Best practice review of Keys2drive

TJ Bailey, LN Wundersitz, SJ Raftery

June 2020

Report documentation

TITLE

Best practice review of Keys2drive

AUTHORS

TJ Bailey, LN Wundersitz, SJ Raftery

PERFORMING ORGANISATION

Centre for Automotive Safety Research
The University of Adelaide
South Australia 5005
AUSTRALIA

SPONSORED BY

ABSTRACT

This best practice review of the Australian Automobile Association's national Keys2drive driver education program used the internationally recognised Goals for Driver Education (GDE) matrix to help identify a set of best practice principles. The principles covered: having a sound theoretical base, facilitating parental involvement, provision of feedback, building resilience, use of coaching approaches, commentary driving, self-assessment, understanding of risk factors and being supportive of Safe System components. It was considered that Keys2drive's learning materials and approach for learner drivers, their supervising drivers and instructor accreditation are consistent with nearly all the principles, and this view was confirmed through consultations. Some suggestions were made for increasing the use of interactive learning approaches and for improving the monitoring of novice driver learning and of the performance standards of accredited instructors. A profiling of program penetration identified geographic areas deserving greater attention. The greatest program challenges lie in supplying instructors for regional and remote areas and in assisting learner drivers who cannot otherwise access a supervising driver and/or a roadworthy vehicle. Major changes to learning materials and delivery approach were considered not warranted, although consideration could be given to developing low English literacy formats of the materials.

KEYWORDS

Evaluation, Driver education, Driver training, Goals for Driver Education, Keys2drive

Summary

Keys2drive is a single-lesson interactive education program for learner drivers. It is funded by the Commonwealth Government and the Australian Automobile Association's member motoring clubs.

This review of the program sought to: a) analyse the extent to which the program is aligned with best practice for driver education programs; b) profile Keys2drive delivery with respect to jurisdictional and geographical area penetration; and c) identify ways in which the program can be modified to better suit the needs of those in regional/remote areas. The research approach comprised developing a best practice evaluation framework, gap analyses of learning materials in relation to the framework, examination of the penetration of Keys2drive lessons in ABS remoteness areas, and consultations with relevant personnel.

The Goals for Driver Education (GDE) matrix is an internationally recognised model of the essential features of quality driver education. This, together with a short literature review of adult learning approaches and driving instruction, formed the basis of a set of 18 best practice principles developed for and used in this evaluation to assess Keys2drive. The principles covered having a sound theoretical base, facilitating parental involvement, provision of feedback, building resilience, use of coaching approaches, commentary driving, self-assessment, understanding of risk factors and being supportive of Safe System components. It was considered that Keys2drive's learning materials and approach, for both learner drivers and their supervisors, are largely consistent with nearly all of the best practice principles. This view was confirmed through the consultations. Some suggestions were made for increasing the use of interactive learning approaches in the Keys2drive website's layout and content.

Keys2drive's learning materials for instructor accreditation were also found to be highly indicative of the best practice principles. Some suggestions were made for improving the monitoring of learning outcomes for learner drivers and the performance standards of accredited instructors. There is a particular need for instructors and Keys2drive staff to check learners' perceptions of what they learned, as recent driver education research has revealed disparities between instructors' and learner drivers' perceptions of learning outcomes where the GDE matrix is used as the basis of the education program.

The delivery profile found that program penetration rates for 16-18 year olds increased from 2018 to 2019 in all areas nationally. In 2019, the highest penetration rates occurred in Queensland and Western Australia, and the lowest penetration rates occurred in South Australia, the Northern Territory and the ACT. Relatively low remote area penetration rates were found for New South Wales, the Northern Territory and Western Australia, jurisdictions with large remote areas. There is opportunity to boost remote area penetration rates towards the rates for major cities and regional areas. The greatest delivery challenges lie in supplying instructors for regional and remote areas and in assisting learner drivers who cannot access a supervising driver and/or a roadworthy vehicle. Major changes to learning materials and delivery approach are considered to be not warranted, although consideration could be given to developing low English literacy formats of the materials, particularly the Road Map. The notion of allowing clients a second lesson was raised during the consultations and could be investigated on a potential user-pays or part-subsidy basis (noting this would require implementing a system of payment which is not currently part of the program's remit, along with considerable hurdles to overcome in designing and administering a system of means testing, which is well beyond the remit of Keys2drive).

The report concludes with a summary of all the suggestions proposed, organised around four areas proposed by the AAA in 2017 as part of a set of program enhancements: a curriculum refresh; a more even distribution across different socio-economic groups; better take-up in regional and remote areas, and better collection and reporting of program data. Each suggestion in the summary is flagged as either WPR (within current program remit) or BPR (beyond current program remit).

Contents

1 Introduction

Since its launch in 2009, Keys2drive has been a joint initiative of the Australian Automobile Association (AAA), the Commonwealth Government, and AAA member organisations[1]. Funding arrangements in place since the 2017-2018 financial year stipulate that the Commonwealth will provide $16 million over four years and the AAA's member motoring clubs $2 million in cash and a further $2 million in-kind marketing support over four years. Based around a single interactive lesson, Keys2drive endeavours to increase the safety of young drivers by encouraging them to acquire and reflect on substantial on-road experience during the learner phase and by improving the mentoring skills of their supervising drivers (often parents). Keys2drive has four core components (AAA, 2017):

1. A free lesson delivered by accredited Keys2drive driving instructors to learner drivers and their supervising drivers, in which information and strategies for managing the first stages of solo driving are provided

2. A website providing information and various learning experiences to learners, supervising drivers and driving instructors with the aim of consolidating and extending learning in the free lesson

3. An accreditation scheme for professional driving instructors involving training, professional development and commitment to an agreed code of conduct

4. Monitoring of instructor behaviour and learner/supervisor feedback.

The Keys2drive pedagogy is based on coaching, as distinct from training. (Training concerns the development of skills, whereas coaching nurtures the behaviours and knowledge that underpin the skills acquired.) Keys2drive encourages learner drivers to adopt an *active learning* and a pre-emptive frame of mind in their driving through the drivers asking questions, recognising and anticipating risky situations before they are encountered, and in self-identifying and fixing their driving errors. This approach, called *Find Your Own Way*, encourages learners to practise for longer, with greater variation in driving environments, and to learn through self-assessment and reflection. It is an approach aimed at equipping novice drivers with skills and a safety mindset that endure throughout a driving career.

In 2017, the AAA proposed some program improvements for Keys2drive with respect to:

- A curriculum refresh (including accredited instructor re-training)

- A more even distribution across different socio-economic groups

- Better take-up in regional areas not well-served by driving instructors

- Better collection and reporting of program data.

In 2019, the AAA requested that the Centre for Automotive Safety Research (CASR) conduct a review of Keys2drive in terms of best practice for driver educational interventions, particularly in relation to the various elements of *Find Your Own Way* but also the extent of the program's social and geographic inclusiveness.

---

[1] RAA, RACV, NRMA, RACQ, RAC, RACT and AANT.

1.1 Best practice review of Keys2drive

The review's aim was to assess Keys2drive against its current objectives as a program designed for *all* learner drivers in Australia, with regard to:

- Identification of considered best practice principles in teaching/learning relevant to driving instruction, and analysis of the extent to which Keys2drive is aligned with best practice, for novice drivers, their instructors and supervising drivers

- A demographic profiling of Keys2drive delivery, particularly with respect to geographic areas and their association with social disadvantage

- Identification of ways in which the program can be modified to better suit the needs of novice drivers, particularly those in regional/remote areas.

CASR considered that its fulfilment of these aspects would make a substantial contribution to the above AAA proposed improvements. CASR's specific review approach involved five interdependent approaches:

1. Identification of best practice principles for driver educational interventions

2. Gap analyses comparing Keys2drive's teaching materials and delivery with the best practice principles

3. Gap analyses that reviewed the accreditation process and performance standards for Keys2drive's driving instructors according to the best practice principles

4. Demographic profiling of Keys2drive penetration with respect to jurisdictions and remoteness

5. Consultations with relevant personnel.

Although interdependent, each of the first four of these approaches and the related outcomes are reported in individual Chapters 2 to 5 within this review. In contrast, the consultation process was broad-ranging across various components of the first four approaches. Consequently, relevant information and opinion gleaned through the consultations is included within each of the above four chapters where it is immediate to specific aspects covered, as well as presented in a designated chapter.

Summary of report structure (chapters)

1. Introduction

2. Development of evaluation framework (literature review)

3. Gap analyses of learning materials

4. Instructor training, accreditation and professional development

5. Regional, remote and disadvantage perspectives

6. Consultations

7. Summary of suggestions.

2   Development of a framework to evaluate Keys2drive

The evaluation framework used in this study was developed through identifying relevant principles of best practice in driver education, including principles for adult/teenage learning. The framework also encapsulates relevant other criteria, such as broader system contexts and the stated aims of the Keys2drive program.

Many contemporary best practice principles for driver education stem from the Goals for Driver Education matrix (GDE) developed by an Organisation for Economic Cooperation and Development (OECD) team in 2006. It is also important to consider principles arising from adult learning perspectives and from various broader transport system contexts.

