

Enhanced training and structured lesson planning for young drivers in New South Wales

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Abstract

Young driver safety in New South Wales has improved over the past decade. The graduated driver licensing system in New South Wales is a blue ribbon system reflecting world best practice, but further developments are possible. In December 2009, New South Wales introduced a structured lesson plan program for learner drivers where 10 one-hour lessons with a professional driving instructor can be credited as 30 hours towards a minimum 120 hours learner driver logbook requirement. Driving instructors have to document the specific lessons conducted and relate them to the structured program of learning and practice as listed in the logbook. The new program developed from a review conducted by Safety and Policy Analysis International that examined means for enhancing training for learner drivers, and which was strongly influenced by European novice driver and licensing developments. In this paper, the concept of structured lesson planning for learner drivers will be outlined, and the results of a preliminary analysis of learner driver log book records prior to and after the commencement of the new program will be presented. Ongoing research over the 2010-2012 period will include the continued analysis of learner driver log book records, an analysis of the range of lessons conducted by driving instructors, and interviews and focus group discussions with learner drivers, parents and supervising drivers, and driving instructors. This paper also discusses further developments for novice drivers, including: the keys2drive program; the novice driver program; a revision of Rotary programs for young drivers; learner driver log book runs; learner driver mentoring by volunteer supervising drivers; and education programs focused on training of young drivers in the workplace.

Keywords

Young drivers, Education, Driver licensing, Learner driving, Driver training, Log books

Introduction

On November 21, 2009, the Hon. David Borger, then Assistant Minister for Transport in the New South Wales government, announced new rules for learner drivers [1]. From December 19, 2009, one hour of structured driving tuition by a professional driving instructor will count for three hours in the learner driver logbook, capped at a maximum of 10 one-hour lessons counting as 30 logbook hours.

This change to the New South Wales graduated licensing system for novice drivers meant that while learner drivers will still need to show that a minimum of 120 hours of experience has been recorded in the learner log book, those learners who seek professional driving instruction and follow the structured tuition program as part of their accumulation of experience will have the required hours of driving experience reduce from 120 hours of driving in total to a minimum of 100 hours, as 30 hours will be recorded in the driver's log book for 10 hours of professional driving instruction.

This change was well received by road safety advocates and in the general community, as it addressed a series of problems faced by learner drivers, parents, and the professional driving instruction industry, including:

- learner drivers not having the opportunity for sustained driving practice (supervised driving and professional driving instruction) to meet the mandated 120 hours of driving;

- parents not knowing or being unable to provide any knowledgeable or structured instruction during their supervision of learner drivers, and thereby not obtaining as much practice as possible in a wide range of driving situations and conditions; and
- learner drivers not using the professional driving instruction industry to access a wide range of driver training experience as possible.

Under the rule changes, lessons with professional driving instructors are not compulsory, however, it is anticipated that the structured tuition program will act as an incentive for learner drivers to obtain professional driving lessons while they are learning to drive.

This paper is organised in three parts. The first outlines the research underpinnings of the proposal to develop a program for enhanced training of learner drivers [2], and summarises the process of policy development that has led to the introduction of a structured tuition program for learner drivers in New South Wales. The second part describes the implementation of the structured lesson planning program for learner drivers and describes and discusses a research project developed to monitor and assess the outcomes of the structured tuition program. A final part discusses the structured lesson planning program in the context of other initiatives for novice driver safety.

PART 1: Theoretical and policy aspects of structured lesson planning for learner drivers

Background

A revised graduated driver licensing system was introduced in New South Wales in 2000, with significant additions over 2004-2010 [3]. The system provides for:

- extensions to the minimum and maximum tenure of learner and provisional licences, with the aim of reducing any pressure for novice drivers to progress to later licence stages because of licence expiry:
- zero tolerance for novice drivers who:
 - use alcohol or other drugs (cannabis, psychostimulants such as methylamphetamine and ecstasy); or
 - use mobile telephones (cell phones) – there is a ban on hands-free or handheld mobile phones for learner and P1 provisional drivers; or
 - speed – a licence suspension of three months is imposed for any speeding offence by a P1 provisional driver
- a night-time driving restriction (11pm–5am) for P1 provisional drivers restricting the carriage of more than one peer passenger, unless accompanied by a person aged over 21 years [4, 5].

Graduated driver licensing systems were introduced in Australian jurisdictions from the mid 1960s, and there is thus more than five decades of experience with different forms of this licensing approach [3]. A rudimentary graduated driver licensing system was legislated in New South Wales in 1965 and commenced in 1966. This early form of a graduated driver licensing system was focused on, first, a requirement to provide for the unambiguous identification of novice drivers to other road users, and, as a consequence, the enabling of police enforcement of speed restrictions as facilitated by the open identification of novice drivers. Until the turn of the 21st century, the basic system of regulation of young drivers in the driver licensing system changed little from the introduction of graduated licensing, despite an enormous increase in motorisation and consequently, an enormous increase in the complexity of the traffic system. Significant reform was introduced following an inquiry and reports by the Staysafe Committee over the period 1995-1997 [6, 7, 8], and action on the committee's recommendations by the New South Wales government since 2000 [9].

Over the last decade there has been a series of major reforms to graduated driver licensing for young drivers in New South Wales. A two stage provisional licensing system (P1 and P2 licences) was introduced in July 2000 [3], extending the overall provisional licensing period to a minimum of three years (one year as a

provisionally licensed P1 driver, and two years as a provisionally licensed P2 driver) and a maximum period of provisional licensure of up to five years. The tenure of a learner licence was extended to a maximum of three years. A log book system was introduced, initially requiring the documentation of completion of a minimum of 50 hours of supervised driving (now increased to 120 hours). The licence classes for young drivers were subject to particular speed limits: learner licence (80 km/h), provisional P1 licence (90 km/h), and provisional P2 licence (100 km/h); and to a general requirement for display of L, P1, and P2 plates on the front and rear of the vehicle being driven.

Over the decade 2000-2010, there has continued to be modification of the New South Wales graduated driver licensing system. In October 2004, a new initiative in road safety education, 'Shifting Gears', was introduced, with all Year 9 and 10 students in government schools being taught about personal responsibility on the roads, decision-making, and crash causes. Later, restrictions on novice drivers being able to drive certain high-powered vehicles were introduced, as well as a requirement for provisional drivers who lose their licence to be able to carry only one passenger for the 12 months following the reinstatement of their licence. In addition, the L, red P1 and green P2-plates now show a driver's allowable speed limit.

In July 2007 there was additional significant reform, with the introduction of a peer passenger restriction for provisional P1 drivers under 25 years of age permitting only one passenger aged under 21 years of age to be carried from 11:00 p.m. to 5:00 a.m. (a combination of night time curfew and passenger restriction). A licence suspension of at least three months applies for a provisional P1 driver or motorcycle rider licence holder who commits any speeding offence. The L and P plates must be clearly displayed on the exterior of the vehicle and adjacent to the vehicle restriction plates. There is a prohibition on the use of mobile telephones (cell phones)—in both hand held and hands free mode of operation—for learner and provisional P1 drivers and riders. There was an increase in the mandatory period of supervised driving for learner drivers from 50 hours to 120 hours, and including a minimum of 20 hours of night time driving. There was an increase in the minimum tenure period for learner drivers under the age of 25 years old from six months to 12 months before they can apply for a provisional P1 licence, and an increase in the maximum length of the licensing period for learner drivers from three years to five years.

Another change came into effect in late 2008, where if a person is caught underage drinking or misusing a NSW Photo Card, then a penalty of a six month extension to the minimum period of a provisional licence is imposed [5].

Further changes were introduced late in 2009, with the introduction of structured lesson planning – the subject of this paper – and in 2010 with the commencement of the keys2drive program offering a Federally funded one-hour lesson delivered by an accredited professional driving instructor to the learner driver and a supervising driver [10].

Throughout the decade there has been a major research program – the DRIVE study - aimed at assessing the nature of young driver licensing and safety in New South Wales and the effectiveness of countermeasures to address road trauma risk [11, 12], and many research papers from the DRIVE study are now available [see, e.g., papers by Ivers, Senserrick and their colleagues: 11, 12, 13, 14, 15, 16, 17, 18, 19]. Despite the difficulties posed by the major reforms to graduated driver licensing for young drivers in New South Wales, the effectiveness of particular initiatives for the 2000-2003 cohort of young drivers has been evaluated successfully.

The New South Wales driver licensing system in 2010 is now well structured to manage risks faced by novice drivers, and is described as a 'blue ribbon system' reflecting best practice in graduated driver licensing [3, 4].

Enhanced training for young drivers

Young driver safety can be addressed in two ways: one, which has been dominant in research up to now, is to reduce the factors that increase crash involvement (e.g., night driving restrictions, peer passenger restrictions,

as used in North American graduated driver licensing systems). The other, which has occasionally been discussed, is to increase the influence of factors that define safe drivers. Both approaches are probably needed [2].

