matter experts and careful scrutiny of items and their reliability via the item response theory approaches taken to developing item banks. However, although these conditions are necessary for achieving criterion-related validity they are not necessarily sufficient.

Recommendation 1.5b: Re-design guidance and training materials to aid learner driver's preparation

If the real theory test questions are no longer published, the training materials should be re-designed. They should not contain the bank of questions. They should instead focus on enhancing knowledge and understanding of the content areas covered by the theory test(s). Practice test materials should be included so that learners come to test sessions familiar with the style of testing but these should not be actual questions from the real item bank.

4.4.3 Alternative theory test options

Recommendations 1.5a and 1.5b are predicated on the assumption that RSA will cease to publish the real item bank. There are a number of alternative approaches which can be considered if RSA decides against this action.

Recommendation 1.5c: Partial publication of the item bank

As a compromise, it might be possible to treat the two parts envisaged for the theory test separately. The initial (Part 1) and final (Part 2) theory tests would, preferably, cover different ground (see Recommendation 1.7). The complete question and answer set could still be published for Part 1, since it is still a hurdle to beginning to learn, but not for Part 2, particularly if Part 2 does not rely only on multiple-choice responding (see Recommendation 1.6) and has response formats which do not lend themselves to publication in books. Another alternative is to publish only the questions and correct answers (with an explanation of why they are the correct answers) but not include the incorrect response options.

Recommendation 1.5d: Develop item writing algorithms to automatically change multiple-choice test content

One method that could be used to reduce the role of rote memory is to create computer based item writing algorithms which can automatically produce unique versions of the test for each candidate. The algorithms can work in three ways:

1. Alternative wording or presentation for each question can be developed which retains the exact same meaning.
2. Alternative wording or presentation can be developed for the response options (including the correct answer).
3. The order of response options can be changed randomly.

These interventions will go some way to ensuring that the candidate has not simply memorised item patterns but knows the correct answer. Another possibility is to have questions which address higher risk areas carry more weight in the marking scheme, although we note that, when a test is composed of more than 10 items, differential weighting has only a minor impact on overall scores.

Note also that increasing the number of items in the item bank was considered as a possible option. However, due to the already large bank of 1250 questions used by RSA, it was thought to be unnecessary.

Recommendation 1.5e: Re-structure the existing guidance and training materials

A complaint often voiced by our workshop participants was that the theory test contains questions which belong to different licence categories. This perception indicates that learners are confused about the fact that the practice materials contain all 1400 items which are used for all licence categories. It also indicates something about how learners approach this material. The guidance and training materials should be restructured to clearly indicate which test items related to which category of vehicle. This will stop candidates becoming confused over the test content.

4.4.4 Theory test formats

Recommendation 1.6: In the longer term, develop a theory test which does not rely solely on multiple choice questions

With the growth of computer-based testing, a greater variety of question and response option formats is now available. The importance of this is that it provides a way to reduce a known problem in psychometrics, namely the method variance problem. Method variance reduces the validity of tests because a significant proportion of someone's score is related to the method of responding rather than to the content of the test. Using different question and answer formats can help alleviate this problem.

A number of countries in Europe have theory tests with items based on short videos of driving situations or scenarios where candidates are asked what they would do in this situation. In most cases, the questions still use multiple-choice response formats but there is no reason why responding should be restricted in this way. Answer grids, free responses, reaction time measures and point and click responses are all possible. For example, candidates can be asked to click on relevant areas of the screen or to press a button to indicate when they would take an action. Such approaches are already being tried in some theory tests and are becoming common in educational and occupational testing. This can be a more effective way of assessing understanding about the Highway Code, regulations and rules of the road as well as testing risk assessment and hazard perception.

Recommendation 1.7: Integrate the learning processes for the theory test, school-based education and practical driving education

In terms of the learning-to-drive process, learning for the theory test is often viewed by learner drivers as entirely separate to learning and practicing driving skills. This perception is reinforced by having only one theory test carried out before gaining a learner's permit. To ensure that the importance of driving theory is recognised by learner drivers, it needs to be integrated with both education in safe road use and with driving practice. We envisage that this can be done in three ways:

1. Split the theory test into two with each part assessing different parts of the learning-to-drive syllabus. The initial test (Part 1) should still have to be passed before obtaining a learner's permit and should cover knowledge of road signs, legislation and rules of the road. The final test (Part 2) should be more concerned with understanding, risk awareness and assessment and decision making although it may include checks that the knowledge assessed in Part 1 has been maintained over the learning period. It might also include a hazard perception component (see Recommendation 1.9).
2. Awards or qualifications in safe road use obtained through the education process could carry credit towards the initial theory test and might, if there is sufficient confidence in the validity of the results, stand in its stead.
3. ADIs could include questions on driving theory in their formative assessments.

By ensuring integration between the two areas of learning-to-drive, key messages and lessons learned will be emphasised and reinforced (see Recommendation 3.1). Note that

performance on the initial theory test would count towards progression through the GDLS but would not count towards the final 'in-depth' theory test (see Table 2).

4.4.4.1 When should candidates take the Theory Test?

Researchers have argued that it is more valuable to take the theory test when it is closely coupled with taking the practical test (CIECA, 1998; Henriksson, Sundstrom and Wiberg, 2004).

Recommendation 1.8: Candidates should take their final theory test and practical test as close together in time as possible

There are advantages in taking the practical and theory tests as close together as possible. In Sweden, the theory test must be taken no sooner than 2 weeks before the practical test and no later than 6 weeks afterwards. This close coupling of the tests produced a 12% increase in theory test pass rates in Sweden (Per-Olof Nilsson, 2009) (for more evidence on linking the theory test and practical driving test see Appendix D, Volume 2).