2.1   Goals for Driver Education matrix (GDE)

The Goals for Driver Education (GDE) matrix (OECD, 2006) is an internationally recognised model outlining the essential features of quality novice driver education. It provides a hierarchical organisation of different facets of the driving task with the key training areas necessary to improve driver competency. Typically, at the early stages of learning to drive, the functional/procedural levels such as vehicle-control skills and traffic mastery predominate (the lower rows in the matrix). As the novice driver becomes more adept at these skills, the higher-order aspects of goals for driving context and lifestyle have increasing applicability, not so much as discrete skill sets, but as necessary complements to the operational or lower-order skills. The matrix also has three columns of learner driver needs: a focus on knowledge and skill, an understanding of aspects that increase driving risk, and abilities in self-assessment of one's emerging skills, which, in the twelve matrix cells, are applied to the vehicle control, traffic mastery and goal strands.

Table 2.1
GDE Matrix (OECD, 2006) with later researchers' classifications

Later researcher classifications	GDE MATRIX	Knowledge and Skill	Risk Increasing Aspects	Self-Assessment
Higher-order abilities	**Goals for Life and Skills for Living**	Understanding the importance of lifestyle, age group, culture, social circumstances, etc.	Understanding the importance of sensation-seeking, risk acceptance, group norms, peer pressure, etc.	Understanding the importance of introspection, competence, personal preconditions for safe driving, impulse control, etc.
Higher-order abilities	**Goals for, and Context of Driving**	Understanding the importance of modal choice, time-of-day, motives for driving, route planning, etc.	Understanding the impact of alcohol, fatigue, low friction, rush hour traffic, peer-age passengers, etc.	Understanding the importance of personal motives, self-critical thinking, etc.
Functional / procedural abilities	**Driving in Traffic**	Mastering traffic rules, hazard perception, etc. Automating elements of the driving process. Co-operating with other drivers, etc.	Understanding the risks associated with disobeying rules, close-following, low friction, vulnerable road users, etc.	Calibration of driving skills, developing a personal driving style, etc.
Functional / procedural abilities	**Vehicle Control**	Mastering vehicle functioning, protective systems, vehicle control, etc. Understanding the impact of physical laws.	Understanding risks associated with non-use of seat belts, breakdown of vehicle systems, worn out tyres, etc.	Calibration of car control skills

The GDE matrix was initially conceived in 2002 by Hatakka, Keskinen, Gregersen, Glad, and Hernetkoski as a way of organising information about young drivers and driver education and training, and was intended to provide guidance for evaluating existing driver education programs and developing new ones. This, together with its subsequent endorsement by the OECD, affords ample justification for its consideration in this review of Keys2drive.

In fact, the GDE matrix has influenced much subsequent research into driver development. While the matrix as originally conceived, first by Hatakka et al. (2002) and subsequently by the OECD team, did not especially distinguish between the two lower horizontal levels and the two upper levels, subsequent researchers have tended to do this, as shown in the italicised column in Table 2.1. The two lower levels are often labelled as 'functional levels' or those concerned with driving procedures (procedural levels). The two upper levels are frequently termed higher-order levels. While this terminology lends more structure to the matrix in its description of how drivers should develop, in its practical application, the hierarchy is quite diffuse, with the cells of the horizontal levels merging and overlapping somewhat in practice.

2.2   Recent research based on the GDE matrix

Watson-Brown, Scott-Parker and Senserrick (2018a), who also asserted that the GDE matrix represents best practice in driver education, used that framework as a basis for developing an assessment tool for evaluating the teaching styles of driving instructors. In a pilot study, they used their assessment tool to measure the extent to which three instructors each implemented functional-level instruction along with higher-order approaches, such as understanding risk and self-assessment. In one of the scenario examples they provided, a learner driver follows a route to get from A to B. At a functional level an instructor is likely to give the learner direct directions of when to turn a corner, or which lane to drive in. At a higher-order level, an instructor would encourage the learner to plan the route before starting, to allow the learner to just concentrate on the driving task. Another example concerned a learner developing mastery of traffic situations. At a functional level an instructor might remind a learner about giving way when the driver approaches a roundabout. At a higher-order level, the instructor might encourage the learner to consider if they have left sufficient space behind vehicles in front in case those drivers brake suddenly. In such higher-order level examples, an instructor's emphasis on the learner considering risk increasing aspects and self-awareness will advance the learner's knowledge and skill to a much greater depth than without that emphasis. This is especially so when an instructor encourages a driver to self-analyse safety-critical incidents after a driving lesson, in which the instructor provides a generalised context around how and why the incident occurred, rather than simply what happened. At the same time, the instructor also nurtures the learner's situation awareness and future planning abilities. Such approaches, for Watson-Brown et al. (2018a), are indicative of higher-order teaching. Arguably, instructors should be flexible in implementing *both* functional/procedural and higher-order approaches, according to the ability and needs of the learner and the driving environment at the time.

Watson-Brown et al. (2018a) also pointed out that traditional driver training approaches predominantly focus on functional instruction levels but fail to address the higher-order goals deemed necessary to produce safer drivers. This is not to deny the importance of the lower levels, but that coverage of all four levels in driver education programs is essential. However, they see the higher-order levels as teaching *transferable* driving practices applicable to current and future driving situations and aimed at fostering safe *independent* driving, particularly in the first six months of solo driving.

Based on work by Bailey (2006), Watson-Brown et al. (2018a) also drew a distinction between teacher-centred and student-centred driver education. In the former, the focus of the education process is on what the teacher or instructor does. By contrast, the focus of the latter is on the student or learner's thinking and activity. In their research, Watson-Brown et al. (2018a) noted that teacher-centred or

focussed approaches, such as giving direct commands or instructions, in general tend to reduce the cognitive load or demand that is important during safety-critical driving scenarios. By contrast, student-focussed approaches (such as those involving self-reflection) encourage transfer of learning for application in future driving scenarios (where the instructor or supervisor will no longer be present). For Watson-Brown et al. (2018a), implementing higher-order approaches is consistent with a student-focussed approach in driver education. They wrote that traditional driver instruction (as mentioned earlier) emphasises the teaching of procedural and control skills such as steering and changing lanes. Consequently, they added, a teacher-focussed approach on its own cannot effectively educate at the higher levels of the GDE matrix where the learner's goals and motives are central. Nevertheless, teaching functional or procedural driving skills, which essentially require a teacher-focussed approach, underpins the higher-order aspects involved in learning how to handle safety-critical incidents on the road. Thus there is an essential synergy between teacher-focussed approaches and teaching procedural control skills, and between student-focussed approaches and higher-order learning.

In conclusion, Watson-Brown et al. (2018a, p. 88) stated:

> "Higher-order skills enable performance of complex tasks in dynamic environments requiring immediate decision-making and safety critical judgments. Consequently, higher-order skills may be implicated in improved crash rates critical for novice drivers when they graduate from supervised to independent driving."

Watson-Brown et al. (2018a) considered that it remains to be seen to what extent development of higher-order skills actually produces safer drivers in crash reduction terms. However, the theoretical construct of the GDE matrix suggests nurturing higher-order abilities will produce safer drivers. Hence, attention to higher-order skills in driving instruction should be included among best practice principles for driving instruction. At the same time, there is now emerging research pointing to a positive link between higher-order learning and safe behaviours. In an online survey of over 1600 young drivers in Queensland about the driving instruction they received and their self-reported driving behaviours, Watson-Brown, Scott-Parker and Senserrick (2018b) found that higher-order instruction predicted self-regulated safety orientations and was negatively associated with engagement in risky behaviours. In other words, the higher-order instruction produced safer driving intentions, and less of a tendency to engage in risky driving behaviours.

Some higher-order thinking skills are amenable to training, and research has found evidence that such training leads to improved safety behaviours. Concurrent with the publication of Watson-Brown et al.'s (2018a) paper was a paper by Molloy, Molesworth and Williamson (2018) which found that training drivers to implement the higher-order skills of self-explanations, self-reflection and making use of feedback improved speed management behaviour among 102 young drivers. Molloy et al. (2018) termed these three higher-order thinking skills as 'cognitive-based skills'. Despite the difference in name, they fall under both categories of higher-order skills and student-focussed teaching. Self-explanation is a student-focussed active learning strategy involving explaining one's actions to oneself and is known to improve learning outcomes. Reflection involves self-analysis of one's driving scenarios, prompted by 'how?' and 'why did it happen?' questions from the instructor/supervisor, and exploration of alternative actions through discussion. Making use of feedback by an instructor permits the learner to appraise their self-explanations and reflections more accurately. Molloy et al. (2018) found that, while training in all three cognitive interventions improved speed management behaviour, making use of feedback afforded the most enduring changes and promise for inclusion in novice driver training. Similarly, the findings of Prabhakharan and Molesworth (2011, p. 1696) suggested that,

> "…training programs that actively engage individuals about a driving episode by providing them with personalised feedback may be effective in curbing young drivers' speeding behaviour."

While all the above researchers have lauded the GDE matrix (and the higher-order levels) as an essential paradigm for contemporary driver education, other research has identified a critical caution to bear in mind. In a study of 22 young learner drivers and their 10 instructors, Rodwell, Hawkins, Haworth, Larue, Bates and Filtness (2018) found that the instructors considered that they had taught a comprehensive driver education course based on all four levels of the GDE matrix; however this was not reflected in the perceptions the young drivers reported after completing the course. Rodwell et al. (2018) wrote that the young drivers may have come away from the course thinking it was focussed on the lower levels of the GDE matrix, while not comprehending some of the most important contributors to young driver crash involvement. They go on to recommend explicit teaching in the higher-order components but fail to elaborate on this or give examples.