Graduated driver licensing systems are designed to encourage young drivers to interact with, and be exposed to, a range of traffic, road, and weather conditions within the road transport system both day and night. The premise of graduated driver licensing systems is that the risk of traffic incidents and crashes will decrease, and learning of driving skills will increase, as the learner driver gains increasing on-road driving experience over time or distance travelled [20, see Figure 1). Supervised driving undertaken in artificial driving environments, such as a driver trainer centre-facility, does not count towards the completion of the driving experience requirement: in New South Wales the driving experience must be undertaken on a road or road-related area defined under national road rules. In fact, driver training, as a regulated activity, is premised almost entirely on learning by on-road practical experience (e.g., in New South Wales, the only regulated requirement for knowledge assessment occurs at the point of entry into the graduated driver licensing system with a computer-based knowledge test). All learner drivers in New South Wales must gain 120 hours of supervised driving experience and record it in an approved Roads and Traffic Authority log book. The log book must also show 20 hours of night driving as part of the 120 hour requirement [3].

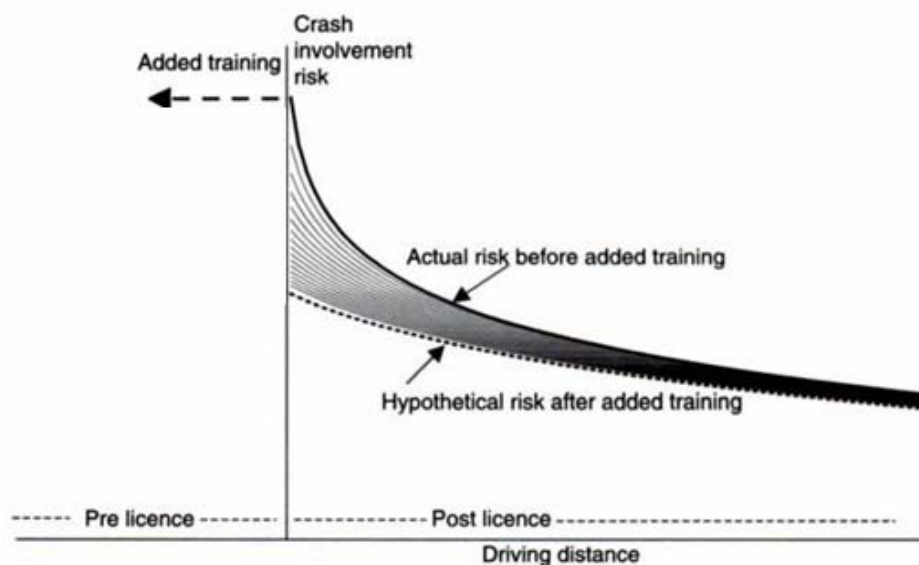


Figure 1: Schematic illustration of the hypothesised effect of added learner driver training (in the 'pre-licence' phase) on crash risk in the post-learner driving (solo driving) period [20, adapted from 21].

The longer a new driver is kept under a teaching and supervised training regime, the better they become (see Figure 1). The peak exposure period of young drivers to crashes is after moving from a learner drivers licence to a P1 provisional drivers licence [10, 22]. When serious crashes occur that involve young drivers, the community response is regularly one of asking for more training and education and professional tuition of learner drivers. As well, when improved programs of training and education of young drivers to achieve those objectives are introduced, the community response is supportive, and often one of asking for professional help to comply with the new initiatives.

This was the case when the requirement for learner drivers to complete 120 hours of supervised driving was introduced in 2007. Following community and media concern, it was proposed that tuition obtained from

professional driving instructors should qualify as a three hour award for each hour of instruction, up to a maximum of ten hours tuition from a driving instructor (enhanced training, or the '3 for 1' proposal; a similar such program is in operation in Queensland [23].

While knowledge and skill are obvious prerequisites to safe driving behaviour, the real issue for a driver within the road transport system is the capacity to make good, safe, low-risk judgments. This requires not only knowledge of the road rules but the capacity to discern the relevant details of the particular event on the road at the particular time under consideration. It is an act of practical wisdom (or prudence) that requires capacities in perception, recognition, assessment and response that go beyond the abstract or the merely skilled.

The New South Wales Roads and Traffic Authority's learning goals for learner drivers

The Roads and Traffic Authority, as with other Australian roads agencies, suggests a structured approach for the training of learner drivers to operate effectively and safely with the road transport network; based on four levels of learning goals (as summarised in Table 1):

- Building a foundation;
- Traffic skills;
- Low risk driving; and
- Building experience.

Importantly, there are great benefits to the learner driver to have the supervising driver demonstrate the driving of the vehicle through each of these levels, modeling appropriate and safe behaviours.

The learning goals form the basis for a structured and systematic approach to learner driver training, and detailed practical information about the application of this approach is included within the Learner Driver Log Book as a guide for both the learner driver and the supervising driver as to what to do and when to do it. The supervising driver is also required to sign off on the achievement of the learning goals, as well as a 'declaration of completion' stating that all learner driver driving experiences have been met. The Roads and Traffic Authority supports supervising drivers (and the learner drivers in their care) through workshops for parents and supervising drivers of learner drivers (the Helping Learner Drivers Become Safer Drivers workshops, informally known as the 'Parent GDL workshops'), which are conducted regularly across New South Wales.

It is important to note that the approach by the Roads and Traffic Authority and other Australian roads agencies reflects best driver licensing practice and reflects best educational practice for adult learning. The Roads and Traffic Authority's approach reflects the conclusions arising from the EU Project GADGET (Guarding Automobile Drivers through Guidance Education and Technology), which reviewed best practice for learner driver training, and argued for a hierarchical process involving:

- the acquisition of vehicle control skills (controlling speed, direction and position); and
- the acquisition of basic traffic skills (adapting to the demands of the present situation), and then progressing to
- the acquisition of higher-order skills in identifying and reducing risks (addressing the goals and context of driving by understanding purposes of travel, environment, social context, and work environment); and
- the acquisition of high-order skills in self-perception (leading to skills for self-control, and understanding the role of the road transport system in life) [24, 25].

Table 1: The Roads and Traffic Authority's structured approach for the training of learner drivers to operate effectively and safely with the road transport network

<i>Learning goal</i>	<i>Focus</i>	<i>Skills</i>	<i>Comment</i>
Building a foundation for driving	The development of basic vehicle control skills	<ul style="list-style-type: none"> • Familiarisation with the driver cockpit; • Adjustment of controls and vehicle fittings • Preparing to drive; • Vehicle controls; • Moving off and stopping; • Steering; • Changing gears; • Scanning; • Reversing 	Typically, these skills are introduced and practised on quiet back streets and roads, using long straight stretches of road to practice gear changes, and avoiding locations that have traffic lights and intersections with stop and give way signage.
Traffic skills	The development of the skills needed to enable the learner driver to interact with traffic in a number of situations commonly encountered within the road transport system, transitioning from simple, relatively quiet road environments to more complex and busy environments within the road transport system and incorporating driving in traffic, parking, and understanding and applying relevant road rules	<ul style="list-style-type: none"> • Driving in simple traffic situations; • Parking; • Driving in complex traffic situations; and • Lane changing 	Typically, these skills are introduced and practised in stages, commencing with driving on streets and roads with relatively low traffic flows, negotiation of single lane roundabouts, and single lane intersections with Stop and Give Way signage, or traffic lights, and returning to quieter streets and roads to practice parking and other manoeuvres, and revise the foundation skills.
Low risk driving	The intentional introduction and application of driving behaviours that reduce the risk of traffic incidents and crashes (described as the 'thinking' skills needed to become a safer driver)	<ul style="list-style-type: none"> • Speed management; • Road positioning; • Decision making; and • Responding to hazards 	Typically, these skills are introduced and practiced in a wide variety of driving environments, including new and unfamiliar roads and traffic environments. Again, the learner driver should return to quieter streets and roads to revise traffic skills and the foundation skills

<p>Building experience in driving</p>	<p>To ensure that the learner driver, having developed good car control and traffic skills, and having learned, understood and applied the elements of low risk driving, now gains as much experience as possible in a wide range of driving situations within the road transport system, all while under supervised driving</p>	<ul style="list-style-type: none"> • Night driving; • Country driving; • City and motorway driving; • Driving in adverse conditions; and • Preparation for the driving test and solo driving. 	<p>Typically, these skills will involve travel at times and to locations that will provide the required experiences. Adverse conditions include wet weather, fog, snow and ice, and road construction sites. The learner driver should be encouraged to review and comment on traffic situations and incidents, and to reflect on own behaviour. Where possible, peer group discussion should be encouraged. Again, the learner driver should return to quieter streets and roads to revise traffic skills, the foundation skills, and to demonstrate low risk driving skills, and attempt the complex situations after discussion and rehearsal.</p>
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The EU Project GADGET concluded that seeking to improve driver education by simply increasing the amount of training will only have limited success. Instead, explicit and well-designed methods for supporting the process of developing the necessary higher order skills are also needed. These higher levels are not accessible with teacher-centred methods like lecturing, or a longer training period; active learning methods are needed.

Practising self-evaluative and meta-cognitive skills should be included in training programs, as this offers a possibility for developing a learner driver's post-training expertise and for reaching and modifying motives and objectives at the highest level. A general conclusion drawn from the GADGET review is that the systems that have shown safety-increasing effects are systems that have not only increased the amount of formal education and training, but introduced other components, such as graduated licensing, and increased experience through lay instruction or risk-awareness training [24, 25].