However, we recognise that close coupling of the tests may not always be possible. It is, therefore, recommended that both the theory test and practical driving test should have a minimum period of validity, e.g. two months, and that the theory test should not be taken more than two weeks before the practical test. Gaining an intermediate licence would be dependent on passing both within the two month period. This assumes that re-sits of either test can be arranged within this time period.

4.5 Test enhancements: Introduce a Hazard Perception Test

4.5.1 Background

Responses from the interviews and workshops provided much support for the introduction of a Hazard Perception test. There are currently a number of good models for developing a Hazard Perception test upon which RSA could base its test (McKenna & Crick, 1994; Vlakveld, 2008). For a more in-depth description of these models see Appendix D, Volume 2. Most countries that currently have a Hazard Perception test use computer-based assessments as a more convenient, cost effective way of providing results and feedback (Prücher, 2006).

4.5.2 Recommendations

Recommendation 1.9: Introduce a Hazard Perception test for all learner drivers

Hazard perception questions do not need to form part of a separate hazard perception test. They can be included within the theory test, particularly if the theory test incorporates items with video or animated graphics. The hazard perception questions should aim to assess hazard identification, reactions to hazards and subsequent decisions and choices (Note: the current UK test only measures hazard detection). Many countries (e.g. Germany and Finland) are in the process of introducing or reviewing their Hazard Perception test items. Many of these new assessments are incorporating situational judgement tests (The DEKRA group, 2009).

Situational judgement tests provide a wider assessment of candidates' Hazard Perception including the driver's decision making, judgements of priorities and situational awareness. Good hazard perception depends on experience. Therefore, any hazard perception testing for licensing purposes is best done towards the end of the learning-to-drive process although it could also form part of formative assessments. For further information on implementing a Hazard Perception test refer to Appendix D, Volume 2.

Again, we recommend that RSA develop this test with professionals who are familiar with good practice test development and assessment principles.

4.6 Test enhancements: Restructure the Practical Driving Test

4.6.1 Background

The current driving test was perceived by post-practical drivers as something that needed to be passed before the 'real learning of road skills could be practised'. There was sufficient evidence for us to presume that test takers had received explicit practice on the test routes with ADIs. In addition, a number of post-practical test takers and long-term provisional drivers felt that they had not received enough feedback after their driving test. The long-term provisional group suggested that if they had received more in-depth feedback from the Driver Tester after their unsuccessful test(s) they would have had more confidence to take the test in the future (and pass it). We have identified a suite of changes to the practical driving test that would bring it into line with current good practice for driver testing.

4.6.2 Recommendations

One of the most significant changes being considered across Europe in the design of the practical driving test is a shift towards competence-based assessment from purely error based assessment.

Recommendation 1.10: Revise the conduct and the assessment of the practical driving test

The current practical driving test in Ireland focuses on errors or faults made by candidates. This method has been criticised as being a poor predictor of driver's performance (Baughan et al, 2006, Emmerson, 2008). This is because:

- The detection of single dangerous faults or small numbers of serious faults involves a large element of chance and leads to low test-retest reliability.
- The learners who do best in such tests tend to have the poorest subsequent collision records.

An alternative approach already adopted or being considered by a number of countries (e.g. Germany, France, UK and The Netherlands) is competence-based testing. The main features of a competence-based assessment are:

- Using holistic assessment (how well, overall, has this candidate driven?) rather than a reductionist approach focusing on individual actions e.g. as in the Netherlands.
- Focusing on driving behaviours rather than specific manoeuvres.
- Allowing evidence of good driving performance to compensate for occasional lapses or errors during the test.
- Ensuring that the test covers different levels of performance as, for example, set out in the GDE matrix.

Note, however, that all retain the assessment of errors as a part of the test and will fail a candidate if sufficient errors are made. An important point raised by Baughan et al (2006) is that the number of minor faults may be a more significant indicator of competence than a single dangerous fault.

The practical driving tests of those countries either already using competence-based systems or on the point of introducing them incorporate some or all of these features. The approaches adopted are very similar and share two key design principles:

- They specify a range of situations that need to be covered in the test (e.g. negotiating junctions, driving on major roads or driving in residential areas).
- They specify a range of critical behaviours that candidates are expected to demonstrate in each situation (such as, good hazard perception and responses, defensive driving or eco-safe driving).

An example of what a competence-based recording system might look like is provided in Table 4. Please note the content is based on systems used in Sweden, The Netherlands and Finland. We do not recommend that the actual content is used by RSA. Rather, this is an example of what a competence-based recording system might look like.

Competence-based recording systems of this sort require Driver Testers to assess whether a learner can competently perform a set number of driving activities and driving behaviours in a consistent manner on a range of road types. The system is not based on marking errors. Instead the Driver Tester should make a decision based on the candidate's overall performance. The Driver Tester can make marks on the record form, but only to remind them of 'good' or 'poor' driving behaviours. This information would be used at the end of the practical driving test to make an overall decision and to give feedback.

The example also includes assessment of 3 special driving tasks (independent driving, eco-driving and special manoeuvres). The case for independent driving is made in Recommendation 1.13 and the testing of special manoeuvres is a requirement European Commission Directive 2000/56/EC. The case for including eco-driving is slightly different. Usually, eco-driving is promoted on the basis of financial, environmental and social benefits. However, recent research in Germany (Schulte, 2009) suggests that there are a number of additional benefits, including lower stress levels among drivers and significantly reduced crash risk, which create a very strong case for its inclusion in driving practice and the practical driving test.