Nonetheless, it seems Rodwell et al. (2018) are advocating what Bailey (2006) and Watson-Brown et al. (2018a) have referred to as a teacher-focussed approach, such as in explicitly teaching about the effects of risk increasing factors of alcohol, fatigue and distraction etc. on driving performance. Such explicit teaching can also occur when instructors give objective feedback to the young driver, as advocated by Molloy et al. (2018) and by Prabhakharan and Molesworth (2011). However, a more rounded and enduring educational experience is afforded when teacher-focussed approaches such as explicit instruction are complemented with student-focussed approaches, for example 'commentary driving' as discussed in Section 2.3. Student-focussed approaches also include encouraging novice drivers to give feedback on what they have learned. As in the Rodwell et al. study (2018), novice drivers can be asked to provide feedback on their driving experiences by responding to questions structured around components of the GDE matrix. For example, open-ended feedback questions such as, 'What do you do if you are driving and a friend calls your mobile? And why?' prompt the novice driver to consider various higher-order aspects. These include the context of their driving at the time, the known risks surrounding driver distraction, self-reflection of own motives and behaviour, plus impulse control as to whether the driver ignores the call, answers while driving or pulls over to answer. The nature and depth of the answer should indicate to an instructor the extent to which the higher order aspects were considered by the novice drivers.

As stated above, Rodwell et al. (2018) highlighted the importance of checking for congruence in understanding between learner and instructor about what was taught. This finding relates to the study by Bates, Hawkins, Rodwell et al. (2019) of 114 young drivers and various psychosocial factors either included or implicit in the GDE matrix. The drivers were asked to rate themselves on a 7-point strongly agree / strongly disagree scale on several items such as, 'It is beneficial for learner drivers to receive feedback and learn how to judge for themselves their abilities in traffic situations'. This statement covers feedback, calibration, application of road rules and self-assessment in the GDE matrix.

In relation to a scale item on personal levels of sensation seeking in driving, Bates et al. (2019) found drivers who rated themselves as having high levels of sensation seeking tended to be drivers who focussed on the three lower levels of the GDE matrix, rather than in relation to Goals for Life (GDE top level). Noting other research that sensation seeking is linked to risky behaviours, the researchers considered that it is likely high sensation seeking drivers tend to believe it is important to focus on vehicle control skills and mastering traffic situations when teaching driving. Conversely, those drivers who revealed positive (safe) attitudes towards risk taking tended to be those who favoured the three *highest* GDE levels, including goals and contexts for driving and goals and contexts for living.

Bates et al. (2019) concluded that not only do some psychosocial factors influence perceptions about the benefits of learning indicated by the various GDE levels, but there may be a need for instructors to consider presenting information in different ways to reflect the diversity in psychosocial background of their learners. Additionally, they stated that, while it is important for instructors to stress the importance of vehicle control skills, it is essential they also communicate the need for skill development covering all

four GDE levels to ensure drivers do not over or under estimate the role of vehicle control skills in safe driving. Overall, instructors should endeavour to tie more closely the fourth level of goals for driving and life with the lower levels. Also, instructors should indicate to new drivers indicating high levels of sensation seeking that they are at greater risk of crashing.

As a final thought, one that Bates et al. (2019) did not mention, it is worth considering that instructors themselves may display a range of psychosocial dispositions that may affect their beliefs about what is important to teach in driving, and these beliefs may well be conveyed to the learner.

In sum, the main implications from the above research based on the GDE matrix are that:

- Novice drivers require learning experiences involving mixtures of the lower and higher-order GDE levels commensurate with their progress

- Instructors should be flexible in covering all four levels of the GDE matrix and in using a combination of teacher and student-focussed approaches, according to learner need and driving tasks

- Novice drivers require objective feedback on their driving from their instructor/supervisor but also subjective feedback gained through self-evaluation/reflection

- Novice drivers and their instructors/supervisors may have differing interpretations of the learning outcomes from the driving experiences such that learners may downplay the higher-order GDE levels; in such cases, instructors may need to be prepared through asking the learner 'How?' and 'Why?' questions about those driving experiences

- Instructors should be prepared to deliver learning content in different ways according to the psychosocial disposition of the learner (e.g. learners who, in initial discussion, reveal themselves to be high-sensation seeking persons may value vehicle control skills as more important than being aware of various risk factors).

2.3   General adult/teenage learning perspectives

This section first discusses general principles of adult learning before examining other perspectives specifically relevant to the Keys2drive program: coaching, parental involvement, resilience building, peer to peer education, commentary driving and professional learning for driving instructors.

2.3.1   Adult Learning principles

Chen (2014) describes three tenets at the foundation of adult learning. First, adult learners are self-directed and possess life experiences that should be recognised and utilised in the learning process. Adults value problem-based approaches and prefer content that can be applied to real life situations. They also like to know how education will help them achieve their goals. The teacher is not the gate-keeper of knowledge, rather they facilitate and collaborate in the learning process (Chen, 2014). Second, learning is transformative and leads to personal development. Transformations occur when existing beliefs are challenged by the presence of new, contradictory information which leads to an evaluation of the accuracy and relevance of old assumptions (Chen, 2014). The final tenet of adult

education is simply critical reflection. Critical reflection involves challenging assumptions and exploring alternatives in the light of new information. Effective adult learning recognises and follows these tenets.

Further to these three tenets, Collins (2004) identifies the principles of adult learning and offers examples of how they are applied in adult education. These are outlined in Table 2.2.

Table 2.2
Principles of adult learning and their application to adult education (Collins, 2004, p. 1485)

Principle	Application
Adults have accumulated a foundation of life experiences and knowledge.	Connect life experiences and prior learning to new information.
Adults are autonomous and self-directed.	Involve participants in the learning process, serving as a facilitator and not just a supplier of facts.
Adults are goal-oriented.	Create educational programs that are organised with clearly defined elements, clearly showing how the program will help participants reach their goals.
Adults are relevancy-oriented and practical.	Help learners see the reason for learning something by making it applicable to their work or other responsibilities of value to them.
Adults (all learners) need to be respected.	Acknowledge the experiences that adult participants bring to the learning environment, allowing for opinions to be voiced freely.
Adults are motivated to learn by both intrinsic and extrinsic motivation.	Show learners how the learning will benefit them and create a comfortable and appropriately challenging learning environment.
Adults learn best when they are active participants in the learning processes.	Limit lecturing and provide opportunities for sharing of experiences, questions, and exercises that require participants to practice a skill or apply knowledge.
Not all adults learn the same way.	Accommodate different learning styles by offering a variety of training methods (e.g., group discussion, role-playing, lecturing, cases studies, panel/guest expert, games, structured note-taking, individual coaching, demonstration, and variation in media used) and by using visual, auditory and kinaesthetic techniques.
Adults learn more effectively when given timely and appropriate feedback and reinforcement of learning.	Provide opportunity for feedback from self, peers, and instructor.
Adults learn better in an environment that is informal and personal.	Promote group interaction.

Examination of the tenets and principles of adult learning from Chen (2014) and Collins (2004) reveals connections with key best practice principles previously discussed in this chapter, such as self-reflection and assessment, provision of constructive feedback, fostering personal development, and use of coaching techniques. These important adult learning approaches are discussed next.

2.3.2 Coaching

In his internal review of the Keys2drive program, Rasch (2018, p. 18) provides the rationale for Keys2drive's adoption of coaching methodology, noting that coaching is defined as a student-focussed approach "…that engages body, mind and emotions to develop inner and outer awareness and

responsibility with an equal relationship between learner and coach" (EU HERMES, 2010). Moreover, in contrast to a teacher-focussed instructional approach chiefly aimed at passing a driving test, coaching is characterised by active learning techniques that prepare learner drivers for their solo driving careers. In particular, coaching raises self-awareness, responsibility and self-acceptance and the coach's role includes listening and reflecting back (and feedback) to the learner (EU HERMES, 2010).

Rasch (2018) also cited an investigation of the effectiveness of learner driver coaching by Passmore and Rehman (2012) in the United Kingdom. The study involved 24 driving instructors and 208 heavy vehicle driver trainees divided into two groups of 104. The trainees in Group 1 received a mixture of coaching and regular instruction approaches from driving instructors. Trainees in Group 2 received only the regular instruction. It was found that the Group 1 trainees receiving coaching spent less time in training, were more likely to pass their driving test on the first attempt and required fewer attempts to pass the driving test. When the Group 1 trainees and instructors were interviewed, both trainees and instructors reported positive aspects of the coaching approach. However, this was strongest for the coaching instructors, who felt that their coaching "facilitated an improved relationship and helped the learner to learn more quickly" (Passmore & Rehman, 2012, p.166).

In sum, coaching approaches differ from traditional teaching approaches through their prime focus on fostering learner self-awareness and mutual feedback. Research has shown it to be a superior instructional/learning approach.

2.3.3 Parental involvement

As many novice drivers participating in Keys2drive are likely to be attending secondary school, it is highly desirable that parents be fully informed about the program, especially as a learner driver's supervising driver will be a parent in most cases. Parental involvement in a child's education is a core feature of the Goals of Schooling in Australia (Melbourne Declaration, 2008), agreed to by all state and federal Ministers of Education. In addition, it is generally considered that the most effective child road safety interventions are likely to be those consistent with the School Drug Education and Road Aware's (SDERA) set of sixteen Best Practice Principles (2009), which include parents being fully informed about a program's aims and content.