In terms of general adult education practice, the Dreyfus brothers [26], drawing on different perspectives from computer science and philosophy, described a continuum from rule-based to context-based behaviours that is widely applied, and has relevance for an understanding of the novice driving experience (see Atherton [27] for a recent critique of the model). The model describes a five-stage typology of developing expertise, with the characteristics of each stage being:

- Novice: Rigid adherence to taught rules or plans; little situational perception; no discretionary judgment
- Advanced beginner: Guidelines for action based on attributes or aspects; the situational perception is still limited; all attributes and aspects are treated separately and given equal importance
- Competent: Coping with "crowdedness"; now sees actions at least partly in terms of longer-term goals; conscious deliberate planning; standardised and routinised procedures

- Proficient: Sees situations holistically rather than in terms of aspects; sees what is most important in a situation; perceives deviations from the normal pattern; decision-making is less laboured; uses maxims for guidance, whose meaning varies according to the situation
- Expert: No longer relies on rules, guidelines or maxims; has an intuitive grasp of situations based on deep tacit understanding; analytic approaches used only in novel situations or when problems occur; has a vision of what is possible

The Novice, Advanced beginner, Competent and Proficient transitions identified in the Dreyfus typology overlap substantially with the learning goals approach laid out by the Roads and Traffic Authority (the Expert stage is unlikely to be achieved by all young drivers at the transition of learner drivers to provisional licensure, as learning to drive safely within the road transport system requires continuing practice and exposure extending to hundreds of hours behind the wheel).

Why involve professional driving instructors in the graduated driver licensing system?

Our community relies on instructors to acquire, interpret and teach others the knowledge, skills and practices offered by earlier experience and study. Persons who teach or train others do so in various roles: some are formal, in teaching environments such as school, TAFE, and universities; some are informal, such as parents in the home; and some are context-specific, such as supervisors in the workplace.

Professional driving instructors are a specific form of safety instructor or trainer, and as such they have a special role as virtually all adult members of our community aspire to obtain and hold a drivers licence. Most people offer some aspect of road safety instruction at one time or another during a lifetime, and the matters we elect to try to teach depend in large measure upon our perceptions of the needs of our 'learners' and the knowledge, skills or practices we decide to teach them. Instruction on safe road use may range from a simple 'be careful' said to a driver, through to an agreed curricula and training program for specific purposes. Whatever the level, the intent is similar: conveying to the learners an ability to function safely in the road transport environment, now and in the future.

The role of professional driving instructors is to convey the knowledge and skills needed to function safely within the road transport system in a systematic, structured and secure environment. Much of safe behaviour must be learned, and is not intuitive. Motor vehicle drivers are the most adaptive, imaginative element of the road transport system, and the systematic development of adaptive knowledge and skill is essential to safe performance in the face of dangers or safety risks. Driving instructors are experienced in adding information to a learner driver's state of knowledge and skills on which the learner will adapt and act, through orientation to the vehicle cockpit and controls, discussion of road transport law and driving practices, and controlled exposure to road environments and driving conditions. Driving instructors thus play an important role in achieving safety performance by young and inexperienced drivers on the road.

Some professional driving instructors use course materials developed by others, and some driving instructors develop their own materials. All driving instructors aim to develop low-risk driving habits focused on perception of risky situations and on crash prevention. Most will use a variant of the system of vehicle control known as the Hendon system, which outlines a sequence of steps to be considered by the driver, at the approach to any situation that may be encountered (e.g. moving away from a parked situation, approach and transit at a roundabout, a speed hump, approach and transit at other forms of signalised or unsignalised intersection, curves and bends in the roadway, hill crests, lane change manoeuvres, presence of slower or braking vehicles ahead, presence or likely presence of pedestrians, cyclists, motorcyclists, etc. - in short, anything which could or would interrupt a driver's progress and which requires a response in anticipation or correction. By correct application of a low risk driving system, the driver of a vehicle should always be in the right place on the roadway, travelling at the appropriate speed for the conditions, and with the vehicle controls (including gears if a manual gearbox) correctly engaged in a timely fashion.

As noted, the Roads and Traffic Authority has developed a guide for learner drivers which is integrated into the learner driver log book, as well as materials specifically for supervising drivers accompanying learner drivers. However, Senserrick and Haworth [28], in a review of young driver research (posing the questions: where are we now, and what do we still need to know) commented:

[Our] . . . findings point to areas to target in education/training of professional instructors and private supervisory drivers. There is currently a lack of much-needed guidelines for supervisory drivers on how to gain a large number of practice hours through everyday activities and how to structure this experience; i.e. about which conditions pose the greatest risk, what skills are required to address these and how to best structure and graduate the learning experience in light of these. This includes information on how to assess when the learner has developed sufficient skills at lower levels before progressing to subsequent levels.

and later:

Several gaps in this area persist, including a lack of research incorporating . . . issues as found for learners. There is still a clear need to know how best to increase and enhance the quality of supervised experience gained as a learner, with extended periods providing the opportunity and log book systems providing examples and encouraging variety, but still not achieving adequate experience in many cases. (p.9)

Nils-Petter Gregersen [29] is one of the few researchers to examine the relationships between learner drivers, their supervising drivers (who he termed private instructors), and professional driving instructors. He analysed the effect of a combination of private and professional driver education compared to solely private instruction, using an intervention design involving nearly 2,000 17-year old learner drivers. The learner drivers were divided into two groups. An experimental group was given professionally supported education and the control group was educated by parents or other private teachers. The educational interventions comprised three parts: systematic cooperation between professional driving instructors and parents; "commentary driving" to improve scanning behaviour; and special practice to help the learner drivers experience their own limitations in driving skill. The results, based on self-reported crash involvement after solo driver licensing, showed little effect from the educational interventions, although there were indications of positive effects during the second year after licensing. As well, the results of a questionnaire survey of subjective skill and driving style showed small changes, with the experimental group who had experienced the educational interventions being a little more careful and a little less self-confident. These results are indicative, at least, that crash risks among young drivers normally educated by private instructors (such as their parents) can be reduced if complementary professional driving instruction and support are provided. It is likely, however, that the educational interventions chosen were not suitable in terms of effectively accounting for factors such as cognitive overload experienced by learner drivers and, perhaps, the learner drivers' limited capacity to benefit from the educational interventions during the first of the two years.

It seemed appropriate, therefore, for a more rigorous intervention to be available to learner drivers, addressing the range of competencies identified in the Dreyfus typology (Novice, Advanced beginner, Competent, Proficient and Expert) in a systematic and controlled manner throughout the period of learner driver licence tenure.

The proposal for an Enhanced Training Program for learner drivers

The Enhanced Training Program proposed by Faulks [2] was an education intervention that allows for the direct targeting of an individual—their knowledge, beliefs and attitudes, and their behaviour and skills—within the real on-road context where driving occurs and over the full period of learner driver licence tenure. It supports general educational efforts that bypass the need for individual action (e.g., school-based education, general community advertising and publicity)—these efforts have been described by Drummond [30] as examples of the 'coarse treatment' paradigm and have not worked well for young people as novice drivers. Specifically, the proposed Enhanced Training Program provided an opportunity for an accredited driving instructor to obtain a balanced view of many of the elements of driving competence, including:

- the focused assessment of driving skills by direct observation of driving behaviour;

- the possibility of self-evaluation by the learner drivers;
- a review of the experiences of the learner drivers through examination of the log book; and
- prompted assessment (or testing) of the knowledge, attitudes and understanding of learner drivers about on-road situations.

It is also relevant to note that the latter two aspects will also enable an accredited driving instructor to form a view as to the truthfulness of the entries made in the log book and documenting the driving experiences of the learner drivers, and may thus serve as a useful indicator of fraudulent entries.

The core features of the proposed Enhanced Training Program were:

- Novice drivers are required to complete a 120-hour log book detailing their driving experience
- Under the Enhanced Training Program a credit of 3 hours for each hour spent with a driving instructor will be given – up to a maximum of 10 hours
- This means that a novice driver will have completed a minimum of 100 hours of driving experience, of which at least 10 hours will have been training with a driving instructor; and
- One hour of training under the Enhanced Training Program would likely be training under the keys2drive program [see 10]

The proposed Enhanced Training Program was endorsed by a peak driver training organisation in New South Wales and presented to the NSW government subsequently. The proposed program was adopted and implemented as structured lesson planning in December 2009 [1].

The Queensland triple time scheme for learner drivers receiving professional driving instruction

A scheme with elements of structured lesson planning for learner drivers operates in Queensland. Stapleton [31] described a scheme of on-road supervised driving experience with an accredited driver trainer as triple time (one hour of training = three log book hours). The concept of driving instructor sessions being counted at a higher value than practice hours – 3:1, or triple time – was seen as constructive during the community consultation phases of the young driver discussion paper – 'Queensland youth – on the road and in control' – conducted by the Queensland Government in 2005–2006.

Under the current graduated driver licensing system in Queensland, all new learners need to record 100 hours of driving in a log book prior to their practical on-road driving test [23]. A 1 hour period of on-road driver training with a driving instructor is credited as 3 hours, up to a maximum limit of 10 hours of training with a driving instructor. This means that if a learner driver completes 10 hours of training with a driver instructor, it will count for 30 hours in the log book record. The remaining minimum of 70 hours to achieve the 100 hours of driving in the log book can be obtained through supervised driving practice and through further on-road driving training from a driving instructor (but credited as 1 hour only for each 1 hour of driver training). There is no evaluation of the triple time scheme planned, although an evaluation of the Queensland graduated driver licensing system is about to commence and may include some findings relevant to the triple time scheme.