Table 4: Example competence-based recording system

Road Types	Driving Activities (applicable to all road types)	Driving Behaviours						
		Control of the car	Driving safely (speed control / safety distance)	Driving Considerately	Anticipating risks (Observation and Avoidance)	Decision Making	Complying with traffic laws and controls	Adjusting to conditions
Urban residential Roads	Drive Off							
Urban arterial Roads	Stop / Leave car							
Local, unclassified roads	Negotiate Junctions (R,L & S)							
Regional Roads	Driving ahead and lane use							
National Roads								
Eco – driving								
Independent driving								
Special manoeuvres								

Recommendation 1.11: Develop training for Driver Testers in carrying out competence-based assessment

The move to competence-based assessments would require Driver Testers to undergo training. The training should focus on the way practical driving tests are marked, how to make decisions about competence and to how explain the overall approach to assessment. Similar training was introduced in Sweden to help Driver Testers cope with the new competence-based assessment.

4.6.3 Format of the Practical Test

Recommendations 1.12 to 1.15 should, for best effect, be designed around a competence-based approach to assessment. However, they are not dependent on the implementation of Recommendations 1.10 and 1.11.

Recommendation 1.12: Increase the length of the practical driving test

Expert opinion e.g. The CIECA group (CIECA, 1998) suggests that longer practical driving tests are more effective than shorter ones. In longer tests, Driver Testers can observe a wider range of behaviours in more situations and collect more evidence, all of which is known to improve the reliability and validity of assessment.

Of course, the question then arises of how long is long enough. If the practical driving test is lengthened, it is essential that the extra time is used effectively. In The Netherlands, tasks in the practical test have allocated time slots. For example, a 5 minute introduction, a 5 minute technical check of the vehicle, 5 minutes for special manoeuvres and 5 minutes for feedback leaving 25 minutes of net driving time (Rietman, 2009). This approach ensures that sufficient time is allocated to all key elements of the practical driving test. However, in the GDLS being considered for Ireland, some of these elements might be covered in the formative assessments carried out by ADIs. As a minimum, we consider the practical test should last for 35 minutes and include 30 minutes of driving (including special manoeuvres) and 5 minutes of feedback.

Furthermore, there is anecdotal evidence from our interviews that learner drivers believe that driving tests are cut short if candidates fail early in the test. This may reflect confusion about tests being curtailed because the learner driver is seriously unsafe. There are some countries e.g. Germany, where this is standard practice but in most countries it is considered good practice to complete the test so that feedback can be given to candidates on all aspects of their test performance, unless there is a risk to the safety of the driver and Driver Tester

(Jonsson, Sundstrom & Henriksson, 2003). RSA policy is for tests to use their full time allotment and we have no evidence to suggest that this does not happen. However, the lack of feedback at the end of the Irish practical test actually means that there is little value in using the full amount of time allotted to it. We would encourage Driver Testers to use some practical test time to give candidates feedback on all aspects of their performance which may need improving (see Recommendation 1.15).

We recognise that lengthening the practical test would result in fewer candidates being tested each day. However, it is hoped that introducing a progressive learning process in the GDLS will increase pass rates and thus reduce overall demand for tests. Certainly, VicRoads have reported significantly higher pass rates on their new practical test for those learners with more practical experience (Cavallo; 2009).

Recommendation 1.13: Introduce an element of independent driving to the practical test

Several countries in Europe e.g. The Netherlands, Finland and Sweden, have either introduced or are considering introducing an element of independent driving into the practical test. The reason for this is that it is recognised that driving unsupervised is a major step for novice drivers, as can be seen in the much lower collision rates for accompanied learners compared to unaccompanied learners (Cavallo, 2009). The problems arise from a mixture of increased distraction and increased cognitive workload. The effects of these are well known in other safety critical sectors (e.g. train driving).

Independent driving can take several forms in the test including:

- Giving the candidate a set of general instructions for a route, mimicking what happens when a driver asks for directions.
- Asking the candidate to follow road signs in order to reach a given location (as in the approach used in Sweden).
- Asking for an action to be taken that requires a manoeuvre to be carried out but letting the candidate decide exactly how, when and where to do it.
- Using maps or satellite navigation systems to reach a destination.

These options are not mutually exclusive and all could be used, particularly as there are a number of concerns over their individual practicality. The first task places a burden on the candidate's memory and thus tests a skill which falls outside the scope of the practical test. The second task may severely limit the routes that can be taken at a particular test centre (see Recommendation 1.14). The third could lead to candidates avoiding carrying out some

types of manoeuvre. For example, if asked to turn the vehicle around, there is evidence from trials in the UK that candidates will find somewhere to do a U-turn rather than attempt a three-point turn. The fourth may introduce an unstandardised element to the test since some cars will be fitted with navigation systems and some not. The key would be to give the Driver Tester maximum flexibility in deciding when and how to integrate the different independent driving elements.

A different approach which has been tried for assessing independent driving is to question candidates about their situational awareness. Again, there are a number of ways this can be done. For example, after driving through or past an interesting road situation, such as a roundabout, as soon as it is convenient the Driver Tester might ask the candidate to stop and ask them questions about what potential hazards they observed, why certain decisions were made, and so on.

Alternatively, the candidate might be asked to choose a route to a destination and questioned on why that particular route was chosen. However, this approach would need to be well integrated into the learning-to-drive process. There is evidence from trials in the UK that candidates find it difficult to remember what has just happened in test situations and do not find it easy to explain the choices they have made, perhaps for the same reason. Learner drivers would need to practice self-reflection and describing their actions. If ADIs encouraged this sort of questioning during their formative assessments then learner drivers might feel more comfortable with this approach. However, our conclusion is that the approach works better in training than in assessment.