In Western Australia, the *Keys for Life* pre-driver education program combines components of drug education and road aware programs, based on the SDERA (2009) principles. *Keys for Life* is integrated with the school curriculum and with the driver licensing system but a key feature is its promotion of parental involvement. An evaluation of the program (Zines, 2016) found 60% of the participating students were consistently implementing the program after it had formally finished. Positive outcomes for a similar whole school community approach in an Australian study championing parental involvement were also reported by Pierce (2016).

A paper by Rasch (2019) indicates that Keys2drive's component of parental involvement in the program currently places emphasis not on getting parents involved per se, but the *quality* of that involvement. In recognition of current research into parental involvement, Keys2drive now emphasises parents having more two-way interactions with their novice driver that encourage the driver to "…self-question, self-assess and self-correct their performance instead of just responding to instructions". Parents who reduce their instructions through such two-way interactions are adopting both teacher-focussed and student-focussed learning approaches, as discussed in Section 2.2 of this report.

Keys2drive's recent emphasis on quality parental involvement appears to be paying off. A consultant report (West, 2019) of a survey of over 2200 Keys2drive supervisors found they reported high confidence in their ability to supervise their learner driver before the Keys2drive lesson but reported still higher levels afterwards. This increased confidence included in relation to supervisors being able to

reach mutual agreement with their learners on aspects of the road rules and on the learners' driving techniques.

It should be noted that, while in the vast majority of cases a learner's supervisor will be their parent, in around 8% of cases they will not (West, 2019). These 8% could be siblings, grandparents, guardians, friends or employers. In some of these cases the learner's parents may simply be unwilling to be a supervisor, or unable/ineligible to drive or be a supervisor. When a learner is under age 18 and their parent is not a supervisor, the parents are still entitled to be involved in the Keys2drive program and to be kept fully informed.

In sum, best practice parental involvement emphasises *quality* involvement of the parent through interactions with the driver that encourages the driver's self-awareness, assessment and reflection.

2.3.4   Resilience building

In his Keys2drive review, Rasch (2018) covered resilience-based education as a core approach in both school education programs and Keys2drive. That coverage is not repeated here, but it is worth stressing that, in Keys2drive's incorporation of resilience education, it is consistent with a core approach in contemporary school education. Rasch (2018) goes on to explore resilience approaches in novice driver programs, citing the study of Senserrick, Ivers, Boufous, et al. (2009) involving 20,000 Year 11 students, which found that the resilience course group had a reduced crash risk after the program relative to a comparison group who didn't take the course. Moreover, Senserrick et al. (2009) commented that their finding was comparable to that of a major US high school drug education program also aiming to build resilience. It is also worth adding here that international longitudinal research has shown that building the socio-emotional lives of students, such as their resilience in the face of negative peer pressure, reduces tendencies towards risky behaviours as they become young adults (McNeely, Nonnemaker & Blum, 2002; Assailly, 2017). Education programs (including driver education programs) which aim to build resilience also, in doing so, promote various positive social principles such as informed decision making, safe celebrating, speaking up and looking after one's friends, both generally in life and specifically in relation to driving. They typically involve students' participation in drama experiences, peer to peer education and real-life experiences relevant to the social life and development of teenagers. While much of that last point goes someway beyond the scope of the Keys2drive program, it illustrates the powerful effect of resilience education in many aspects of teenagers' lives.

Building novice driver's resilience in the face of negative peer pressure, and during moments of tension between novice and supervisor/instructor is likely to reduce any tendencies towards risky behaviours during and after the P-phase.

2.3.5   Peer to peer education

To the extent that Keys2drive participants can interact among themselves, there may be potential for enriching the program through introducing opportunities for peer to peer education. Again, not only is peer to peer education a common feature of contemporary education programs, it is a student-focussed approach, and there is much evidence for its effectiveness (e.g. Kennedy, Cullen, Firman, Fleiter & Lewis, 2018; Weston & Hellier, 2018). In Weston and Hillier's study, similar age young drivers designed and delivered to their peers a safety intervention containing various interactive components, such as a young driver risk factors quiz. It was found that the peer intervention group a month after the program reported safer attitudes and intentions to drive safely than a control group. Additionally, how to achieve evidence-based practice in peer to peer education to improve passenger safety among Victorian high school students was informatively discussed by Buckley and Watson (2014). The implications for the Keys2drive program are that, while there are no opportunities for peer to peer learning during the Keys2drive lesson, encouraging learner drivers to contribute comments, ideas and tips surrounding their

involvement in Keys2drive via an interactive component of the Keys2drive website, for example, could facilitate participants learning from one another.

2.3.6 Commentary driving

Commentary driving is studied in the basic Certificate IV in Driving Instruction qualification. Bailey (2009, p.49) noted that commentary driving is a powerful learning technique that involves speaking aloud one's driving observations, thoughts and actions, for example, "I'm driving just under the speed limit; the car behind me is changing lanes; coming now to a line of parked cars - must watch out for pedestrians", etc. Such an activity assists in developing the higher-order skill of personal control in paying full attention to the driving task. However, it can also help learners become more self-aware of their developing skills when scanning the driving environment, particularly in appreciating salient features and in anticipating and perceiving hazards, as well as in self-monitoring and evaluating their progress in learning such skills.

Cantwell, Isler and Starkey (2013), for example, found that practising commentary driving improved novice drivers' hazard perception skills, visual search behaviour and situation awareness (see also Beanland, Goode, Salmon & Lenné, 2013; Crundall, Andrews, van Loon & Chapman, 2010). Additionally, besides this learning value for the student, the instructor and/or supervising driver can readily notice what things the novice driver is aware of, or concentrating on, and can discuss this with them as needed. This assists in developing mutual understandings between the novice driver and the instructor/supervisor about the traffic context being experienced during practice drives. Developing mutual understandings is crucial for the novice driver in making fullest sense of what the instructor/supervisor is saying, just as much as it is for the instructor/supervisor in fully appreciating how the novice driver perceives the driving task and traffic context. Without mutual understandings, the instructor/supervisor and the novice driver run the risk of 'operating within two private knowledge worlds'. Both need to engage in dialogue that elaborates meaning for the concepts being used (Rismark & Sølvberg, 2007). Such a dialogue form is typified by commentary driving in which the instructor/supervisor exhibits an intention to facilitate the novice driver's comprehension. This is irrespective of whether the instructor/supervisor is providing the commentary or is listening and responding to the novice driver's commentary. Rismark and Sølvberg (2007) provide further detail on elaborating the dialogue between the instructor/supervisor and the novice driver, but to a degree that is beyond the scope of a Keys2drive lesson.

In this regard, it is not advocated in this report that novice driver participants should necessarily practise commentary driving during their Keys2drive lesson, or indeed that any novice driver should do so in the early stages of learning to drive. It is most suited to the later learning consolidation phase, when the student has acquired some automated skills (see GDE matrix) when experiencing moderately demanding traffic conditions, and has found self-reflection and discussion of their experiences to be helpful. A later stage in learning to drive is also advisable because commentary driving adds considerably to the mental workload, which new learners commonly have difficulty in managing.

What is suggested, however, is that it may be appropriate for the instructor to briefly introduce commentary driving and, if requested, briefly demonstrate it to the learner and supervisor. Such a demonstration would show the novice driver (and the supervising driver) the salient things to notice while driving, which can be followed up in a brief discussion. At this demonstration stage, it is a teacher-focussed approach, but one that develops into a student-focussed one when the novice driver at a later stage practises commentary driving with their supervising driver. Not every driver finds commentary driving easy, but many do with practice (Steer Davies Gleave, 2004). If a novice driver participates in Keys2drive having already obtained a substantial amount of supervised practice (such as 50+ hours), then they may be ready to begin providing a commentary during their driving if they haven't already

begun to do so. One of several available useful practical guides to the commentary driving procedure is provided by VicRoads (2018) in its *Guide for Supervising Drivers.*

In sum, commentary driving assists in developing novice drivers' personal control in attending to the driving task, self-awareness of abilities in scanning for hazards ahead, as well as in novices' self-monitoring and evaluation of their progress in learning such skills.

2.3.7 Professional learning for driving instructors

The work of Rismark and Sølvberg (2007) offers some implications for the professional development of driving instructors. In their conclusion, they emphasised the value of instructors self-reflecting on their role in their dialogues with novice drivers (note, self-reflection is a higher-order skill in the GDE matrix (2006)). Rismark and Sølvberg consider that driving instructors can be assisted in their self-reflection through a peer debriefing process involving fellow instructors observing each other's dialogue with their learner drivers and mutually exchanging feedback on each instructor's dialogue effectiveness. While Rismark and Sølvberg did not elaborate further, it seems pertinent that the aspects of dialogue effectiveness on which instructors should provide feedback concern nurturing the higher-order skills of novice driver self-awareness and self-assessment contained in the GDE matrix (Table 2.1). For example, as discussed in Section 2.2, a key way of prompting self-reflection by the novice driver is for the instructor to simply ask 'How?' and 'Why?' questions in relation to driving situations the novice driver has just experienced. While the concept of peer review may be challenging, even threatening, to driving instructors, peer review is common in school and in tertiary teaching (Krumrow & Dahlen, 2002) and is often used in the health services professions, law, accounting and engineering.