Comparing the supervising driver with a professional driving instructor

It is useful to compare the supervising driver with a professional driving instructor. When a supervising driver commences to accompany a learner driver, what are the qualifications and experience of that supervising driver? There is very little that can be known about the skills, knowledge and attitudes of the supervising driver, as there is no prior verification or training required. At best, under the current driver licensing approach, information could potentially be obtained about traffic offences and parking offences, but little more. There is concern that supervising drivers may, in fact, model 'informal traffic laws' [32] that are in contravention of regulatory road rules but remain in common practice though ignorance or deliberate disobedience. A typical Australian example would be drivers who actually stop at marked stop lines at

intersections (obey the Australian Road Rule 67) as opposed to those drivers who do a rolling stop past the stop line before actually stopping, etc.. As noted by Faulks, Drummond and Rogers [33]:

One of the key challenges when dealing with the newly licensed driver is to prevent the headlong rush to the normative behavioural standards of the majority of experienced drivers on the road that differ in many slight but important ways from the formal traffic law. Other drivers are able to cope with these standards because they have the benefit of extended experience that allows the recognition of 'informal traffic laws', . . .such as tolerated speeding above the posted maximum speed limit, acceleration through changing traffic signals, the determination of when is it appropriate to engage in merging and lane-changing in heavy traffic or in overtaking manoeuvres on undivided roads, etc.. (p.5)

In contrast, professional driving instructors have an expert and current knowledge of road law, through their training, retesting to retain their driving instructors licence, and an ongoing process of professional development. It is driving instructors who have the teaching skills and ability to offer expert knowledge and intervention on the road with a learner driver.

It is important to recognise that studies of psychosocial factors in young driver safety have shown that children as young drivers will often emulate their parents driving behaviour, particularly if their family circumstances also include increased likelihood of traffic offending, aggression and hostility, sensation seeking, misuse of alcohol and other drugs, etc. [34, 35].

Log books

Log books are a required, formal element of the New South Wales graduated driver licensing process. Log books were introduced as a method to increase the amount of experience a learner driver accumulates before being allowed to drive alone. In particular, log books allow for the documentation of experience to be gained driving at night-time [36], which is a requirement under learner driver licensing in New South Wales. More generally, log books help to increase the understanding and support of parents and young people for the need to gain experience in driving.

Log books are also the personal diaries of drivers. The log books record a number of transitional experiences of learner drivers, from the first driving experience (which may be limited to cockpit orientation, adjustment of seating and mirrors, and learning about instruments and controls), the actual first experience of driving in control of a moving vehicle, driving on a public road, driving on major roads or in the presence of other traffic, driving at night, or driving in wet weather or other adverse conditions, etc.. The log book may also record episodes of prolonged driving (longer journeys, typically for holidays or family trips). The log book also marks the passage of significant periods of driving experience (e.g., 10 hours, 20 hours, 50 hours, 100 hours, etc.), and in this sense it acts as a record of milestones in driving hours achieved by a learner driver.

There is a remarkably sparse literature to support a log book and a regime of mandated hours of supervised driving. There have been no reported studies of the Australian log book systems for learner drivers. Where studies have evaluated or assessed log books in the context of learner driving, this has been done in the context of using a log book as a method of assessing or evaluating some other aspect of learner driving or the experiences of novice drivers.

In Queensland, Solomon, King and Moore [37] reported on community attitudes to a proposal for 120 hours of driving experience with a log book (the proposal was included in a young driver discussion paper – 'Queensland youth – on the road and in control' – that was released by the Queensland Government in November 2005, providing 22 possible initiatives to reduce the high incidence of young road user fatalities on Queensland Roads). One proposal was for 120 hours of compulsory supervised on-road driving experience, recorded and certified in a log book. The log book would be checked before being tested for a provisional licence. Solomon *et al.* reported:

A great deal of comment was generated about this initiative. Strong views were expressed both for and against. Generally most respondents agreed with the concept of increased on-road driving experience and its potential road safety benefit. Concern was expressed about a number of the aspects of such a program, including:

- administration of the log book system particularly the potential for fraud;
- the high number of hours proposed (120) to be completed and whether families could assist their young drivers to complete a large number of hours;
- access to vehicles and supervisors for disadvantaged youth to achieve 120 hours of on-road driving experience; and
- the ability of non-qualified supervisors to provide a large amount of supervision to young drivers and whether a layperson would create less safe drivers as a result.

In the end, the Queensland government introduced a learner driver licensing requirement for 100 hours of driving experience recorded in a log book, and provided for the first 10 hours of training with a professional driving instructor to be credited as 30 logged hours in the log book (the triple time scheme of on-road supervised driving experience with an accredited driver trainer)

Benefits of the structured lesson planning for learner drivers

In general, discussions with driving instructors supported the introduction of structured lesson planning as a form of enhanced driver training [38]:

The benefits of this proposal mean that learners would benefit by learning the right way to do all the procedures necessary to be a safer driver. Parents would benefit by seeing the learning program kept on track and if the professional tuition was taken early in the process, help them to feel safer giving more time on practice during the latter stages of the course. (p.6)

In addition to providing a mechanism for the structured delivery of training for learner drivers, it was seen that there could be a practical benefit. The requirement for a minimum of 120 hours of recorded log book driving hours, introduced in mid-2007, has proven problematic. Recently, the New South Wales Parliament's Staysafe Committee examined this issue in an inquiry and report on young driver safety and education programs [39], recommending :

Recommendation 6: The Committee has serious concerns that the impact of peer passenger restrictions and the increase in log book hours from 50 to 120, particularly for rural populations, has not been adequately evaluated and recommends that the RTA commissions a further assessment to determine the social and economic costs of these changes and whether the stated objectives of these policies have been achieved. (p.31; see also [40])

The Staysafe Committee's concerns relate to the lack of evidence to support a 120 hour learner driver requirement. The Committee [39] noted that:

In relation to log book hours, while it is accepted that greater exposure to driving practice in a variety of settings generally improves driving ability, the choice of 120 hours seems arbitrary, at best. . . .As far as the Committee can determine, this is based on a 1993 Swedish experience of reducing the minimum age for accompanied learning from 17½ to 16, while retaining the independent driving age at 18. This resulted in an increase to a mean of 117.6 hours of accompanied learning before licensing, compared to a mean of 47.6 hours before the change. This appears to be the basis for the RTA requirement of 120 hours. However, it must be stressed that there has not been independent verification of the benefits of extending the number of required hours beyond a certain amount. (pp.57-58)

Reference to this 1993 Swedish study was made in the Joint OECD/ECMT Transport Research Centre's 2006 publication, 'Young drivers: The road to safety' [41]. In a section dealing with increased learner licence practice, it was noted that 'safe drivers are made and not born' and that it is particularly important that substantial experience be attained in low-risk driving situations before unrestricted solo driving. The

OECD/ECMT Transport Research Centre report argued that high levels of accompanied practice before licensing for solo driving (such as under supervised driving, or through professional driving instruction in the learner driver phase) would result in lower levels of road fatalities, if the driving practice is conducted in a methodical manner that involves a variety of driving situations. In a comment that remains unclear today, the OECD/ECMT Transport Research Centre report stated that while at least 50 hours of pre-licensing practice are recommendable in any system, experience in one country showed that increasing this to approximately 120 hours reduced crashes in the two years following licensing by about 40%. [41].

The Staysafe Committee [39] concluded that:

There is no evidence before the Committee that a comprehensive assessment was undertaken into the impact that increasing the required log book hours from 50 to 120 would have on disadvantaged youth. When questioned on this issue the RTA responded that: “We came down on the side that the benefits outweighed the social difficulties that would occur” (p.46)

The Staysafe Committee [39] was also concerned at issues of social equity and practicality, noting that learner drivers across New South Wales are having difficulty in accumulating 120 hours of practice driving before they can sit their practical driving test. These concerns are also being expressed in the community, for example this issue has been raised in the New South Wales Parliament in general debate and, in fact, a suggestion has been made that is similar, but less detailed, than the proposal here:

