Abstract

keys2drive, is the largest national learner driver safety program in Australia’s history. The program has been developed by the Australian Automobile Association (AAA) and its member clubs with funding from the Australian Government.

keys2drive is designed to help improve the safety of novice drivers by fostering the relationship between a learner, their supervising driver and their professional driving instructor.

Learner drivers are the safest drivers on the road, but when they begin to drive solo their risk jumps dramatically. This risk remains greatest for the first six months of solo driving. Research suggests that getting better on-road experience as a learner driver is an extremely important factor in reducing the risk.

keys2drive aims to improve the quality and quantity of supervised learning by helping parents/supervising drivers be more effective in their driver training role.

This paper outlines the program, the learning methodology and feedback on the introduction of the program in Tasmania.

Keywords

keys2drive, learner, supervising driver, driving instructor, metacognition, empowerment.

Introduction

keys2drive, is the single largest national learner driver safety program in Australia’s history. The program has been developed by the Australian Automobile Association (AAA) and its members; NRMA, RACV, RACQ, RACWA, RAASA, RACT and AANT. The Australian Government has committed $17 million over five years to see keys2drive implemented in every state and territory.

keys2drive is designed to help improve the safety of novice drivers by fostering the relationship between a learner, their supervising driver and their professional driving instructor.

We know that learner drivers are the safest drivers on the road, but the moment that they are no longer supervised – when they begin to drive solo – their risk jumps dramatically for the first six months.

By using new learning methods, keys2drive sets out to positively influence young drivers’ behaviour and their approach to solo driving. The program also aims to improve the quality and quantity of supervised learning by helping parents/supervising drivers to be more effective in their driver training role.

keys2drive has three key components:

1. One free professional lesson by an accredited driving instructor for learner drivers when they are accompanied by their supervisor (usually dad or mum or a family friend). During this lesson, information and strategies for managing the first stages of solo driving are provided to the learner and their supervisor.
2. An engaging and sophisticated website, rich in learning experiences and supporting information.
3. A voluntary accreditation scheme for driving instructors wishing to participate in the program. It involves initial training and ongoing professional development and requires a commitment to the keys2drive Code of Practice developed in consultation with the Australian driver training industry.
*keys2drive* creates an opportunity for the driving instructor, to use the incentive of a free driving lesson to connect with the supervisor and engage their help. The free lesson begins the process of building a sustainable relationship between the instructor, learner driver and supervisor.

Importantly, it helps the supervising driver have greater confidence, so that they are more likely to spend time in the car with their learner and provide a quality experience.

Driving instructors play a critical role in the ultimate effectiveness of *keys2drive*. The accreditation scheme is designed to provide instructors with the knowledge to conduct a *keys2drive* lesson; to utilise *keys2drive* learning in additional lessons; to encourage best practice within the industry; and to actively promote those instructors who are accredited.

To become accredited, instructors need to register online at www.keys2drive.com.au and participate in a one-day training course, an online coaching and assessment program, and an auditing process.

*keys2drive* began with a Tasmanian rollout and official website launch in mid-2009, and is being followed by a staged national rollout from the second half of 2009. Feedback from the Tasmanian rollout has helped with the development of the next stage of the program in Victoria.

**The case for change**

Car crashes are the single greatest cause of accidental death of young Australians.

Car crashes represent 31% of all deaths of people aged 15-24 years, compared to 1% for people aged 25 years and over [1].

The issue is not beginning drivers. Beginning drivers are supervised and have the lowest risk of crashing of all drivers.

Newly licensed drivers are the ones most likely to be involved in car crashes. The risk is highest during their first year of unsupervised driving, and particularly in the first six to eight months.

UK research has estimated that the crash risk in the first year of unsupervised driving is at least 20 times higher than in a supervised driving environment [2.1]. Swedish research places this figure even higher, at 33 times greater risk [2.2].

This elevated risk continues for at least another three to five years [2.3].

**The driver training system**

Our current driver training system is the Graduated Driver Licensing (GDL) system.