Driving instructors should be encouraged to self-reflect on their professional performance, including how they encourage novice drivers to reflect on their driving development and performance.

2.4 Broader system contexts

The internal review of Keys2drive by Rasch (2018) explained in some detail the Safe System's holistic conceptualisation of the facets of road safety, and hence is not iterated here. It is sufficient to note though that the review asserts a commitment to reflecting the 'pillars' of the Safe System within Keys2drive delivery, particularly with regard to 'Safer Vehicles' by educating learners and supervisors about the need to use the safest vehicles they can afford.

Similarly, in his explanation of Graduated Licensing Schemes (GLS) for novice drivers Rasch (2018) noted the intention for the Keys2drive program to complement the GLSs existing in Australia, particularly with respect to aspects such as obtaining extensive amounts of supervised driving practice. In fact, Jerrim (2019) in 'Keys2drive — A Paradigm Shift' (Appendix 4 to the draft Curriculum for Training Driving Instructors) asserted GLSs are "our main defence" against the high early crash involvement of P-plate drivers (although he does cite some research that questions the link between extensive hours of supervised driving practice and crash reduction.) There is some empirical support for a program such as Keys2drive to complement GLSs. Over an eight-year period, Shell, Newman, Còrdova-Cazar and Heese (2015) followed a sample of nearly 152,000 Nebraskan teenagers from age 16 (the earliest age a provisional licence can be obtained in that state). The sample was deliberately selective to ensure it reflected the ethnic mix of the general population of Nebraskan teenagers at the time. Shell et al. (2015) compared crashes and traffic offences in the first two years of driving between teenagers who took a driver education course as part of their GLS, with those who did not take the course within the GLS. The course contained a mixture of classroom and practical driving sessions. Shell et al. (2015) found that those taking the course as part of their GLS had fewer crashes and offences than those who did not. As well, there is a substantial body of research attesting to the effectiveness of GLSs in reducing the road

toll among novice drivers (e.g. Williams (2017); Imberger, Healy, Catchpole, Mitsopoulos-Rubensa & McIntyre (2017)).

2.5 Aims of the Keys2drive program

Finally, it was also important that the evaluation study consider how well the Keys2drive program pursues its aims. This aspect was based on the inherent presumption that best practice programs are not only founded on a set of aims but are shown to actively pursue them.

At the time of writing this report, none of the information or materials available on the Keys2drive website featured a collective, succinct set of distinct program aims. Nevertheless, CASR was supplied with a draft statement dated 11 September 2019: "The Keys2drive Learning Approach" comprising six themes that can be considered the aims of the program as stipulated by the Commonwealth Government in its funding arrangements for Keys2drive. The six themes are interdependent. In paraphrased format, they are:

- A learning target focussed on 'six months beyond the test day' rather than just on the novice driver taking the practical driving test

- Learners are coached to decide what, where, when and how they learn to drive

- Gaining long, wide and deep driving experiences through development of self-awareness and self- monitoring abilities

- A gradual incorporation into the learner phase of the types of driving situations the learner would encounter while on their P-plate phase

- Learning becomes self-directed ('Find Your Own Way')

- Achieving six months on P-plates with zero injury crashes as a good foundation for lifelong learning.

(Note: in this report, the term 'P-plate' refers to the probationary/provisional licensing phase that follows the learner phase, as some licensing authorities refer to this phase as 'probationary' and others 'provisional'.)

Additionally, there are aims that are referred to in various locations in the latest Keys2drive internal review:

- [Contribute to] novice drivers having extensive real-world driving experience before they drive solo (Rasch, 2018, p. 8, 10)

- Minimise the risk of harm for new solo drivers and their passengers such as by addressing driver overconfidence and 'optimism bias', particularly in the first six to 12 months of solo driving (Rasch, 2018, p. 9, 10)

- Build a foundation of knowledge and skills for a lifetime of safe driving (Rasch, 2018, p. 9)

- Counteract traditional driving instruction approaches through active learning methods, self-management skills and by helping novice drivers take control of their own learning, (Rasch, 2018, p. 9, 10)

- Upskilling parents who feel underprepared for supervising a novice driver (Rasch, 2018, p. 10)

- Harnessing and enhancing the existing driving instruction sector through training (Rasch, 2018, p. 10)

- Complementing the GLS systems across Australia (Rasch, 2018, p. 10).

- Designing a program with applicability across all Australian states and territories (Rasch, 2018, p. 10)

The final aim in the above list is a major component of this report and is covered separately in Chapter 5.

2.6   Evaluation framework

The best practice and adult/teenage learning principles identified in the above literature are summarised in the evaluation framework outlined in Table 2.3.

<div align="center">

Table 2.3
Evaluation framework

</div>

Principle	sources
General	
Program has a sound theoretical base	Raftery (2016); GDE Matrix (OECD, 2006); Bates et al. (2019)
Pursues program aims as stated in Section 2.5	Rasch (2018)
Facilitates parental involvement	SDERA (2009); Zines (2006); Rasch (2019)
Instructors are encouraged to peer review	Rismark & Sølvberg (2007)
Teaching / learning approach	
In accordance with adult learning principles	Chen (2014); Collins (2004); Bates et al. (2019)
Both teacher and student-focussed approaches used	Watson-Brown et al. (2018a)
Provision of feedback – instructor/supervisor to driver	Molloy et al. (2018); Prabhakharan and Molesworth (2011)
Provision of feedback - driver to supervisor/instructor/Keys2drive management	Rodwell et al. (2018)
Builds resilience	Senserrick et al. (2018); Rasch (2018); Assailly (2017)
Coaching approach	EU Hermes (2010); Passmore & Rehman (2012).
Opportunities for driver peer to peer education	Kennedy et al. (2018); Weston & Hellier (2018)
Demonstration of commentary driving	Beanland et al (2013); Cantwell et al. (2013) ; Rismark et al. (2007)
Promotes self-assessment / self-regulation at both functional & higher order GDE levels	GDE Matrix (OECD, 2006); Haythorpe & Rasch (2018); Molloy et al. (2018); Watson-Brown et al. (2018b) Bates et al. (2019)
Promotes self-explanation / self-reflection	Molloy et al. (2018)
Content	
Knowledge & skills at both functional & higher order GDE levels	Watson-Brown et al. (2018a); GDE Matrix (OECD, 2006)
Understanding of risk increasing aspects at both functional & higher order GDE levels	Watson-Brown et al. (2018a); GDE Matrix (OECD, 2006)
Indicative of the Safe System components	Rasch (2018)
Complements and supports GLS (e.g. supervised practice in different road conditions)	Shell, et al. (2015); Rasch (2018)

It should be noted that the principles covered in Table 2.3 are not intended as comprising a definitive framework for evaluating any driver education program. Rather, it was developed selectively with the principles listed in Table 2.3 being relevant to the unique nature and operating context of the Keys2drive program for the purpose of assessing it in relation to best practice. In other words, the selected principles acknowledge that Keys2drive essentially consists of a single lesson with a trained instructor, with

subsequent ongoing support and mentoring. For example, while the GDE matrix (OECD, 2006) in its entirety may be considered a best practice approach, it would be unrealistic to expect the content in all twelve matrix cells to be evident in all the Keys2drive aspects evaluated. It should also be appreciated that there is some terminological overlap, particularly regarding the principles relating to higher-order learning but these are nevertheless all included to capture various nuances (e.g. self-assessment, reflection and self-explanation).

3 Gap analyses of Keys2drive materials for learner drivers and their supervisors

In this chapter, the current learning materials used in Keys2drive are considered in relation to the Evaluation Framework (Table 2.3), comprising the derived 18 best practice principles. It should be noted that these gap analyses only assess one prime component of Keys2drive — its learning and teaching materials. The gap analyses, therefore, are limited in that the actual delivery context of a lesson involving the learner's, supervisor's and instructor's interactions is excluded. A more rounded assessment of Keys2drive compared with the best practice principles would incorporate some objective in-car observation, but this is beyond the scope of the present project.

Before commencing the gap analyses of user materials, it should also be noted that some recommendations for program improvement were outlined in previous program evaluations of Keys2drive. It is worth, therefore as an initial form of gap analysis to briefly consider these previous program evaluations to gauge the extent to which relevant findings are reflected in Keys2drive's current program version.

3.1 Previous program evaluations of Keys2drive

The program review by Courage Partners (2013) relied predominantly on stakeholder consultation. Among the suggestions received during this process were calls for more follow-up learning opportunities beyond the first lesson, and incorporating commentary driving techniques (as discussed in Sections 2.3 and 3.2.2 of the present report). It was also suggested that timing the lesson to the learner stage of automated driving (also discussed in 2.3) would have the greatest learning impact.

While it is essentially an outcome evaluation study rather than a program evaluation, Senserrick and Boufous's study (2017) recommended an internal review of Keys2drive according to current trends in learning approaches and in road safety developments. The previously discussed subsequent internal review by Rasch (2018) indicates that this recommendation has been enacted.

3.2 Gap analysis of novice driver learning materials

Keys2drive has numerous materials primarily directed at novice drivers, though they also may be read by supervisors and instructors. The materials range from pamphlet-style information leaflets such as 'Why have a free Keys2drive lesson?' to online comprehensive modules containing guides to various essential information on starting driving. A representative selection of these materials was examined for the gap analysis, as well as the website as a whole from a user perspective.