. . . Tonight I wish to discuss the requirements placed on learner drivers who wish to obtain a driver's licence in New South Wales. As we all know, obtaining a driver's licence is a milestone in a young person's life, an opportunity for independence and freedom, and also demonstrates a sense of responsibility. A driver's licence is a goal that many young people are eager to achieve at the earliest opportunity. . . . The Government has . . . [taken] measures to ensure that young drivers are more experienced before gaining their provisional driver's licence. The latest manifestation of that was when supervised driving requirements were increased from 50 hours to 120 hours. I want to draw to attention the elephant in the room relating to this issue, which is the unspoken reality of the requirement for 120 hours of supervised driving simply not being met. Parents in my electorate tell me that the requirement is so over the top and difficult to achieve that many working families are finding it impossible to find the time to provide 120 hours of supervised driving. Not for one moment do I suggest that the experience gained is not a really important requirement for young drivers to fulfil; but as legislators, we have a responsibility to ensure that laws can be adhered to. NRMA research in July 2007 showed that 84 per cent of respondents believe that the introduction of increased [hours] of supervised driving will make it more likely for learner drivers to overstate in the log book the hours that actually were completed. When people falsify records, it shows that the law is failing to achieve its objective, and that undermines a very creditable system—one that deserves to be endorsed. But there is a continuation of the original problem, namely, if people are not completing 120 hours we have drivers on the road who do not have the necessary skills. I shall give a couple of examples from my electorate of Pittwater. A number of local families have told me that they know of people who simply falsify records; they do 70 or 80 hours and simply make up the rest. In no way do I condone this, and it is something of concern. Nevertheless, we must recognise that it is happening, and something needs to be done about it. Two local people, Judy and Geoff Butcher of Newport, have two teenage sons who recently went through the driver's licence progress. They had 50 hours to do, but Geoff and Judy, who are both busy people, had to find 100 hours between them. That would be 240 hours for their two teenage sons, which would be difficult to achieve. We need to look at creative solutions to this problem. We need to have a system based on quality, not quantity. We need a system that ensures that young drivers learn the necessary skills of driving. We need a system that incorporates programs to ensure that skills are learnt, instead of simply hoping that they pick up skills in 120 hours of driving. For example, four hours of an advanced driving course, with expert tuition and putting students in emergency situations where they learn the proper handling and limitations of their vehicles, could provide 10 times the value of driving with big brother in a local car park. Yet under the existing system there is no recognition of the vastly different value of each driving experience and no incentive

to get expert tuition. Perhaps if the system put a higher value on expert tuition we would encourage more younger drivers to take up expert defensive driver training and get safer drivers, as well as creating regulations that are more realistic, more achievable, less onerous on families and, importantly, more likely to be obeyed." (Private Members Statement, Mr Rob Stokes MP, Member for Pittwater, NSW Legislative Assembly, Thursday 2 April 2009)

Under structured lesson planning, what is lost is twenty hours of unstructured driving experience; what is gained is ten hours of structured professional driving tuition specifically targeted, at the appropriate times, at the skills, knowledge and competency of the learner drivers. Further, it is anticipated that the information and skills gained through professional instruction may flow on to driving practice undertaken with the supervising driver who normally accompanies the learner driver through the use of written lesson plans, feedback on driving undertaken, and suggestions for future driving practice.

Ideally, structured lesson planning for learner drivers is a teaching process delivered at certain way points throughout the period of learner licence tenure. Lessons could be delivered as, say 3-4 hours in the first 25-40 hours of driver training (and it is possible for the first structured lesson to be the *keys2drive* program lesson [see, 10] if that lesson is undertaken in-vehicle). Additional, structured tuition could be given as, say 2 hours in each subsequent 20 or 25 hour tranche of logged driving experience. In total, this would give 90 hours of supervised driving experience outside the enhanced training program, and 10 hours if enhanced instruction with the structured lesson planning program, equaling 100 hours of supervised training in total for a credit of 120 hours in recorded log book hours. As such, the process creates a structured series of lessons and assessments of various aspects of driving competency throughout the period of learner driving required under the log book scheme. The professional driving instructor is, in effect, signing off on accumulated and assessed competencies through the period of learner driver licence tenure.

As well, structured lesson planning could have important ramifications as a fraud control mechanism against incorrect or fraudulent entries being placed into the log book.

As noted earlier, there are four sections in the learner driver log book: Building a foundation; Traffic skills; Low risk driving; and Building experience. The most appropriate method for the use of the learner licence is to make a concentrated effort early in the licence period to try to reach as high a standard as possible quickly. This can encourage parents or other driving supervisors to then more easily provide the hours of practice that are so necessary for a learner driver to gain experience. As shown in Table 2, a driving instructor can make a number of assessments through structured lesson planning. Of course, professional driving instructors are not psychologists, but they are able to make judgments as to practical driving competencies (indeed, in New South Wales, accredited driving instructors perform a regulatory licensing role in motorcycle rider training, heavy vehicle training, and aged driving assessment). As well, in an appropriate context learner drivers have also been shown to have an accurate comprehension of their own driving competencies [42].

Structured lessons and 'teachable moments' in the learner licensing phase for novice drivers

In a study of learner drivers and professional driving instructors, it was reported that an important element in learner drivers' safe driving performance was accurate and shared reporting on behavioural criteria, and that learner drivers' self-efficacy was the main predictor of performance [42]. It would seem that real-time emphasis on learner drivers' mastery experiences may be important in facilitating safe driving behaviour. The Enhanced Training Program proposal provides the opportunity for intervention based on mastery of skill or competency through the structure of the learning and assessment program and its operation over the period of learner licence tenure.

Table 2: Types of assessments that a driving instructor can make through structured lesson planning based on the Roads and Traffic Authority learner driver log book

Building a foundation	<ul style="list-style-type: none"> • Does the learner driver and his or her supervising driver know of, and understand, the use of the learner driver log book, the role of a professional driving instructor, and the recommended process for learning to drive in New South Wales? • Can the learner driver control the direction and position of the vehicle? • Is the learner driver aware of the suitable speed for the road environment? • Can the learner driver demonstrate habitual, well-rehearsed behaviour (automaticity) in operating the vehicle controls: mirror and seat adjustment; use of seat belt; operation of turn signals, windscreen wipers, heater/demister/ airconditioning system, electric window controls, bonnet, boot and fuel cap release; operation of entertainment systems; operation of navigation systems, reversing monitors, etc.? • What does the learner driver say about his or her own vehicle control and manoeuvring skills?
Traffic skills	<ul style="list-style-type: none"> • Can the learner driver select an appropriate driving path? • Does the learner driver show effective use of observation to monitor the road environment, other road users, and vehicle controls? • Can the learner driver communicate appropriately to other road users (use of turn signals, eye contact, etc.)? • Does the learner driver proceed at a suitable speed? • What does the learner driver say about his or her capacity to cope with the traffic situations encountered? • What is the learner driver's attitude toward disobeying road rules?
Low risk driving	<ul style="list-style-type: none"> • What does the learner driver understand about choices – of when to drive, of whether to use own vehicle, travel in a private car with a group, use public transport? • What does the learner driver understand about social pressures in driving (running late, rowdy passengers, emotional or angry interactions with passengers or other drivers, competition with other drivers)? • What does the learner driver understand about driving in challenging and adverse conditions: night driving, wet weather, mist and fog, snow and ice, road construction sites, peak time commuting and other high demand driving (holiday driving, day-tripping), driving at school travel times. • What does the learner driver understand about impaired driving: alcohol, other drugs, driving when tired? • Can the learner driver demonstrate appropriate planning skills, and show insight into influence of self goals on own driving behaviour? • Can the learner driver identify common motives for trips that can result in risky driving?
Building experience	<ul style="list-style-type: none"> • Can the learner driver discuss methods of diffusing risks before driving, for example, not driving drunk, drugged or otherwise impaired, using designated drivers for social outings) and when driving (slowing or stopping when stressed, angry or confused) • Is the learner driver aware of sensation seeking as a motivation for risky driving? • Can the learner driver discuss the influence of peer pressure and group norms on driving behaviour (e.g., frightened of looking stupid, or being labelled as scared)? • Can the learner driver discuss his or her own risky tendencies in driving?

In fact, an important concept underpinning structured lesson planning for learner drivers is the 'teachable moment', or those naturally occurring life transitions or health events that are thought to motivate individuals to spontaneously adopt risk-reducing health behaviors [43]. As the concept of teachable moments has practical implications for health promotion, it is not surprising that the teachable moment has been used across an array of contexts, including risky sexual behaviour, risky alcohol use, and interpersonal conflict (assaults). Of particular interest is the proposal that teachable moments can have application to injury prevention [44, 45].

While it is true that the concept is ill-defined and there has been no evaluation of the evidence to support the existence of teachable moments (either broadly or for specific behaviours), the concept is appealing because timing formal interventions to take advantage of such naturally occurring events may increase the effectiveness of the interventions. Interventions may therefore become personalised and allow for self-review and reflection, while being of low-intensity, likely to be comparatively low in cost, and potentially be amenable to widespread dissemination. This is exactly what is needed for the gaining of higher-order competencies under the hierarchy developed in EU Project GADGET [24, 25] (and which unpins the Roads and Traffic Authority's graduated driver licensing system for learner drivers in New South Wales) [2,3].

Observing cognitive and behavioural changes that occur at teachable moments could give insight into the mechanisms that underlie motivation more generally. While accepting that varying target populations, differing definitions of behavioural outcomes, and debate about the timing of assessments across these behaviours, do make it difficult for evaluations, the concept has a particular resonance for the learning to drive experience, and may yet prove valuable in providing a theoretical structure to support the Enhanced Training Program.