The benefit of GDL is that it creates lower risk conditions for learner drivers [3]. In particular, the extension of the learner period delays the time at which unsupervised driving starts [4].

However, the GDL system does not reduce post-license crash rates [4] or contribute much to driver road safety; in some cases it may even have a negative effect [5].

In Australia, much store is placed on learner drivers gaining at least 120 hours of supervised experience. The concept is based on Swedish research which demonstrated that a trebling of supervised experience (from 41 to 118 hours) led to a post-licence crash reduction in the first year of solo driving of just over 30% [6].

However, an increase in supervised experience does not necessarily result in a reduced crash risk [7], [3], [8], [9], and [10].

Training and testing in hazard perception for learner drivers is not of much benefit either [11].
The change from Ls to Ps

Research indicates that to get a reduction in road accidents and deaths, we need to assist learner drivers to change the way they think and behave. The aim is for beginning drivers to engage in lower risk behaviours on the road.

*keys2drive* aims to bring about a major shift in the way we approach teaching beginning drivers. In essence, this shift is from one of control to one of empowerment.

Graduated Driver Licensing reduces beginning drivers’ risk mostly by imposing controls. Control over behaviour works particularly well during the learner phase. Research shows that very few learners crash while under supervision [12], [8], [2].

However, immediately learner drivers are free of the controls imposed by a supervisor or driving instructor, their crash risk increases significantly. After a year or more on L plates, once they pass the driving test their driving situation changes dramatically (see Table 1).

**Table 1: Comparison of pre and post test environments**

<table>
<thead>
<tr>
<th>Learner phase, pre test</th>
<th>Immediately after passing test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervised</td>
<td>Unsupervised</td>
</tr>
<tr>
<td>Directed</td>
<td>Undirected</td>
</tr>
<tr>
<td>Error corrected</td>
<td>Error uncorrected or accepted</td>
</tr>
<tr>
<td>Externally paced</td>
<td>Self-paced</td>
</tr>
<tr>
<td>Atypical adult driving situation</td>
<td>Typical adult driving situation</td>
</tr>
<tr>
<td>Little adverse influence of significant others</td>
<td>Much potential adverse influence of significant others</td>
</tr>
</tbody>
</table>

Immediately after passing their driving test we say to provisional drivers, ‘You can now find your own way’. This is after years of them being told, ‘Do it my way’. The change is huge and one most learners are poorly prepared for.

The change in the pre and post test situation is made worse by newly licensed drivers believing their ability to be greater than it actually is. Passing the driving test is seen as a validation of overall driving skill, even though the test does not assess safe solo driving behaviour. This false sense of confidence is associated with unrealistic optimism and increased crash risk [13], [14], and [15].

*keys2drive: two key changes*

*keys2drive* proposes two key changes to the GDL system:

1. Changing the target of learning to drive from the driving test to six months on P plates with zero harm.
2. Encouraging supervisors and driving instructors to empower rather than control their learner drivers.

This approach is consistent with the European Union HERMES Project (2007-2010) that “builds on a number of different EU projects in the driver training field which recognise the need for:

- less reliance on short term instructional methods which tend to help learners to pass the driving test, and more focus on active-learning methods to prepare learners for solo driving and to foster ongoing learning after the test
- more focus on the higher levels of the Goals for Driver Education matrix in driver training.” These include personality factors, self awareness, emotions, different trip-related contexts for novice drivers and their motives for driving. [16]
1. Six months on P plates with zero harm

As we have seen, the first six months of P plate driving is the riskiest period in a driver’s life. *keys2drive* focuses on a target of six months on P plates with zero harm. The aim is to create a smooth transition from Ls to Ps and establish a good foundation for lifelong safe driving.

The typical beginning driver’s fixation on ‘passing the test’ and getting a driver’s licence influences what they want to learn, what they are taught, and what they believe about their achievements. This would be less of an issue if the test assessed the learner’s ability to drive safely on their own, but it does not. The outcome is a mechanical test which does not assess some of the most important skills needed to drive safely unsupervised [15].