4.6.4 Practical Test Routes

A problem identified by many participants during the interviews and workshops was that ADIs know the test routes used by Driver Testers in advance (particularly in smaller towns) and give learner drivers the chance to practice on the actual test route. Indeed, many learner drivers and pre-drivers said they would only use an ADI for this purpose. Two issues need to be addressed:

- The first concerns some Driver Testers using a small number of fixed routes.
- The second concerns the availability of suitable test routes in some test centres.

Recommendation 1.14: Adopt a new approach to selecting driving routes during the practical driving test

There are a number of ways this can be achieved, for example:

- Including independent driving which, when used appropriately, can give Driver Testers the flexibility to make each test route unique to the candidate.
- Changing the focus of the practical driving test towards situations e.g. drive in an urban area with a 50 kph speed limit, drive on a rural road with an 80 kph limit, etc., rather than tasks, although we recognise that some tasks will need to be included e.g. turn right off a main road onto a minor road.
- Reducing the current 52 test centres to locations that can provide the full range of test situations and sufficiently complex driving environments. This has been done successfully in Australia (Christie, 2000).

Another suggestion has been that driving simulators could be used to assess those driving environments and situations which are known to be high risk but difficult to include in a practical test. Driving simulators are known to produce realistic driving behaviours and, therefore, provide valid assessments of older and experienced drivers (e.g. Lee, Lee and Cameron, 2003). However, the case for using driving simulators in the practical driving test is less clear. Significant practice on the simulator is often required before genuine behaviour is observed. Occasional users often experience motion sickness although there are a number of ways in which this effect can be reduced. These and other problems may make it unfeasible to use simulators for high volume testing.

4.6.5 Feedback

A number of countries include an element of self assessment in the practical driving test. Usually, the self assessment is carried out prior to sitting the test (e.g. as is the case in Finland). The self assessment can add value both by increasing candidates' awareness of their readiness to take the test and by providing a further opportunity to provide individually tailored feedback. For more information on approaches to the practical driving test refer to Section 3.7, Volume 2.

Recommendation 1.15: Give all driving test candidates an acceptable amount of good quality feedback

The current procedures for the RSA practical driving test do not allow for good, effective feedback; either for the candidate, ADI or accompanying driver. Best practice in other European countries e.g. Finland, Norway, Iceland and Germany, is to allow for much more detailed and extended feedback. This feedback is given regardless of whether the candidate has passed or failed. It is seen both as a way of helping failed candidates to prepare for subsequent tests and of helping drivers who have passed to identify areas where they can continue to improve.

Feedback should be given to the candidate regardless of whether they pass or fail the practical driving test. The feedback should be given by the Driver Tester. Consideration should also be given to encouraging ADIs and accompanying drivers to attend the test and participate in the feedback session since it will help them to improve their effectiveness.

4.7 The Intermediate Licence

4.7.1 Background

The final stage of many GDLS is for the novice driver to enter an intermediate period immediately after a successful driving test. This approach is not uncommon and is used by the majority of states in the USA. The intermediate period can involve:

- A further period of accompanied driving.
- Placing restrictions on how, when and where and in what type of vehicle the novice driver is allowed to drive unaccompanied.

We believe that the further period of accompanied driving will be unnecessary in the scheme envisaged here since the learning-to-drive process involves a significant practice element and the restrictions involve the continued use of accompanying drivers. We have recommended that the intermediate licence should last for 12 months (Recommendation 1.2). This increases the chances that all learner drivers will gain sufficient experience before acquiring their full licence. However, one motivating mechanism that might be used is to have a progressive, risk-based removal of restrictions. For example, after two incident-free months might be eligible to apply for an intermediate licence which allows motorway driving. After four months incident-free, they might be eligible for an intermediate licence which

allows the carrying of passengers. Another motivation could be to award a full licence if the learner drives incident free on an intermediate licence for six months.

There is a good case for applying restrictions. RSA's consultation document identifies a range of options for restrictions, all of which have been used somewhere in the world. There is little evidence in the research literature of the efficacy of some of them. In addition, many of the consultation participants, particularly the learner drivers, felt that many of the restrictions would be unfair or unworkable. In other cases, a strong argument can be made for applying the restriction to all drivers, not just learners. Having a zero blood alcohol limit (or a minimum practical limit such as 20mg / dl) is an example.

However, there is evidence that two of the restrictions have positive effects on crash rates (Institute for Highway Safety, 2000), namely:

- Imposing a night time curfew e.g. between 12.00 am and 5.00 am.
- Placing restrictions on the number and age of passengers that drivers in the intermediate stage can carry.

The two main restrictions which we have not recommended are restrictions to the power of vehicles used by learners and setting lower speed limits for learners. In the former case, it is unclear what measure to use. Engine size is easier to check but may give little indication of the vehicle's horse power. Where to set the limit is unclear. For example, it has been suggested it should apply to engine sizes greater than 1600 cc but small cars with engines this size or smaller can be very quick with rapid acceleration. Learners may have little choice about which car to drive if their family only has one. Larger, more expensive cars may have better safety features and in-car safety devices. In the latter case, requiring one group of road users to drive significantly more slowly than others can itself be dangerous.

Furthermore, such a restriction removes the opportunity to gain experience of driving at typical traffic speeds. We believe it is more advisable to build accompanied practice of driving at typical road speeds into the progressive learning in the GDLS.

Various potential difficulties were identified during the consultation related to the enforcement of restrictions. Amongst the most relevant were:

- The increase of manpower needed to police the system.
- The attitude of the courts to enforcement.
- Unnecessary limitations on life style and mobility e.g. through stopping intermediate drivers travelling to and from paid employment at night.