Structured lesson plans and the professional driver instruction industry in New South Wales

Professional driving instructors have the opportunity to deliver structured lesson planning through the regular task of novice driver training. Second, driving instructors can speak about driving, road safety, and the risks of crash involvement and road trauma with a credible voice, and their advice is valued. Third, the driving lesson supplied by a driving instructor is likely to provide a teachable moment in which to communicate appropriate messages about road safety, and the risks of crash involvement and road trauma. During the lesson a driving instructor can teach and instruct at a time when the learner driver (and their parent or other supervising driver) may be particularly likely to pay attention. This heightened attention may result from the circumstances involved in that particular lesson or because the driving lesson itself provides the appropriate environment in which to deliver messages related to road safety and injury prevention. Fourth, the structured lesson planning is a tool to facilitate novice driver education through coordinated and comprehensive information that can be easily incorporated into a driving instructor's novice driver training approach.

While certainly the introduction of structured lesson planning for learner drivers will provide opportunities for the driver instruction industry in New South Wales, the use of driver instructors by learner drivers is already well established. Ivers [12] reported that a survey of over 20,822 novice drivers indicated that 16,521 (80.9%) of these drivers had, during the learner licensing period, purchased driver training from a driving instructor. The average number of hours of training purchased by a learner driver from a driving instructor was 11.2 hours (median = 6 hours of training). This tuition can be compared with the average number of hours of supervised experience received by a learner driver from a parent or other person (non-professional) was 59.4 hours (median = 53 hours; note that the subject population in the DRIVE study were recruited from learner and provisional drivers under the graduated driver licensing system introduced in 2000, which required a minimum of 50 hours of driving recorded in the log book).

A possible, and perhaps in the longer term more important, impact of structured lesson planning on the professional driver instruction industry in New South Wales could be to support the creation of a professional learning community [46, 47] that addresses the safety concerns of young drivers at a strategic level through the implementation of standard accredited education and training arrangements (and linked to other driver

education interventions such as the keys2drive program, other novice driver programs, and the traffic offender intervention program). Other actions involving the driving industry could include: the development of a communication protocol to enhance and formalise the manner in which the stakeholders involved in structured lesson planning communicate and interact with each other (i.e., learner drivers, supervising drivers, driving instructors, and the Roads and Traffic Authority as driver licensing regulator and as road safety leader); determination of program performance indicators to measure the effectiveness of structured lesson planning in achieving improved road safety outcomes and in building capacity for young drivers. Clearly, it would seem that structured lesson planning offers driving instructors greater agency whereby they can locate their professional development within their practice.

The transition from a learner drivers licence to a P1 provisional drivers licence is, of course, dependent on passing the Roads and Traffic Authority driving test. It is expected that structured lesson planning for learner drivers will have a very positive effect on pass rates for learner drivers, as successful completion of the program will, in many ways, provide an informal assessment process that is akin to the actual practical driving test. The assessment process may, in fact, be a more accurate indicator of safe driving by the young driver as the assessments will be conducted throughout the period of learner licence tenure. Writing five decades ago, Lauer [48], after estimating that an ordinary driver would encounter a situation requiring special manoeuvring only about once in 3,000 hours of driving, commented that:

Since the chance of meeting a real danger situation on a short drive is very remote, it remains a matter of doubt as to whether a person can or cannot be sufficiently evaluated or rated in 10 minutes of driving except in a rare instance. The test drive for a driver's license last from 10 to 20 minutes, hence, only about 1 out of 9,000 to 18,000 drivers would get a crucial test of his performance." (p.xv)

PART 2: Implementation and research concerning structured lesson planning for learner drivers

The first part of this paper has addressed the concept of structured lesson planning for learner drivers. In this second part, a research program to assess the impact of structured lesson planning will be outlined, and preliminary data discussed. A research project to assess structured lesson planning has been developed. This study will involve an analysis of learner driver log book records prior to and after the commencement of the new program. An analysis of the range of lessons conducted by driving instructors, as indicated in structured lesson planning records, will also be included. As well, interviews and focus group discussions will be conducted with learner drivers, parents and supervising drivers, and driving instructors. In a third and concluding part to the paper, further developments for novice drivers will be discussed, including: the keys2drive program; the novice driver program; a revision of Rotary programs for young drivers; learner driver mentoring by volunteer supervising drivers; and education programs focused on training of young drivers in the workplace.

The system for structured lesson plans for learner drivers in New South Wales

Under structured lesson planning there is a maximum limit of 10 hours with a driver instructor that can be included for additional recognition of log book hours. The total value of lessons taken with a driver instructor for additional log book recognition cannot not exceed 30 hours towards the 120 hour log book requirement. Structured driving lessons conducted at night are included as part of structured lesson planning and credited as 3 hours for 1 hour with a fully licensed instructor, but learner drivers must still complete a minimum of 20 hours of actual night time driving.

Driving instructors are required to fill and complete a structured lesson record keeper, as shown in Figure 2, and this must be stapled to the declaration of completion that forms part of the learner driver log book.

Staple to log book here

Structured lesson record keeper LEARNER LICENCE NUMBER

LESSON NO.	DATE	Learner driver log book LESSON TOPIC ★	LESSON DURATION	INSTRUCTOR DRIVING SCHOOL	INSTRUCTOR LICENCE NUMBER	INSTRUCTOR SIGNATURE ✍
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
TOTAL DRIVING INSTRUCTOR HOURS				HOURS FOR LOG BOOK RECOGNITION ★ ★		

Note: Lessons undertaken with a fully licensed driving instructor prior to 19 December 2009 are permitted to be recorded here (up to a maximum of 10 hours). In these instances, only the date, the duration of the lesson, and the driving school need to be completed in the record keeper. Where an instructor signature cannot be obtained, it may be verified and signed by the regular supervising driver. Lesson hours in the *Learner driver log book* must also be adjusted and initialled by the supervising driver.

Figure 2: Structured lesson plan record keeper, to be completed and attached to the learner driver log book.

It is intended that each lesson must be designed by the instructor in conjunction with the regular supervising driver/parent, and the learner driver, and aim to develop the learner driver's ability to understand and apply the principles of 'low risk driving' as outlined in the log book, the Road Users' Handbook and A Guide to the Driving Test. As the lessons will be developed by reflecting on the needs of each learner driver, they will therefore be tailored for each individual. Importantly, driving under structured lesson plans must be conducted on public roads. Ideally, the pattern of structured lessons during the learner licence period will follow the pattern shown in Figure 3 [2].

The driving instructor must insert lesson topics reflecting content derived from one of the learner driver log book sections (see Table 1, i.e., Building a foundation, Traffic skills, Low risk driving, or Building experience). The driving instructor must acknowledge in writing that they have completed a 'structured lesson planner' with curriculum content derived from the learner driver log book (see Figure 4). Learner drivers enter their driving experience with a driving instructor in their learner driver log book as 3 hours for every 1 hour with a driving instructor. Finally, the supervising driver (typically a parent of the learner driver) must certify that the structured lesson plans have been conducted appropriately by completing a supplementary declaration of completion that indicates that the record is an accurate account of structured lessons undertaken by the learner driver.

Quarter	1	2	3	4
Total hours driven	25:00	25:00	25:00	25:00
Hours with driving instructor	3-5	1-2	1-2	3-5

Figure 3: Idealised learner driver log book record under the structured lesson planning scheme, summarised by quarters (3-monthly period) from the time of issue of learners licence, showing total hours driven in each quarter and total hours driven with a driving instructor. It is assumed that the learner driver will utilise the full 10 hours permitted under structured lesson planning, thus qualifying for an additional 20 hours credit towards the minimum requirement of 120 hours driving as recorded in the log book; it is also assumed that the learner driver will successfully obtain a provisional P1 drivers licence on the first day of the fifth quarter of driving (i.e., the day after the minimum twelve month period of learner licensure had been completed).

Structured lesson plans can be retrospective, that is, lessons undertaken with a fully licensed driving instructor prior to 19 December 2009 are permitted to be recorded here (up to a maximum of 10 hours). Thus, existing learner drivers are not disadvantaged if they have undertaken previous lessons with a driving instructor. In these instances, only the date, the duration of the lesson, and the driving instructor or driving school need to be completed in the record keeper. Where an instructor signature cannot be obtained, it may be verified and signed by the regular supervising driver, and lesson hours in the log book must also be adjusted and initialled by the supervising driver.

Research into learner drivers and the log book

Earlier it was noted that the requirement for a minimum of 120 hours of recorded log book driving hours, increased in mid-2007 from a previous requirement for 50 hours of driving, has proven problematic [39]. In 2008, the Youth Action & Policy Association NSW (YAPA) conducted an online survey 'Driving You Crazy' to explore young driver issues in the wake of the changes to New South Wales driving legislation in 2007 - specifically the mandate of 120 hours of driving experience for learner drivers, and the passenger restrictions for provisionally licensed drivers. There has been no formal report written on the findings from the survey [49], but there has been limited media comment [50]. Some of the survey results are therefore presented here, as they have been hitherto unpublished, see Table 3.

Survey responses were obtained from an online survey through the Youth Action & Policy Association NSW website. In all, 460 young people, from a diverse range of backgrounds, completed the survey. The sample is skewed towards females (60% of respondents), and the majority of respondents were 17-19 years old. About 90% of respondents were born in Australia. Almost 10% spoke a language other than English, and 6.5% were Indigenous Australians. Almost half of the respondents were from urban Sydney, approximately one quarter were from regional areas and 10% were from country NSW. The rest of the participants resided outside of New South Wales. There were approximately equal numbers of learner drivers (40%) and provisionally licensed drivers (40%, with approximately equal numbers of those with red P1 and green P2 licences). Approximately fifteen percents of respondents did not have a New South Wales drivers licence, and just over ten percent had a full, unrestricted drivers licence. The main reasons given by respondents for driving were, in decreasing order of mention, work, social events, education, and family. Almost three quarters of participants reported driving mostly during daylight hours. Parents provided driving supervision for approximately 80% of participants. In 80% of responses, the parent's car was used for supervision of learner drivers (this is despite over 70% of respondents reporting that they had their own car).