Much changes when beginning drivers, supervisors, and driving instructors focus on a learning target six months beyond the driving test. In this case the learner driver can be compared to a sports person preparing for the finals rather than the first game of the season. Players (or learner drivers) have to pace themselves, have quality training experiences, get as close to the real thing as possible, and learn endurance skills (mostly mental skills).

The sports person who thinks that they are ready for the finals just because they won their first game has grossly underestimated the task that lies ahead. Similarly the six-month target gives beginning drivers a much more accurate and realistic benchmark.

2. Empowering learner drivers

‘The voyage of discovery is not in seeking new landscapes but in having new eyes’ (Marcel Proust).

In the *keys2drive* approach, the message to the learner driver is ‘Find your own way’. This may sound like a risky message to send but, if we accept that P plate drivers do eventually have to find their own way, then it makes sense that they learn the skills to do this beforehand.

Typically, driving instructors and supervisors tell their learners what they believe they need to know and do: ‘I know best, do it my way’. Understandably, they want to feel in control but often this leads to them being controlling—the opposite of helping someone find their own way.

Find your own way to six months on Ps with zero harm is a target that forces participants to see their roles through new eyes. Beginning drivers must learn to self manage their behaviour rather than relying on others. Supervisors and driving instructors must learn to model self-management behaviours and adopt a supportive coaching role rather than a ‘telling’ role.

The teaching of self-management skills in order to improve driving behaviour is the dominant theme in current research [17], [18], [19], [5], [20], [21], [10], [22].

The ability to find your own way and end up at a good destination is mostly a mental skill. Psychologists use a term called ‘metacognition’. ‘Meta’ is the Greek word for ‘above’. The task is to help learner drivers learn to manage themselves ‘from above’, as if through the eyes of an external observer.

Metacognition is the awareness of one’s thought processes and the efficient use of this self-awareness to self-regulate behaviour [23], [24], and [25]. Simply speaking it’s thinking about one’s thinking.

In *keys2drive* learner drivers are taught how to convert the advice of the three kinds of skilled outside helpers—the trained assessor, the driving instructor, and the supervisor—into inside thoughts. It is useful to deal with these three roles separately. In this case, where we want learner drivers to internalise the different kinds of advice that these three types of people would provide, we will call them ‘meta roles’.

Table 2 summarises the three meta roles (based on the viewpoints of the trained assessor, the driving instructor, and the supervisor) and the research areas that align to them.
Table 2: The three meta roles in learner driving

<table>
<thead>
<tr>
<th>Meta role</th>
<th>Learner driver use</th>
<th>Research area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self assess</td>
<td>You know exactly how you compare to a safe driver and take note when you are not driving that way.</td>
<td>Accurate self-assessment is required to prevent errors of judgement. An accurate benchmark provides for accurate error recognition.</td>
</tr>
<tr>
<td>Self instruct</td>
<td>You fix weaknesses in your driving with little or no outside help.</td>
<td>Novices make errors. Feedback and learning tactics reduce errors. The need for drivers to internalise error and learn from experience.</td>
</tr>
<tr>
<td>Self supervise</td>
<td>You recognise risky P plate situations, notice how they make you feel, and choose to take control.</td>
<td>The importance of self-regulation and management of motives.</td>
</tr>
</tbody>
</table>

Putting it all together

In keys2drive learning metacognition is also described as ‘deep’ learning. While the emphasis is on deep learning, ‘long’ and ‘wide’ learning also contribute in important ways towards preparation for safe solo driving.

Table 3 shows the three learning dimensions that comprise the whole keys2drive learning journey.

Table 3: Dimensions of the learning journey

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Learner driver use</th>
<th>Research area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long learning</td>
<td>You do a lot of driving and eventually basic driving skills are reliable and automatic.</td>
<td>Repetition, repetition…</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Robust habits.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skill automaticity.</td>
</tr>
<tr>
<td>Wide learning</td>
<td>You do a lot of different driving and frequently have experiences that are new and hard. You learn ways to recognise and prepare for new situations.</td>
<td>Storehouse of wide or different experiences.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Capacity to handle novelty.</td>
</tr>
<tr>
<td>Deep learning</td>
<td>You do a lot of thinking about the different driving experiences you have and discover much about yourself, your driving, and how others affect you.</td>
<td>Self-management and self-regulation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Metacognition.</td>
</tr>
</tbody>
</table>

In keys2drive the long, wide, and deep learning journey is a feature of the learning environment.