One option being considered elsewhere is the use of voluntary in-car tracking devices which would allow automatic 'policing' during the intermediate licensing period. The use of such devices is being promoted by insurance companies in a number of states in the USA, the data being made available to both the intermediate driver and accompanying drivers. The simpler devices are relatively cheap (from 100 Euros) and the data can be downloaded to computers or mobile phones as data files or text messages. There is also anecdotal evidence from researchers in the USA that novice drivers often welcome these devices because it gives them a defence against peer pressure.

Another option is to encourage or mandate the use of in-car safety devices such as Electronic Stability Controls and Collision Detection Devices. Making this mandatory for learners would have significant cost implications. Not making it compulsory would seriously affect the penetration of such devices in the target group. This is, perhaps, another example of an initiative that could be promoted through insurance companies.

More formal monitoring by third parties would be more problematic. Novice drivers often share cars with their parents or siblings making it difficult to identify the driver. More importantly, such monitoring could be criticised for infringing civil liberties. In fact, the evidence suggests that enforcement by the police or other third parties is unnecessary since compliance with restrictions has been found to be mainly voluntary (Mayhew et al., 2000) and parents, not police, seem to be the chief enforcers of US night-time driving and passenger restrictions (Williams, 1999).

4.7.2 Recommendations

In the light of the above, we have made four recommendations concerning the introduction of post-test restrictions.

Recommendation 1.16: Apply two restrictions to intermediate driving licences

The restrictions applied should be the imposition of a night time curfew and placing a limit on the carrying of passengers. These restrictions should not apply if the intermediate driver is supervised by an accompanying driver. Crash data shows that accompanied drivers are 20-33 times less likely to have a collision than drivers with up to 6 years experience (Forsyth et al, 1995; Gregerson et al, 2000).

Recommendation 1.17: Allow individuals to have exemptions to restrictions where there are valid reasons

In order to make these restrictions practical, we note that it is not necessary to apply them in a blanket fashion to all intermediate drivers. Exemptions can easily be built into the restrictions and are done so in 48 of the 50 states in the USA. For example, the restrictions placed on carrying passengers may be waived if you are carrying family members. Likewise, the night time curfew could be relaxed if you are travelling to paid employment.

Recommendation 1.18: Incentivise learners to obtain their full licence

In addition, it is recommended that RSA should consider how to motivate intermediate drivers to successfully complete the intermediate period. Successful completion would mean demonstrating that they have driven safely and responsibly during the period of the intermediate licence. There are several possibilities, some or all of which could be applied:

- Successful completion of a six month intermediate period could lead automatically to the award of a full licence. However, if an intermediate driver is caught violating the terms of their restricted licence or commits a motoring offence or is judged at fault for a collision, then the restrictions on the licence would remain in place for an extra six months.
- The intermediate licence could allow for the progressive removal of restrictions or for the progressive allowing of exemptions.
- The intermediate licence could have restricted validity. For example, if not converted to a full licence within two years it reverts to a learners permit with a requirement to re-sit the practical and final theory test.

For more information on the approach to exemptions refer to Section 3.8, Volume 2.

Recommendation 1.19: Allow learner drivers to accumulate fewer penalty points before taking action

Rather than awarding larger penalties to learner drivers who commit motoring offences or breach their licence restrictions, several states in Australia and the USA use a graduated approach to punishing licence violations. For example, in New South Wales an intermediate (1) licence has a limit of 4 penalty points, an intermediate (2) licence has a limit of 6 penalty points and a full licence has a 12 points limit. If penalty points are exceeded then the learner must move back a licensing stage. This approach is thought to incentivise drivers to obey licence restrictions. Consideration should also be given to making penalties appropriate to

the seriousness of the offence. For example, a minor violation of a licensing restriction might lead to that restriction being extended for a few more months. A serious motoring offence might mean removal of the intermediate licence and a requirement to re-sit the tests. For more information on enforcement see Appendix D, Volume 2.

4.8 Clarify and support the roles of ADIs and accompanying drivers

4.8.1 Background

ADIs and accompanying drivers are crucial to an effective GDLS. Currently ADIs are used by the majority of learner drivers at the end of their learning-to-drive process. This enables learner drivers to practice on the driving test route prior to taking their practical driving test. Mostly, ADIs are not used to 'learn' how to drive; they are used to learn how to pass the practical driving test and to refine skills that have been learnt during practice with accompanying drivers.

The recommended GDLS would require ADIs to be involved with learner drivers earlier in the learning-to-drive process. By requiring explicit sign-off points at which a learner driver has to be assessed by an ADI, the role of the ADI immediately becomes more integral to the learning-to-drive process. For a fuller description of this process see Recommendations 1.3 and 1.4.

The recommended GDLS would also place a more formal requirement on accompanying drivers. Accompanying drivers would have responsibility for planning practice drives and confirming that the learner has undertaken sufficient practice of the right sort and quality. They would also be expected to discuss with ADIs areas for improvement and ideas for planning future practice sessions. For more information on the role of the accompanying driver refer to Section 3.3, Volume 2.

4.8.2 Recommendations

Main Recommendation 2: Clarify and support the roles of ADIs and accompanying drivers

Recommendation 2.1: Develop an explicit programme to support ADIs and accompanying drivers in their role as safe and responsible ‘driver educators’

This programme should include a definition of the responsibilities involved and the demands placed on ADIs and accompanying drivers.