Driving Instructor Structured Lesson Planner		 
Student Details		
Name: Larry Driver	Licence number: XXXXXXXX	Expiry date: 07/02/2010
Log book lesson topic: 12. Speed management	Date: 19/12/2009	Time: 15 : 30
Pre Preparation		
<p>Learner driver needs: (Discussion with the supervising driver and learner driver to determine lesson content)</p> <p>During the previous lesson, Larry demonstrated an ability to deal with simple and complex traffic situations. He identified most hazards to the side of the road responding to them appropriately. However, Larry is driving too close to cars in front.</p>		
Lesson Preparation		
<p>Resources required: (ie. Learner driver log book, A Guide to the Driving Test, Road Users' Handbook, other teaching materials and driving aids)</p> <p>Learner driver log book (p. 28); A Guide to the Driving Test (pp. 8-11); Road Users' Handbook (p. 62); relevant diagrams and text book. Note pad and paper, pens etc.</p>		
<p>Planned location/s for session: (Route, location and environment appropriate for topic and the learner's level of skill)</p> <p>A mix of simple and complex traffic situations that can reinforce and further develop Larry's understanding of what hazards are, as well as develop his ability to better manage his speed. Use Springfield or Fernvale Roads.</p>		
Revision (Recap of previous topic, if applicable)		Suggested time: (5 minutes)
<p>Confirms what the learner must already know and do before attempting the lesson: (Instructor tip: Confirm learning by questioning and through student practical demonstration of skills from previous lesson.)</p> <p>Q: What are the procedures you need to complete when moving off from traffic lights?</p> <p>Q: What is scanning? Why is it important?</p> <p>Q: What do you do before crossing an intersection?</p> <p>Student completes a circuit of the block, while commentary driving as a warm-up.</p>		
Introduction		Suggested time: (5 minutes)
<p>Learning goals to be covered during the lesson: (Learning goals are to be taken from the Learner driver log book)</p> <p>(Instructor tip: Ask the learner questions to confirm understanding of the topic before proceeding)</p> <p>Maintain crash avoidance space to the front of the vehicle by managing vehicle speed.</p> <p>CAS front moving; CAS front stopped; CAS front moving in poor conditions; reducing speed for limited vision situations.</p>		

Figure 4: The structured lesson planner to be developed and maintained by a driving instructor, outlining the lesson to be conducted and relating the lesson content to the training requirements outlined in the learner driver log book.

In the Youth Action & Policy Association NSW survey, the 120 hour requirement for learner drivers was not identified as a major deterrent to getting a licence. Most respondents indicated that it was either not a deterrent at all, or if it was, it was only a minor deterrent. Those who did not see the 120 hours as a deterrent either felt they had no choice but to get their licence, or thought these hours would provide them with necessary skills and experience. For those who did regard it as a deterrent, the reasons why 120 hours of driving practice was considered to be a deterrent were the difficulty in arranging driving supervision, the cost of private driving lessons, the time involved and the quantity of hours required (see Table 3).

Table 3: Selected comments by respondents to open ended questions from the Driving You Crazy? survey conducted by the Youth Action & Policy Association NSW in 2008, adapted from [49]

<p>Reasons 120 hours is a barrier to getting your licence</p>	<p>Cost: “who has that kind of money to spend on driving?” Supervision: “I don’t have anyone to teach me to drive so I’d be spending a fortune on getting lessons. Money I don’t have!” Dramatic increase from 50 hours: “Overkill – recording 50 hours of driving experience was over the top; 120 hours is absurd.” Experience: “I think it’s a great idea to get the skill required over time.” Time: “It seems a lot of hours, particularly for someone who lives out of town, in a regional area and has to do their HSC in the year they have to do most of their hours.” “I’m way too busy for that shit.”</p>
<p>Logbook</p>	<p>Parental help: “My parents are supportive with getting 120 hours of learner driving” Hassle: “You can’t always do those long trips, so after a while the short trips do become annoying”; “I got over writing hours down”</p>
<p>Lying in your logbook</p>	<p>Pressure on supervisors: “120 hours? Of course I’d lie, because 50 hours of lessons drove my parents crazy enough” Felt they were competent: “because 120 hours is ridiculous. You get to a point where you can drive and you stop improving at any great length and that’s way before 120 hours.” Unnecessary for all drivers: “Because it does not take every person 120 hours exactly to become a proficient driver. Some learn faster, others may never learn.” 120 hours is “too much”: “120 hours is a joke, as if bro!”</p>
<p>Necessity of 120-hour requirement</p>	<p>Hours are not everything: “Making kids drive 120 hours will not stop them from becoming a P-plater who packs their car with friends, speeds, and then kills themselves and/or their friends by hitting a tree or power pole. Experience is nothing when stupidity comes into play.” “I don’t doubt that it has helped decrease young driver fatalities... But the majority of car accidents involving young drivers are caused due to speeding under the influence, and that has more to do with the choices they make than the number of hours they’ve written in a book.” Good experience: “we need experienced drivers on the road.” Doesn’t take into account individual circumstances: “I think they need the experience in driving in all conditions, but it doesn’t take into account those people who don’t have access to a car or teacher” Driving test is a better indicator: “Drivers need to be good, but if you can pass the test, then obviously you are good enough.” Prioritises quantity over quality: “Excessive. Onerous. Does not look at competencies just quantity.”</p>

Over three-quarters of respondents reported that it was moderately difficult or difficult to complete a 120 hour logbook, but the reasons for this remain to be explored adequately. It may be that there is a difficulty in accruing the 120 hours of driving experience, however respondents may also have been commenting on the difficulty of actually filling out the entries in the logbook.

Respondents were very divided on the issue of making fraudulent entries in the log book. Almost one-third of participants reported that they would never lie on their logbooks, but over one-third said they may lie on their logbooks, and the final third of respondents said they had or they would lie (either a little or a lot) on their logbooks. The reasons that respondents gave for having lied, or indicating they would lie, on their logbooks were to make up their hours, to round off their driving time, because it was too difficult to complete, and because they felt they were competent drivers.

Thirty eight percent of respondents did not find the 120 hour requirement for learner drivers necessary, 30% found it only slightly necessary; approximately 20% found it somewhat necessary; and almost 13% found it very necessary. Those respondents voicing support for the 120 hour requirement cited better experience, increased confidence, and improved road safety as reasons for their answer. Those showing some support for the requirement thought learner drivers should need to complete some driving practice, but that 120 hours was too much for young people, many of whom were likely to have numerous other commitments, and was especially difficult for those who did not have access to a supervisor. These respondents also thought that experience did not necessarily make someone a safe and competent driver, as other factors, such as maturity, were also at play. Those who perceived the 120 hours requirement to be not all necessary described it as “excessive”, ineffective and unachievable.

In general, respondents agreed with the concept of driving experience as a requirement for learner drivers. However, they felt the requirement of 120 hours was “too much”. They felt this did not take into consideration the many commitments of young people, the difficulties they often experience accessing a driving supervisor, and their inability to pay for petrol and driving lessons. In addition, many young people felt the 120 hour requirement was either ineffective, unachievable, or both. There was a lot of support for the previous requirement of 50 hours of driving practice, which respondents felt was sufficient time to gain experience.

The current research into the structured lesson planning scheme

At the commencement of the structured lesson planning scheme for learner drivers in December 2009, a research project was designed to assess its effectiveness. The timetable for the research project is 2009-2013, and will involve an analysis of learner driver log book records prior to and after the commencement of structured lesson planning as an aspect of learner driver licensing in New South Wales. Analysis of the range of lessons conducted by driving instructors will also be included. As well, interviews and focus group discussions will be conducted with learner drivers, parents and supervising drivers, and driving instructors. The proposed research project has commenced, and data collection is underway. In this section, some preliminary findings from the research study are presented.

A database of the individual case histories of learner drivers is in the early stage of construction, but some provisional comments can be made. For the purpose of this paper, three case studies have been selected, as they illustrate the experience of learner drivers prior to, and immediately after, the introduction of structured lesson planning. Figure 5 shows the log book records of the three selected learner drivers, summarised by quarters (3-monthly period) from the time of issue of learners licence, showing total hours driven in each quarter and total hours driven with a driving instructor. A brief summary of these learner drivers is provided in the following paragraphs:

Quarter	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	8:30	2:35	9:50	20:40	19:05	26:25	27:00	9:30	-	-	-	-	-	-	-	-	-
	5:00	0:00	0:00	0:00	1:00	2:00	1:00	2:30	-	-	-	-	-	-	-	-	-
2	29:15	11:35	6:15	0:30	7:05	26:25	1:00	5:15	3:00	12:45	1:45	4:00	9:50	0:00	0:00	17:05	30:45
	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
3	17:35	21:40	24:00	60:50	1:00	-	-	-	-	-	-	-	-	-	-	-	-
	0:00	0:00	0:00	1:00	1:00	-	-	-	-	-	-	-	-	-	-	-	-

Figure 6: Log book records of learner drivers, summarised by quarters (3-monthly period) from the time of issue of learners licence, showing total hours driven in each quarter and total hours driven with a driving instructor. Note that Case study 1 obtained her provisional P1 drivers licence part way through the eighth quarter of driving, while Case study 3 obtained his provisional P1 drivers licence on the first day of the fifth quarter of driving (i.e., the day after the minimum twelve month period of learner licensure had been completed). Case study 2 held a learner drivers licence for just over four years.