The keys2drive learning environment

The aim of keys2drive is to provide a range of learning experiences that produce significantly lower risk driving behaviours. These learning experiences are introduced via the free lesson, in which a “Road Map” forms the basis of the lesson plan and via the games and other learning content on the interactive website, www.keys2drive.com.au.
The “Road Map” document is given to learner drivers and their supervisors when they have their free lesson. The Free Lesson is directed primarily at the parent or supervising driver. Research has shown that parents can make a real difference in reducing crash rates of novice drivers [26]. However we know some parents may not fully appreciate the risks novice drivers face [27]. During the free lesson an accredited driving instructor uses the keys2drive ‘Road Map’ to explain what it means for a beginning driver to find their own way through a long, wide, and deep learning journey. This also involves a practical teaching demonstration.

The front of the “Road Map” initially builds an awareness of the existing road safety issue for younger drivers by using facts, it also highlights that safe driving is more than just knowing how to drive a car – it’s about learning how to manage yourself in different P Plate situations. Learner drivers are then invited to become part of the solution - by becoming their own instructor, assessor and supervisor.

On the back of the “Road Map” the journey unfolds further into what ‘useful practice’ is in very simple terms. There is also a section where the learner driver, supervisor and the driving instructor agree to work together, from ‘pre-learner’ stage to ‘got your P’s’ stage, to ‘make the first six months of solo driving safe’ stage.

The online learning environment (www.keys2drive.com.au) supports pre-learners, learner drivers, novice drivers, supervising drivers and driving instructors on the journey of behavioural change. The keys2drive program is mainly web based with the majority of the intervention material, interactive learning activities and games accessed through the website. All administrative tasks and most information are also delivered via the web. This includes a large part of the driver instructor accreditation process.

The website has themed content areas including:

- Cars: Car safety; buying and selling a car; insurance; maintenance and assistance
- Licensing: State and Territory specific information
- About the keys2drive program
- The keys2drive learning approach
- Accredited driving instructor’s Code of Practice
- Dedicated sections for beginning drivers, supervisors and instructors, including learning materials
- How to apply for a free lesson with an accredited instructor
- Online games - Game technology is used to attract users to the website and subtly engage them in deep learning
- Explore space

‘Explore’ is the most innovative learning option. It combines web 2.0 technologies with innovative content. In this part of the website, beginning drivers participate in a reflective journey via a range of web-based experiences. The experiences simulate life’s complex journey—they may not make sense to us at the time nor have an immediately obvious structure, logic, or sequence. Over time these lived experiences merge and generate new meaning, particularly when reflected upon and shared with others. Some life experiences are more likely to promote safe behaviours than others. ‘Explore’ attempts to accelerate young people’s exposure to, and engagement with, these types of experiences.

Feedback on the introduction of the keys2drive Program in Tasmania

Development of the keys2drive program began in 2008 with the emphasis on building a solid applied research basis to underpin the program. In doing this AAA was mindful of ensuring the foundations of the program were sound and explored opportunities to enhance the program with the use of complementary research and initiatives.

The keys2drive program was introduced in Tasmania. The Hon Anthony Albanese MP, Minister for Infrastructure, Transport, Regional Development and Local Government formally launched the Tasmanian rollout of the program on 2 July 2009 at Newstead College in Launceston.

The following paragraphs provide some feedback on the introduction of the keys2drive program in Tasmania.
1. Coaches and Driving Instructors

Coaches

The role of the keys2drive coach is to pass on the learning methodology to the driving instructor to enable a structured and replicable approach to the delivery of keys2drive lessons to the learner driver and supervisor.