3.2.1 Keys2drive Information Sheet (2019)

This leaflet briefly introduces the program and provides a short safety rationale (stating a 20-30 times higher crash rate in the first 6 months of the P-plate phase). The larger part of the leaflet introduces the Find Your Own Way approach, emphasising the need to obtain extensive amounts of supervised practice in varied road conditions, but also the need for learners to self-assess and self-reflect. Thus, the leaflet is supportive of the GLS and of higher-order thinking skills (GDE matrix) and student-focussed learning.

Links to the following learning modules are found on the Learning 2 Drive page of the Keys2drive website.

3.2.2 Learn from the Passenger Seat (https://www.keys2drive.com.au/learn-from-the-passenger-seat)

Importantly, at the outset, the main page for the 'Learn from the Passenger Seat' module advises novices that they can learn about driving while in the passenger seat not only *before* gaining a learner's permit/licence, but *afterwards* as well. The topic introduces some higher-order components of the GDE matrix by encouraging beginning drivers to observe the driver they are with in regard to facial expressions and to predict how the driver's feelings at any moment might affect their driving performance at the time. [Note, the three facial expressions depicted in the latter part of this topic no longer appear as images on the website.] The main page also provides links to sequential and interdependent sub-topics on further things a novice driver sitting in a passenger seat might learn from observing the driver, as follows:

The 'Learning the Road Rules' sub-topic provides tips on how to learn road rules and to observe their implementation (or otherwise) among other drivers. Importantly, this page encourages the novice to discuss what they have observed with their parent or supervisor, before going on to suggest the novice ask their parent/supervisor if they can provide a simple commentary on their driving. Novice drivers who provide such a commentary from the passenger seat of the driver beside them are developing the skill of commentary driving, albeit at a very basic level. Not only is a novice driver who does this learning the important aspects to think about while driving, but the parent/supervisor gains an appreciation of this emergent skill in the novice, in turn providing further material for mutual discussion about the driving task.

The 'Thinking like a Driver' sub-topic builds on the previous activity and encourages a focus on important aspects to notice about driving, by suggesting that the novice, while in the passenger seat, plans the intended driving route in their own mind. This page then encourages the novice to think in their own mind when they would slow down on approaching a corner, or when to merge, etc. After the drive, the page encourages the novice to reflect on how feelings might have affected the driver's behaviour.

The 'Judge Speed' sub-topic encourages the novice to estimate the car's speed at various times and then seek confirmation with a check of the speedometer and later discuss with the car's driver the reasons for their speed at the time. This exercise introduces and practises the self-assessment skill of calibration in the GDE matrix.

The subsequent 'Judge Crash Avoidance Space' exercise practises calibration in a more complex driving competency that combines speed estimation with hazard perception. Importantly, this sub-topic also encourages self-reflection, for example the suggestion that the novices ask themselves: "The next hazard that could enter my crash avoidance space is…"

The follow-on 'Detect Road Hazards' sub-topic provides further tips on identifying hazards in time and encourages the novice to articulate their observations in the manner of commentary driving. The sub-topic after that, 'Develop X-ray Vision', extends hazard perception into anticipating hazards that may be obscured, such as behind a parked car or bush.

All the above skills performed by the novice while in a passenger seat are consolidated in the final sub-topics in this section: 'Steer With Your Eyes' and 'Are You Visible', in which the novice has to consider the extent to which the car they are in is visible to other road users at the time.

Finally, it is worth noting that the whole of the *Learn to Drive - Learn from the Passenger Seat* module implements several Keys2drive aims, including developing self-awareness, addressing overconfidence in one's abilities, implementation of active learning methods, and involving and upskilling parents, as illustrated in the above discussion. The module also embodies several adult learning principles, such

as immediate relevance, building on prior learning and reinforcement, and utilising informal and personal learning settings.

3.2.3   Just Got Ls – (https://www.keys2drive.com.au/just-got-ls)

This module's introductory page emphasises program precepts such as active learning, taking the initiative and 'Find Your Own Way'. There are links to three sub-topics:

'Getting Started' begins by stressing taking active control of one's learning, but also working collaboratively with the supervisor. It encourages the novice to practise their car control skills to achieve skill automation. CASR suggests adding an explanation for the reader as to what skill automation means in relation to driving, and how to recognise when the stage of automation is achieved.

The 'Working with your Supervisor' sub-topic reinforces controlling one's own learning, but also working collaboratively. It extends into setting learning goals and making the most of the supervising driver's expertise but provides some tips for dealing with interpersonal tension or differences of opinion when the learner's feedback differs from the supervisor's perspective. Importantly, this information is written in a way that is amenable to reading by both novices and supervisors.

The subsequent 'Extra Help' sub-topic expands on the issues of tension and conflict resolution by suggestions to seek the advice of an accredited instructor. The sub-topic appears to be written with supervising drivers in mind, although this relevancy is not mentioned.

3.2.4   Had Ls a While (https://www.keys2drive.com.au/had-ls-a-while)

This module presents several sub-topics:

- How to form good driving habits
- Tactics for handling unfamiliar situations
- Tips for driving at night
- Tips for driving in the rain
- Tips for driving on country roads
- Tips for city driving
- How to park
- How to parallel park.

Collectively, these sub-topics embody much of the GDE matrix horizontal levels, ranging from basic car control skills (such as how to indicate turns and how to park) to higher-order skills (such as pre-planning a driving route and anticipating hazards ahead while driving). Also covered is awareness of risk increasing aspects such as fatigue when driving at night, and the need to increase following distance when driving in rain). The parking sub-topic suggests the driver self-reflect on their performance and discuss with their supervisor how they went. However, this self-awareness follow-up advice could usefully be added to each of the sub-topics under Had Ls a While.

3.2.5   Nearly at Ps (https://www.keys2drive.com.au/nearly-at-ps)

This module begins with the sub-topic 'Nearly at Ls' which, logically, would be more appropriately placed within the initial Learn to Drive module, than in the 'Nearly at Ps' module.

The next sub-topic, 'Before Going for Your Ps', briefly encourages the learner to self-assess by: "taking a good, hard look at your driving ability". CASR suggests augmenting this coverage with specific examples of relevant driving abilities to self-assess (e.g. keeping within the speed limit, anticipating

other road user's likely movements). Importantly, the coverage then mentions the problematic nature of overconfidence before recommending the learner acquire as many supervised driving hours as possible in varied road conditions as the best way to ensure they are ready for the P-phase. The learner is also encouraged to be aware of how their moods may affect their driving performance.

3.2.6   Safe Driving on Ps (https://www.keys2drive.com.au/safe-driving-on-ps)

This module congratulates the new P-plater while also reminding the reader that the first six months on a P-licence are the most risky in terms of crashes and losing a licence through accumulation of demerit points. There are links to two sub-topics: 'Assess Yourself' and 'Reduce the Risks'.

'Assess Yourself' states:

> "Being a good driver basically equates to driving well regardless of what other things are going on, at all times. You need the skills to drive in different weather and different moods, with people in the car and on your own. Can you keep it together in bad traffic on a rainy day, when you're feeling stressed-out and everything has gone wrong? Have a good look at what your awareness skills are like. There's nothing wrong with realising your skills aren't as good as they could be. Good drivers keep noticing their weaknesses, and make the effort to improve."

While this coverage mentions essential points reflective of the GDE matrix, CASR suggests augmenting it with practical illustrations of a P-plate driver or two self-assessing themselves. For example, a male and female P-plate driver could be depicted narrating their self-assessments, covering essential points such as those in the above quotation. Such illustrations would more meaningfully demonstrate to the reader what is involved in self-assessment of one's driving. There are resourcing implications for this.

The 'Reduce the Risks' sub-topic presents several practical tips to increase safety margins (e.g. following distances). It then covers the importance of driving the safest vehicles that can be afforded (preferably high ANCAP-rated) and also suggests the P-plate driver continue having supervised driving occasionally. The final section looks at reducing specific risks such as in-vehicle distractions such as from mobile phones. Importantly, this coverage also encourages prior journey planning, such as travelling by alternative means to driving at night and by limiting the number of passengers carried (although some jurisdictions impose restrictions on night driving and peer age passengers).

The final part of the 'Safe Driving on Ps' module discusses a target of "six months zero harm", which supports the Keys2drive program aim of a focus on six months beyond the test day.

3.2.7   Outcomes of gap analysis of novice driver materials

The above gap analysis is summarised in Table 3.1, based on the evaluation framework (Table 2.3).