- Case study 1 is a young woman born in 1992. She obtained her learner licence at age 16 years, and drove as a learner driver from May 2008 to March 2010. In all, she held her learner licence for almost two years of driving, during which time she spent five months overseas and did not drive. Her log book record showed 122 hours of driving experience, with just over 25 hours of night time driving. Her log book showed that two drivers - her parents - conducted the bulk of her driving supervision. While she drove regularly, she did not seek to increase her practice by driving to and from school. She completed ten hours of driving instruction under the structured lesson planning scheme, including six and one half hours prior to the commencement of the scheme. She claimed a total of 142 hours of log book experience by the time she passed her on-road driving test.
- Case study 2 is a young woman born in 1989. She obtained her learner licence in December 2005, and was required to complete a minimum of 50 hours driving before her on-road test. Eventually, she held a learners licence for four years, during which she amassed over 150 hours of driving, all with the same supervising driver - her mother. She did not obtain any driving tuition from a driving instructor over this time. She commented that she had been unlikely to drive during school terms, and in fact did most of her driving practice over the summer school holidays. Her driving practice increased markedly after she completed high school, as she needed to obtain a provisional drivers licence to enable her to attend university classes at locations across the Sydney metropolitan area and to travel for work.
- Case study 3 is a young man born in 1993. He obtained his learner licence immediately after his sixteenth birthday, and drove as a learner driver from March 2009 to March 2010. He completed just under 125 hours of driving, which included 21 hours of night time driving. His log book showed that several drivers - including his parents - conducted the bulk of his driving supervision. He reported that he regularly drove to and from school as a way of increasing his driving practice, and saw the gaining of a provisional licence as a step towards commencing casual employment as an adjunct to his high school studies. He completed two hours of driving instruction under the structured lesson planning scheme, immediately prior to taking the on-road driving test, which was the only driving instruction taken during his learner licensing period, but this tuition was sought to assist in his preparation for the on-road test rather than to increase his recorded driving to achieve the minimum of 120 hours.

As indicated by these three case studies, there is a diversity of approaches taken during the process of gaining 120 hours of driving experience as a learner driver, ranging from practice purely under parental supervision through to a systemic approach involving parents and other supervising driver and formal driving tuition from a driving instructor. Although structured lesson planning was introduced as a retrospective process, there is, at this earlier stage of the research project, little or no evidence to indicate that the retrospective crediting of three hours for each one of tuition by a driving instructor (up to a maximum of ten hours) has impacted on the achievement of 120 hours of driving experience. It may well be, however, that once the structured lesson planning scheme is well known and understood by learner drivers and their supervisors and parents then the actual hours of driving practice will be reduce to 100 hours or a little more.

Recently, interviews have commenced with professional driving instructors concerning the structured lesson planning program. Some driving instructors have responded to the introduction of the program by creating new commercial products for learner drivers: the standard, one-hour driving lesson, and an 'enhanced' driving lesson of 75 minutes at additional cost. Driving instructors justify the introduction of an 'enhanced' driving lesson at a higher cost because of the need for them to complete individual lesson planning paperwork prior to the driving lesson, to record variations in the lesson conducted, and to provide written feedback to the learner driver. Most driving instructors indicated that they were not keen to conduct structured lessons due to the documentation required and the need to maintain records for auditing by the Roads and Traffic Authority. Accordingly, they said they did not promote the program, and in some cases they would seek to dissuade a learner driver from undertaking a structured lesson.

PART 3: Structured lesson planning and other novice driver safety initiatives

In this concluding part to the paper, further developments for novice drivers will be discussed, including: the keys2drive program; the novice driver program; a revision of Rotary programs for young drivers; learner driver mentoring by volunteer supervising drivers; and education programs focused on training of young drivers in the workplace.

Structured lesson planning provides an example of an action taken under the Safe System approach to reducing road trauma within the road transport system that is supportive rather than coercive in nature, unlike some more prominent actions such as increases in penalties for traffic offences and the introduction of traffic policing measures such as covert mobile speed cameras to address illegal speeding behaviour by motorists [51].

In fact, there are a number of current initiatives in New South Wales that are expected to further enhance the safety of novice drivers - both learner drivers and provisionally licensed drivers - through supportive programs. These programs have been discussed elsewhere [3, 4, 5], and include: the keys2drive program; the novice driver program; a revision of Rotary programs for young drivers; learner driver log book runs; learner driver mentoring by volunteer supervising drivers; and education programs focused on training of young drivers in the workplace.

For those road safety practitioners interesting in novice driver safety, the introduction of structured lesson planning in New South Wales is but one of a number of exciting programs being developed and implemented.

Under the keys2drive program, the federal Australian government is funding a one hour lesson for learner drivers to be delivered by a driving instructor, provided that a parent or other supervising driver is also present. As Jerrim [10] has noted, the aim is to build a working relationship involving the learner driver, supervising driver and driving instructor so that all can become familiar with the concept of a methodical and appropriate curriculum of instruction for the training of a novice driver [10]. The keys2drive program is now available in New South Wales.

Since 2004, work has been progressing on developing a Novice Driver Programme Trial (originally involving the federal Australian government, and the Victorian, and New South Wales governments). Under this trial program, provisionally licensed drivers would receive post-learner training (classroom and on-road) within the known high risk period for crashes (0-6 months after provisional licensure) [52]. The trial has yet to commence.

A particularly important paper was published late in 2009 by Senserrick and her colleagues, based on the DRIVE study [16]. This study reported that current driver education programs can range from being ineffective through to being a powerful means of reducing road trauma affecting novice drivers. They compared participation in a 1-day workshop-only program focusing on driving risks ("driver-focused", the RYDA program, based on the U-Turn The Wheel program developed by Rotary, see Faulks & Irwin [53]) and a whole-of-community program also including a 1-day workshop but also longer term follow-up activities and a broader focus on reducing risk-taking and building resilience ("resilience-focused", the RRISK program - Reducing Risk, Increasing Skills and Knowledge - developed by NSW Health), linking participation with subsequent police-reported road crash and traffic offence data. Senserrick and her colleagues found that the, the resilience-focused program (RRISK) was associated with a 44% reduced relative risk for crash involvement, but the driver-focused program (RYDA) was not associated with reduced crash risk. This very large effect size seen for RRISK suggests that driver education programs that focus more generally on reducing risks and building resilience have the potential to reduce crashes. However, traffic offence rates did not differ between those young drivers who had completed the RYDA or RRISK programs. Police enforcement tactics and policies may have influenced this finding, but the causal factors involved remain unknown. In response to this finding from the DRIVE study, and a similar finding in 2005 reported by Elkington for the RYDA program [54, 55], there is now strong interest in the RRISK ("resilience-focused")

approach. Both RYDA, and the Rotary program from which it was developed (U-Turn The Wheel) are currently undertaking revision and review processes to more effectively address young driver safety issues.

To support learner drivers and their supervising drivers under graduated driver licensing systems, there has been interest in organising learner driver log book runs. An example of this approach is the log book run program organised in the Macarthur region in south-western Sydney and the Southern Highlands [56]. This program was developed by local councils as an educational behavioural project targeting learner drivers, in recognition of the need to develop the skill and knowledge of novice drivers whilst in the learner licensing stage. The project links well with the graduated driver licensing system by providing a detailed booklet of routes and maps presenting a variety of driving conditions and road types, and also involves scheduled log book run events for groups of learner drivers and their supervisors that are supported by local police and service clubs.

There has been interest in New South Wales in developing learner driver mentoring by volunteer supervising drivers, in recognition that some young people have difficulty in being able to access vehicles and drivers to supervise their training and practice, and are unable to access driving instructors due to financial constraints or the absence of commercial driving instruction businesses in their area. Learner driver mentor programs provide support for new drivers to become licensed by allowing them use of a vehicle for practice while being supervised by a volunteer mentor. While there are no successful Learner driver mentor programs operating currently in New South Wales, Youthsafe has been conducted research into mentoring programs and has published their research findings [57].

A feature of many of the programs for learner drivers described here, and as indicated in our preliminary research findings into structured lesson planning, driver licensing is a process undertaken by many young people in order to access employment. It is therefore of interest that there has been a focus on education programs for training of young drivers in the workplace, both in terms of national skills development through the Transport & Logistics Industry Skills Council and in many local programs (e.g., the Kids of Cadia program developed by Blayney Shire Council and Bathurst Regional Council in conjunction with local mining companies). It is expected that this interest will continue, and may likely see new partnerships involving secondary and post-secondary education providers, private companies, and local, state and national government agencies.

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