To be selected as a keys2drive accredited coach, applicants were expected to be

- experienced trainers holding a Certificate IV in Driving Instruction and preferably Certificate IV in Training and Assessment;
- critically reflective thinkers and confident in an intellectually challenging environment;
- passionate about teaching and advancing their own learning;
- skilful in using information technology; and
- confident and capable drivers with experience in the driving instruction industry.

An initial 12 applicants for the coaching role were selected covering all Australian capital cities. They attended a one week intensive training program in February 2009. Prior to this training they were required to complete an assignment on the underpinning philosophies and background of the keys2drive program. As part of their development, the coaches attended the keys2drive Instructor accreditation training in March 2009 in Tasmania and assisted in the curriculum review sessions. Some of these coaches were also involved in presenting the first round of instructor accreditation training in Victoria in July 2009 in preparation for the national rollout on the mainland. Additional coaches are being trained at present.

Driving Instructors

To become an accredited keys2drive instructor applicants need to:

- hold a Certificate IV in Driving Instruction (by end of 2009);
- abide by a keys2drive accreditation Code of Practice;
- successfully complete a one day training course and a five step self-coaching program;
- participate in ongoing professional self-development; and
- utilise a safe car for instruction (minimum 4 Star ANCAP safety rating by end 2010).

From 36 driving instructors who attended training in Tasmania in March 2009, 20 are active accredited keys2drive instructors throughout Tasmania. In addition to a one day training course, the instructors were required to complete five self reflection tasks. The accreditation process was effective in identifying the most professional instructors.

2. Website development and usage www.keys2drive.com.au

Results for the website need to be considered in the context of the time the website has been accessible through Google – since 1 July 2009. Prior to this the website was only accessible to people who had the address. Therefore, prior to 27 June (when the address was published in newspaper advertisements in Tasmania) the data gathered does not reflect the general user.

Between 25 May and 8 August 2009 Google Analytics recorded the following website statistics:

- 5,318 visits;
- 52,216 page views;
- 9.82 pages per visit;
- 23.66% bounce rate; and
- an average of 9 minutes 24 seconds on the site.

Although consultation occurred during this period with driving instructors in Victoria, New South Wales and Queensland, the main public promotion for keys2drive occurred in Tasmania.
Despite the limited publicity, monthly statistics indicate that the website is successfully drawing users. Website visits are increasing by approx 15% per week. IT industry experts expect a bounce rate of 50-70% so a bounce rate of 20+% indicates that visitors are being drawn to the site.

### 3. keys2drive Lessons

From end July 2009, AAA undertook a targeted campaign in Tasmania to promote the program with advertisements in the “youth sections” of the three major newspapers and by a direct mail out to all high schools. As a result, at 21 August 2009 the number of learner drivers registered to take a free lesson had risen to 157 – an increase of 27% in less than a month.

Lesson feedback has been positive. Respondents indicated that their knowledge had significantly increased as a result of the free lesson. Both supervisors and learners indicated that their knowledge about the risks learners face when they go solo had considerably increased.

Feedback on the keys2drive “Road Map” has also been positive. The “Road Map” forms the basis of the lesson plan for the free lesson and has been designed to cater equally well for all of the five beginner driver stages (pre-learner, just got my Ls, had my Ls for a while, about to go for my Ps, just got my Ps). keys2drive accredited Driving Instructors in Tasmania indicated that they see it as an essential tool for conducting the keys2drive lesson.

### Conclusion

Throughout its 85-year history, the Australian Automobile Association has been committed to improving the safety of motoring. Today, road safety remains a critical issue for Australians. For meaningful reductions to be made in road trauma, we need to take a safe systems approach –Safer drivers in Safer cars on Safer roads. keys2drive is a unique initiative that is designed to deal with one important aspect of this road safety recipe – novice driver risk.

keys2drive aims to positively influence young drivers’ behaviour and their approach to solo driving by using new learning methods. The program also aims to assist supervising drivers to be more effective in their driver training role.

AAA is passionate about helping to foster the critical relationship between learner drivers, their supervising drivers and professional driving instructors. We look forward to making keys2drive the benchmark training program not just in Australia, but around the world.
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