Table 3.1
Summary of gap analysis of novice driver materials

Principle	Evidence
General	
Program has a sound theoretical base	● (is indicative of GDE matrix)
Pursues program aims as stated in Section 2.5	● (e.g. in 'Learn to Drive from Passenger Seat' sub-topics)
Facilitates parental involvement	● (e.g. in 'Learn to Drive from Passenger Seat' sub-topics)
Instructors are encouraged to peer review	N/A
Teaching / learning approach	
In accordance with adult learning principles	● (e.g. in 'Learn to Drive from Passenger Seat' sub-topics)
Both teacher and student-focussed approaches used	● (e.g. in Information Sheet and Extra Help)
Provision of feedback - driver to supervisor/instructor/Keys2drive management	● (e.g. in 'Just Got Ls' sub-topic)
Provision of feedback - driver to instructor/Keys2drive management	No coverage found
Builds resilience	● (e.g. in 'Working with your Supervisor' sub-topic)
Coaching approach	N/A
Opportunities for driver peer to peer education	No coverage found
Demonstration of commentary driving	● (e.g. in Learning the Road Rules' sub-topic)
Promotes self-assessment / self-regulation at both functional & higher order GDE levels	● (e.g. in 'Judge Speed' and 'Assess Yourself' sub-topics)
Promotes self-explanation / self-reflection	● (e.g. in in Introduction Sheet and 'thinking Like a Driver')
Content	
Knowledge & skills at both functional & higher order GDE levels	● (e.g. in 'Getting Started' and 'Assess Yourself' sub-topics)
Understanding of risk increasing aspects at both functional & higher order GDE levels	● (e.g. in 'Had Ls a While' and 'Reduce the Risks')
Indicative of the Safe System components	● (e.g. safest vehicles in 'Reduce the Risks')
Complements and supports GLS (e.g. supervised practice in different road conditions)	● (e.g. in Information Sheet and 'Reduce the Risks')

● means evidence of the principle was found. N/A means not applicable as the principle essentially pertains to instructors and supervisors, not novice drivers.

It can be seen in Table 3.1 that the materials aimed at novice drivers embody nearly all of the best practice principles listed in Table 2.3. While the ● symbol denotes evidence of the principle, it does not on its own indicate the strength or amount of the evidence. In this regard, where applicable, CASR has made suggestions for further improvement.

The two areas in which no coverage was found relate to interactive learning approaches — feedback from novice drivers to instructors and peer to peer education activities. The study of driving instructors by Rodwell et al. (2018) (discussed in Section 2.2) illustrates the importance of instructors obtaining feedback from their novice drivers to ensure the concepts and skills they intend to impart are perceived that way by the novices. This point gains further support from Bates et al.'s (2019) finding that some

psychosocial dispositions such as sensation seeking may affect learners' beliefs about what aspects of driving are important to learn and master. There does not appear to be any encouragement in the novice driver materials on the website for novice drivers to provide feedback to their instructors on their teaching (this is irrespective of whether instructors ask their novices for such feedback).

Also, as discussed in Section 2.3, opportunities for peer to peer education are a common feature of contemporary education programs and are a key ingredient to building resilience. While there are no practical opportunities during the Keys2drive lesson for novice drivers to interact with their peers, this is achievable in the context of the website. Earlier in this chapter, CASR suggested including in the 'Assess Yourself' sub-topic videoclips of novice drivers articulating their self-assessment thoughts to illustrate how this process works. However, there are opportunities for the website itself to be much more interactive, utilising solicited and unsolicited input from novice drivers. This could be as simple as displaying on the website examples of feedback comments made about the program, if such a facility were provided. A more complex approach could involve a monitored online discussion forum where novice drivers (logging in with their Keys2drive ID), can post comments or questions, with responses as needed from the staff team. For example, the question: 'How risky is texting while driving?' could be answered briefly but supplemented with a link to the relevant section under 'Safe Driving on Ps', as part of Keys2drive's provision of ongoing support to participants. However, providing such a monitored online discussion forum would have implications for the allocation of resources.

Keys2drive has a Facebook page which presents quiz-style questions on road rules but also posts comments from appreciative learners and supervisors, including a prize-winning cartoon video made by a learner participant, subsequently featured in *Girlfriend* teen magazine. However, the main Keys2drive website does not appear to advertise the program's presence on Facebook such as by a suggestion to post feedback on the Facebook page (although at the very end of the page there is a small icon). Monitoring, responding to and moderating additional Facebook posts will have resourcing implications.

While the notion of peer to peer learning is well supported in the literature and is prevalent in educational practice, there would be barriers in relation to the Keys2drive program. These include the aforementioned resource implications, but also limited opportunities for engagement with other learner drivers once their free lesson has taken place, plus privacy concerns. Privacy concerns relate to learner drivers who request no ongoing liaison with Keys2drive, as well as drivers who are happy for their comments to be shared with others provided they are de-identified (e.g. use of fictitious names). Nonetheless, while acknowledging such barriers, it is suggested consideration be given to providing peer to peer learning opportunities via the Keys2drive website.

Such opportunities, which would assist in advertising Keys2drive, form one suggestion for improving the website. Other suggestions are discussed in the following subsection, looking at the overall structure of the website and an introductory video, rather than just the various learning materials.

3.2.8 Keys2drive Website

For a first-time viewer of the website, it is not immediately clear what content is available, except through the small three horizontal lines menu icon (≡) which inexperienced internet users may not understand, or through scrolling down some considerable way to find the sections relevant to learners, supervisors and instructors. CASR suggests that the 'Learning 2 Drive' section, for example, which covers a wide range of sub-topics, display an overall 'contents' listing, site map or other overview of links to specific topics on the left-hand side of the home page. The SA Government's My Licence website (www.mylicence.sa.gov.au) is a useful example of an information intense resource catering to various categories of users. It organises the vast amount of diverse information so that it can be easily accessed, either through the overall site map or through drop-down filtering menus on the home page.

Additionally, some users might appreciate being able to download a single document, containing all the sub-topics, as a pdf file. Furthermore, given the ubiquitous use of smart phones, especially among young adults, consideration could be given to developing a phone app specific to learner drivers, with all website content pertaining to learner drivers made available, and a similar phone app for supervisors. Provision of phone apps would be useful in areas where internet access is poor or unavailable.

The Keys2drive introductory videoclip for novice drivers (web: Keys2drive home page), in just under six minutes, introduces the program and explains how interested novice drivers can register on line for their Keys2drive lesson. It also explains the unique learning approach of a focus on higher-order thinking skills, as distinct from physical car control skills. Consistent with the Keys2drive ethos, the presenter's style is to ask open-ended questions, encouraging the novice driver to think about the driving task, what skills they themselves believe they need to master, and to take control over their own learning pathways.

While the video makes worthwhile initial viewing by both novice drivers and supervisors, CASR suggests adding words to the home page indicating that the video is relevant to both. It is also suggested that the video show learners gaining experience in regional driving conditions, not just in suburban areas. Moreover, while the video to some extent depicts learners from diverse ethnic backgrounds, the learner footage could include a wider age range of learners, reflecting the full age range of novices taking up the program. Additionally, both male and female presenters could be employed. Finally, when the presenter discusses the need for the learner to take control of their learning to drive, the accompanying video shows a supervisor using his hand to increase the learner's turning of the steering wheel. While such intervention may occasionally be necessary for safety reasons in the early stages of learning to drive, CASR suggests Keys2drive staff reconsider the juxtaposition of this scene with the spoken words in the videoclip. There are resourcing implications for amending and/or expanding the video.

The website contains a worthwhile page on 'Safer Cars', giving tips on how to ensure a novice driver drives the safest vehicle that can be afforded, together with a short videoclip on the ANCAP star rating system and the program of crash-testing new vehicles. However, the 'Safer Cars' page is located under the 'News' menu of the website, rather than under the Learning2Drive and the Teaching Someone2Drive menus, where it would be more likely viewed by the intended audiences. Even so, a link to the Safer Cars video is sent to all learner drivers and supervisors after completion of the Keys2drive lesson.

3.3 Gap analysis of materials for supervising drivers

Keys2drive has produced a number of materials for supervising instructors, both in hard copy and online format.

3.3.1 About the Learning Approach

This information sheet introduces various aspects of Keys2drive's learning approach, emphasising how to help learners to self-mage their learning, the importance of having quality conversations about the learner's driving, and metacognition or thinking about one's learning.

3.3.2 A basic before you drive checklist (undated)

Despite the title, this information sheet is intended for supervising drivers, though novice drivers my well read it. It is suggested, though, that if the prime intention is to inform supervising drivers, a more pertinent title would be advisable, to make it more likely that supervising drivers read the checklist. While the checklist includes necessary safety matters and information about legal requirements, it also covers pre-drive concerns such as ensuring sufficient prior sleep and removal of in-car distractions. There are also sections on the 'Find Your Own Way' approach and the importance of using language meaningful to the learner that are indicative of the GDE matrix and other elements of best practice.

3.3.3   Question How You're Going checklist (undated)

This checklist is available in both hardcopy and on the website under Supervisor Downloads. While it is aimed at supervisors, that aim is not made apparent on the hardcopy version. Nevertheless, the checklist is a useful tool to assist supervisors in obtaining feedback from their learner on their supervision approach. Some supervisors might be apprehensive about seeking feedback but the checklist offers gentle assurance through suggestions of simple questions to begin asking their learner (e.g. 'How do you think you went?), to specific tips on how to improve seeking feedback and making most use of it to improve the learning experience.

3.3.4   Teaching Someone 2 Drive (https://www.keys2drive.com.au/teaching-someone-2-drive)

The main item accessible in this module is the Supervisor Guide (also, available in hardcopy as an undated booklet). While this comprehensive guide includes a range of important information, such as references to the legal requirements for being a supervising driver, and how to find time for supervised drives, the guide generally embodies many of the best practice principles. The detailed comparison of the characteristics of the 'Find Your Own Way' approach with the traditional 'Do as I Say' approach, together with references to the high crash rate in the first six months on a P-plate, and substantial coverage of the need to gain extensive experience in varied road conditions are all indicative of adult learning principles and the Keys2drive program aims.