A number of GDLS include training programmes to support accompanying drivers. The U.S. Department for Transportation (2007) offers a Parents Taught Drivers Education (PTDE) Program to help accompanying drivers prepare and teach learners. An Australian programme (‘Keys please’, VicRoads) offers a one-off training session targeting both learner drivers and their accompanying drivers. Both programmes cover the complexities of the driving task; risk factors; statistics on young driver casualties; the effects of alcohol, speed, fatigue and poor concentration; the roles and responsibilities of the learner and adult accompanying driver; achieving varied driving experience; and advice about getting a learner’s permit and available resources.

Some countries e.g. Finland, require accompanying drivers to have a ‘permit to teach’ from the police. The idea of a minimum requirement for accompanying drivers was considered. However, the implementation of compulsory practice may cause some learner drivers difficulties in finding an accompanying driver. In fact, some parents and ADIs raised concerns in interviews and workshops that minimum mandates for accompanying drivers ‘might not be practical given some peoples’ circumstances’.

Recommendation 2.2: Train ADIs to undertake formative assessments of competence

It is assumed that the formative assessments suggested in Recommendation 1.4 and shown in Table 2 could be carried out in an hour. ADIs would use this hour for several purposes:

1. To assess progress against the learning objectives in the logbook.
2. To conduct assessments of learners’ knowledge and understanding of driving theory.
3. To encourage learners to reflect on their own driving. This would give learner drivers the opportunity to practice this type of self-assessment before the final assessment with Driver Testers. This would be valuable even if self-assessment is not included in the practical driving test.

Training would be vital to achieve consistency and quality assurance across ADIs. Following training, ADIs would have to demonstrate their competence as assessors. As noted previously, not all ADIs are likely to want to be assessors. This implies that there will be two levels of ADI with only the assessor level requiring additional training. However, all ADIs should be given the opportunity to be assessors because of the commercial advantage it might bring.

Recommendation 2.3: Develop guidance material for accompanying drivers to help them understand and plan the practice sessions envisaged in the GDLS

This should set out not only the process but also clarify the standard that learner drivers are expected to reach in order to progress through the GDLS. We envisage that the learner logbook (see Table 3) and the driver competence standard would form the basis of this material. Each lesson defined in the logbook could be supported by a set of learning objectives, suggested routes and relevant reading material.

Similar guidance material has been successfully developed and implemented in the state of California (USA). They implemented a 'parent-teen' training guide to help accompanying drivers. The guidance includes suggested lesson plans, skills checklists and a contract (teaching agreement) for the accompanying driver and learner to sign (available at <http://www.dmv.ca.gov/pubs/dl603/dl603.pdf>).

We think this recommendation will be well received as it proved very popular in interviews and workshops with parents and ADIs.

4.9 Improve and integrate the role of education outside of Driver Licensing

4.9.1 Background

The potential value of road safety education in schools was recognised by everyone we interviewed. All those who had received road safety education during their school career remembered it and believed that, to some extent, it was helpful. A commonly expressed opinion was that driving education and training in Ireland is effective. However, its impact was thought to be short lived. This is also the conclusion of the national Highway Traffic Safety Administration (2009) in a review of educational initiatives in the USA. Their standard formula of 30 hours of classroom teaching seems to provide safety benefits immediately but the effect wears off after 6 months. It would seem that novice drivers, both in Ireland and the

rest of the world, learn to pass the driving test rather than to be a safe and responsible driver. Therefore the goal for road safety education in Ireland is to make sure that messages have a lasting impact.

Our survey of teachers indicated that there were road safety education programmes in place at over two thirds of the schools surveyed. The majority of road safety education is delivered to pupils in Transition Year, although a small number of schools deliver it to fifth and sixth year pupils. The main goals of this education are to improve attitudes towards other road users and to driving in general. Currently, classroom based discussion, group work and videos are the most common delivery methods.

However, good practice suggests that the current approach is inadequate (McKnight, 2001; Lynham and Twisk, 1995; Te Braak, Groot and Ruyters, 1998; Wells et al, 2008; Chickering and Gamson, 1987). By providing education to only some students, the total possible benefit cannot be realised. The position with Transition Year students is indicative of a weakness across the whole driver education programme. In Transition Year, not only are approximately half of all students ruled out e.g. those who do not elect to have a Transition Year, but also, of the students who do opt for the Transition Year, many do not choose the road safety education option.

The research evidence suggests that students need to have ongoing driver education and training from a young age, preferably starting as early as age nine or ten (Christmas, 2008). There is good evidence that attitudes towards driving are formed far earlier than age 16 (Christmas, 2008).

To have a lasting impact, road safety education needs to be memorable. The survey of teachers showed that they are very aware of this need and indicated that their 'ideal programme' would include group discussions and expert lecturers as well as classroom based instruction. However, such preferences need to be treated with caution. The survey also found that teachers recommended the use of actual practical driving lessons either in schools or on driving tracks.

Research evidence suggests (Vernick et al., 1999) that teaching driving skills to pre-drivers, either at the individual or community level, does not reduce motor vehicle crash involvement rates for young drivers. In fact, by providing an opportunity for early licensure, there is evidence that these courses are associated with higher crash involvement rates for young drivers (Vernick et al., 1999). Furthermore, completing a pre-driver education programme with an in-car component led to no significant reduction in collisions or traffic offences in

longer term driver behaviour (Williams et al., 2004). In light of these and other research findings we do not think that the driving education received in schools should cover practical driving skills.

The same case can be made about the use of driving simulators in pre-driver education and training. The association with game playing and the absence of real risk and consequences can encourage young learner drivers to experiment with driving at high speeds with resulting negative effects on attitudes and over-confidence. A much better case can be made for using simulations for cognitive skills training (see Recommendation 3.3) and for using driving simulators in the assessment and training of older and experienced drivers (see Recommendations 3.2 and 3.3).

A number of respondents also suggested that the school programme could be given extra impetus by allowing road safety qualifications or awards to carry credits towards parts of the driving test. There are good motivational reasons for doing this but such an approach should be treated with caution. As noted previously, best practice is to integrate practical and theoretical aspects of driving in the learning-to-drive process. Signing off theoretical knowledge well in advance of the practical test is sub-optimal and raises questions about the currency, life span and coverage of such qualifications. This is why we recommend (see Recommendation 1.7) a two part theory test with qualifications contributing only, potentially, to the initial test.

Furthermore, information gathered during the interviews indicates that there is a need for Ireland to develop and provide on-going driver education and training. Specifically it was mentioned that older drivers needed to stay competent in terms of changes to road legislation and advances in technology. In addition, studies have found that essential driving skills such as vigilance, speed and distance judgements, co-ordination and hazard perception are more difficult for older people (Anstey & Low, 2004).

There are two main ways to implement lifelong driver training programmes. RSA can either make programmes compulsory or work with partners to motivate voluntary participation.

Some successful programmes have incentivised attendance at lifelong learning courses through advertising monetary savings. The Dutch eco-driving programme advertised possible savings from applying skills learnt during the course. Other programmes enlist the help of insurance companies to offer reduced insurance premiums. The key to motivating through incentivisation is to offer large enough incentives. Experience in the USA suggests that

reductions in insurance premiums need to be greater than 20% to attract the motoring public in significant numbers (Foss, 2009).

4.9.2 Recommendations

Main Recommendation 3: Improve and integrate the role of education outside of Driver Licensing

In making recommendations about driver education, we have taken into account what happens in training and education in other safety critical sectors. In particular, we have considered how competence approaches are applied to training and education. The recommendations in this section all conform to what would be recognised as good practice in a competence management system.

As with other safety critical sectors, there are a number of stakeholders in the driving sector who have overlapping responsibilities for ensuring that the goals of driver education are met. RSA may not be in direct control of the changes recommended in this section. It needs to consider how it might collaborate with other agencies or authorities to improve and integrate the role of education throughout the driver lifespan.

Recommendation 3.1: Introduce a coherent programme of road safety education at various stages in the school curriculum

A great deal of work has already been done by RSA and others developing road safety education materials. These materials cover those aspects which we would expect to see in a road safety programme, such as knowledge and understanding of the rules of the road, driving attitudes and attitudes to other road users, hazards, risks and social, environmental and financial aspects of driving and some practical skills, such as car maintenance, though we would argue that they should not be extended by introducing practical driving skills into the school curriculum. As noted in Section 3.2, these materials are not collected into a coherent programme based on a model of lifelong learning. We consider that road safety education should form part of the core curriculum and should not be optional. In addition, the curriculum should not be focused on one year group. Rather it should be a continuous message that is returned to and reinforced periodically during a pupil's school career. The materials exist for creating a programme that extends across a wide range of school years but their use needs to be formalised and not left to the discretion of individual schools.

At this time, we do not recommend that educational qualifications should replace all of the Theory or, potentially, the Hazard Perception Test. However, RSA may want to accredit

qualifications which give credits or partial credits to candidates taking the initial Theory Test although this should wait until the content and structure of an initial Test has been developed. If credits are to be awarded, systems will need to be developed which cover the expiry of credits and verification of the maintenance of knowledge and understanding.

Furthermore, the introduction of cognitive skills training has shown potential for improving higher order driving skills without causing overconfidence. This does not appear as a recommendation as its effect has not yet been assessed as part of an education initiative. However, it is important to highlight cognitive skills training as an area which RSA might want to pursue in the future. For more information on the benefit of cognitive skills training see Appendix D, Volume 2.

Recommendation 3.2: Develop a system to manage lifelong learning beyond the boundaries of the GDLS

This is an important recommendation because our interviews revealed some gaps in drivers' knowledge. For example, many participants were unaware of the debate around proposals to lower BAC levels.

Two high level approaches can be considered, mandatory and incentivised. Japan currently uses licence renewal (every 10 years) to provide a short, one hour update on driver knowledge. This typically involves a short video presentation or a discussion session. So, one possibility is a mandatory, post-licence course for all driving licence holders to attend e.g. every 10 years. Alternatively, attendance could be made discretionary through insurers or be required only of drivers who had acquired more than a certain number of penalty points. Whichever approach is chosen, the course content should cover any changes to road rules, regulations and legislation as well as any technological advances.

Re-assessment should also be considered. This could encompass both the theory and the practical driving elements. Driving simulators would be a good option for carrying out these re-assessments since they have been shown to provide valid assessments of the driving behaviour of experienced and older drivers (see Recommendation 3.3). However, it is unlikely that mandatory re-assessment would be feasible. Encouraging self-referral for re-assessment by tying it to such benefits as reductions in insurance premiums is a more likely approach. For more information on how to encourage lifelong learning refer to Section 3.9, Volume 2.

Recommendation 3.3: Develop a specific lifelong learning programme aimed at older drivers (defined as over the age of 60 years)

This programme should educate older drivers about the likelihood of age related decline, explain about affordable and accessible transport alternatives to driving oneself (such as public transport, taxis and journey sharing) and incorporate practising cognitive skills in order to extend driving life. Some researchers (Alicandri, 1994; Fraser, Hawken, & Warnes, 1994; Van der Winsum, 1996) suggest practising these skills on driving simulators. This is a concept worth pursuing. Simulators are safer and more economical than on-road practice (Lee, 2002; Lee, Lee & Cameron, 2003). For more information on training and educating older drivers refer to Section 4.4, Volume 2.

4.9.3 Driver rehabilitation

Current penalties and punishments for disobeying the law take the form of penalty points and disqualifications. Rehabilitation is not used. These methods focus on punishing the offender, not on changing behaviour. This indicates that the driving licensing system currently provides little encouragement for safe and responsible driving (for more information on how to manage delinquent drivers refer to Section 3.5, Volume 2).

The lifelong learning system should encompass delinquent drivers. Traditionally the most common approaches to managing deviant driver behaviour have included engineering (such as road humps, chicanes for speeding drivers), education and enforcement. However, recent approaches have measured and attempted to change risky attitudes using a tailored intervention. Interventions based on individual attitude assessment have been found to be more effective than other types of interventions (Clark, Ward & Truman, 2002). For more in-depth information on delinquent driver interventions see Section 3.5, Volume 2.

Recommendation 3.4: Develop an attitude based intervention programmes for delinquent drivers

The main types of delinquent drivers to consider are:

- Speeding drivers.
- Drink drivers.
- Aggressive / dangerous drivers.

The programmes should aim to improve individual's attitudes to the risky driving behaviours rather than follow a traditional approach of punishing drivers with fines and penalty points. Attitudes to driving are formed at an early age. As such, they are likely to be deeply embedded and difficult to change. Therefore, simple, short interventions are unlikely to be

effective. We recommend that any education programme directed at changing attitudes is not a short term intervention. Changing attitudes needs to be thought of as a long term process which involves interventions throughout drivers' lifetimes. Until significant cultural change has been achieved it is important to retain effective traffic law enforcement in the areas which produce the greatest safety benefit. For more information on attitude interventions refer to Section 3.5, Volume 2.

Some countries e.g. Sweden and the Netherlands, use pre-conviction interventions. These typically involve offering remedial training programmes before the driver is convicted. In The Netherlands a person suspected of driving under the influence of alcohol can be ordered to attend an Education Measure Alcohol (EMA) course (Vissers and Beekun, undated). Pre-emptive measures of this sort could, in the long run, be far more effective than post-conviction interventions.

5 FURTHER IMPLICATIONS

All the recommendations in section 4 have implications for the design of the training, education and licensing systems in use for car drivers in Ireland. They also have wider implications for RSA policy and procedures which include those outlined in the following sections.

5.1 Administration systems

The type of GDLS envisaged will require a relatively sophisticated administrative system to support it. The system will require one or more databases which store information on learner drivers, fully licensed drivers and ADIs. It will need to interpret this information and take various sorts of actions. For example, it will need to be capable of:

- Tracking what stage each learner driver is at in the GDLS.
- Storing the restrictions and exemptions that apply to intermediate licences.
- Storing evidence that affects restrictions, exemptions and the length of the intermediate licence.
- Alerting learner drivers to the expiry of intermediate licences.
- Storing the results of theory and practical driving tests.
- Alerting learners to the expiry of their test passes.
- Alerting fully licensed drivers to age-related requirements (such as re-assessments or medical assessments).
- Identifying ADIs who are competent to carry out formative assessments.
- Supporting processes for assuring the quality of ADIs' formative assessments and producing appropriate reports.

5.2 Other licence categories

Once the competences of a safe and responsible driver holding a category B licence have been defined (see Recommendation 1) and the GDLS and associated educational, training and assessment processes are in place, RSA will have a template approach which can be applied to all other licence categories, as required. This will need careful planning, not least

because the competences of other types of driver or rider will overlap considerably but may also have unique characteristics which make the simple adoption of the same GDLS inappropriate.

5.3 Advanced driving

In several recommendations it has been suggested that, rather than introduce compulsory controls, improvements could be introduced on a voluntary basis by linking them to reduced insurance premiums. This particularly relates to advanced driving qualifications. Such schemes already exist in Ireland. For example, the Irish School of Motoring offers both re-testing and training and eco-driving and the Institute of Advanced Motorists in Ireland offers advanced driver training and testing. The precise nature of these advanced courses is likely to change if aspects of them are included in the normal test process and if individuals who gain their full licence are already significantly safer and more responsible drivers than is currently the case.

RSA needs to consider working with both the insurance companies and the training organisations to develop and promote a set of advanced driving qualifications which build on the GDLS and further the goals of the recommendations concerned with driver education and lifelong learning outside of the licensing system.

5.4 Professional driving

As with advanced driving, some of the recommendations place significantly different requirements on what is expected of a normal driver. Therefore, it will be important to ensure that these requirements are also captured in the requirements for professional drivers. For example, the competence requirements which underpin the Certificate of Professional Competence (CPC) should be checked to ensure that they are at the same or a higher level than those expected of normal drivers. Any hazard perception test introduced for category B drivers would have implications for the theory testing element of CPC.

5.5 Medical assessment and fitness to drive

Likewise, some of the recommendations will have implications for what it means to be fit to drive and how that might be assessed. Hazard perception testing is, again, an interesting case. Video-based assessments may make demands of candidates which are beyond current eyesight requirements. Some of these may be highly relevant to safe driving e.g. detection of problems with tunnel vision, but others may introduce error into the assessment

process e.g. some individuals can have problems with flicker fusion on computer screens but have good vision otherwise. Therefore, the recommendations will need to be checked for their implications for fitness to drive assessments before their implementation.

Another implication of bringing Irish driver education, training and licensing into line with best practice is that more attention will need to be paid to how drivers maintain their competence over time and under what medical circumstances licences might be removed and / or re-testing required.