The discussion in the section 'You Can Both Feel in Control' illustrates the balance between teacher and student-focussed approaches, as well as giving examples of encouraging the novice driver to self-reflect. The guide also contains prompts to the supervisor to seek feedback from the novice, specifically in relation to who is 'taking control' of the learning process and clarification of any unfamiliar terms. Additionally, there is a substantial section on both giving and receiving feedback generally.

The 'Manage Confusion and Surprises' section discusses how negative emotions in both the novice and the supervisor can affect their performances in driving or supervising, which is reflective of an element in the GDE matrix. The 'Manage the P-plate Risk' section recognises the greater risk in the first six months on a P-plate by suggesting that the supervisor arrange driving experiences for the novice that approximate solo driving, such as by exposure to gradually more complex driving situations (e.g. rush hour traffic), that may not be present in a practical driving test. This section also covers some of the risk increasing aspects included in the GDE matrix.

The second available item is 'Start Teaching Before Ls'. Essentially, this replicates the 'Learning from the Passenger Seat' module under 'Learning 2 Drive', as discussed in section 3.2.

'Is Your Learner P-plate Ready?' extends the earlier coverage under 'Manage the P-plate Risk' by introducing driving experiences that approximate the P-plate phase. There is also a link provided to the instructor guide: 'P-plate Ready Indicator'.

'Helpful Hints for Supervisors' provides a concise summary of information contained in the Supervisors Guide. Similarly, the 'How You're Going Checklist' summarises key points in promoting self-assessment and self-reflection by the novice.

3.3.5   Outcomes of gap analysis of supervising driver materials

The above gap analysis is summarised in Table 3.2, based on the evaluation framework (Table 2.3).

Table 3.2
Summary of gap analysis of supervising driver materials

Principle	Evidence
General	
Program has a sound theoretical base	● (is indicative of GDE matrix)
Pursues program aims as stated in Section 2.5	● (e.g. in Supervisor Guide, 'Helpful Hints for Supervisors')
Facilitates parental involvement	● (for parents who are supervisors, in Supervisor Guide & 'Helpful Hints for Supervisors')
Instructors are encouraged to peer review	N/A
Teaching / learning approach	
In accordance with adult learning principles	● (e.g. in Supervisor Guide)
Both teacher and student-focussed approaches used	● (e.g. in in Supervisor Guide, 'Helpful Hints for Supervisors')
Provision of feedback – instructor/supervisor to driver	● (e.g. in in Supervisor Guide)
Provision of feedback - driver to supervisor/instructor/Keys2drive management	● (e.g. in in Question How You're Going Checklist)
Builds resilience	● (e.g. in 'You Can Both Feel in Control' sub-topic)
Coaching approach	Implicit coverage only (terms 'coach, coaching' not used)
Opportunities for driver peer to peer education	N/A
Demonstration of commentary driving	● (e.g. in Learning the Road Rules' sub-topic)
Promotes self-assessment / self-regulation at both functional & higher order GDE levels	● (e.g. in Supervisor Guide, 'Helpful Hints for Supervisors'))
Promotes self-explanation / self-reflection	● (e.g. in Supervisor Guide, 'Helpful Hints for Supervisors')
Content	
Knowledge & skills at both functional & higher order GDE levels	● (e.g. in Supervisor Guide)
Understanding of risk increasing aspects at both functional & higher order GDE levels	● (e.g. in in 'Managing the P-plate Risk' sub-topic)
Indicative of the Safe System components	● (e.g. safest vehicles in 'Reduce the Risks')
Complements and supports GLS (e.g. supervised practice in different road conditions)	● (e.g. in 'Managing the P-plate Risk' sub-topic)

● means evidence of the principle was found. N/A means not applicable as the principle essentially pertains to instructors and novice drivers, not supervising drivers.

It can be seen in Table 3.2 that the materials aimed at supervising drivers embody nearly all of the best practice principles listed in Table 2.3. In addition to the materials gap analysis, further evidence of Keys2drive's implementation of best practice comes from studies by West (2019) and Barbaro and Hawthorn (2019). West conducted an online survey of over 2200 supervisors who had participated in Keys2drive, and found that:

- while the vast majority of supervisors were highly aware of novice driver safety risks before the Keys2drive lesson, still more had become aware after the lesson

- supervisors reported the Keys2drive lesson had encouraged supervisors and their learners to have further discussions about the risks in the P-plate phase

- the majority of supervisors reported the Keys2drive lesson had encouraged their learners to seek out further, different driving experiences with their supervisor

- after the Keys2drive lesson, nearly all supervisors said they had observed a new appreciation in their learner of the risks facing them in the P-plate phase

- a majority of supervisors said the knowledge they had gained had improved their own driving techniques and knowledge, including of the road rules, buying a safe vehicle, and intention to access the program on a future occasion.

Barbaro and Hawthorn (2019) conducted in-depth interviews and focus groups among 36 supervisors not necessarily involved in Key2Drive. A number of their findings indicate that some of Keys2drive's emphases (as discussed in Section 3.2) are already being implemented by supervisors, thus indicative of further development:

- some supervisors began their role by explaining out aloud elements of driving while they themselves drove with the learner in the passenger seat (the usefulness of this is that it is a rudimentary introduction to commentary driving)

- many supervisors consider overconfidence and peer pressure to be substantial risks for learners but believe they have taught their learner to overcome such challenges (this indicates many supervisors already realise the importance of building resilience in the learner)

- almost all of the supervisors believe their role is not finished once the learner graduates to a P-plate and intend to be available for ongoing mentoring

- most supervisors consider safety to be the leading consideration when buying a car.

In relation to 'Facilitates parental involvement' in Table 3.2, it is worth noting West's (2019) finding that it is likely that just over 90% of supervisors are learner drivers' parents. Consequently, in the vast majority of cases, materials directed at supervising drivers will be read and understood by parents. However, as discussed in Section 2.3.3, supervisors who are not parents deserve to be kept fully informed about the learning process, even if they are themselves not drivers. CASR suggests the Teaching Someone 2 Drive module on the website, plus the materials available in the module, remind supervisors that if they are not the learner's parents they should seek to share and explain information about the program, particularly if the parents have literacy issues.

It is also suggested the Teaching Someone 2 Drive module contains prompts for supervisors to remind novice drivers that they should read through appropriate novice driver materials on the website, and to check what the novices might not understand. This is important because not all novices (and their supervisors) can read well and some may have no access to a computer with internet connection.

While the coaching methodology is not specifically mentioned as such within the supervisor materials, the important elements of coaching such as the focusses on encouraging learner self-awareness and mutual feedback (see Section 2.3.2) are nonetheless implicit of coaching rather than explicit. CASR suggests the introduction of the terms 'coach' and 'coaching' into the supervisor materials as a way of illustrating the different teaching approach in Keys2drive, as compared to traditional methods.

Finally, it is suggested that Keys2drive staff seek feedback on the website's structure and content from supervisors and instructors through post-program evaluation surveys and through providing an online feedback facility.

4 Driving instructor training, accreditation and professional development

Driving instructors are responsible for the delivery of the program in its entirety, and as such, their accreditation training and ongoing professional development are critical to the success of Keys2drive. This chapter reviews the driver accreditation process, specifically:

- The process of accreditation (e.g., format & content of training, and assessment)
- Quality assurance (how the quality of the training is assured and maintained)
- Whether current instructor training content is aligned with current road safety knowledge.

4.1 Driving instructor accreditation

In his program evaluation of Keys2drive, Ogden (2010) noted that the AAA had met its contractual obligation to establish and administer a driving instructor accreditation scheme and that at that time 581 licensed driving instructors nationwide had taken up Keys2drive accreditation, meaning that much of the industry had not been accredited in the program. Ogden discussed several obstacles to instructors choosing Keys2drive accreditation, ranging from instructor aversion (on diverse grounds) to the Find Your Own Way ethos of Keys2drive, to commercial reasons including competition with other driver training programs. Unfortunately, advice from Keys2drive staff is that current numbers of licensed instructors in each jurisdiction are not readily obtainable, meaning that no meaningful comparison can be made with Ogden's 2010 analysis. However, the Keys2drive 2019-2020 *Business Plan* states that there were 1439 accredited instructors at 30 June 2019, more than double the number in 2010. Ogden also noted the AAA's intention to conduct follow-up audits of program instructors and development of support videos for instructors.

Currently, the basic criteria for driving instructors to be accredited in the Keys2drive program are:
- A full Australian driver's licence
- An instructor's licence from the relevant state/territory
- A current Working with Children clearance
- Hold a Certificate IV in Driving Instruction.
- Use of a minimum four-star ANCAP rated vehicle
- Hold a current comprehensive motor vehicle insurance policy statement
- Hold an active ABN number
- Completion of the Keys2drive online accreditation course
- Commitment to abide by the Keys2drive Code of Practice
- Participation in ongoing professional self-development.

Instructors complete the accreditation course under the guidance and supervision of an assigned coach.

In Section 4.1 below, the hardcopy and online materials used in the accreditation course are reviewed through a gap analysis as performed on the novice driver and supervisor materials (Sections 3.2 and 3.3).

4.1.1 Gap analysis of materials for instructors

Keys2drive has produced a number of materials for its accredited instructors, both in hard copy and online format, though most are available online to instructors through using a secure log-in facility. Accredited instructors may operate in both Keys2drive contexts and privately (non-Keys2drive contexts),

and the materials generally encourage instructors to promote the benefits of the program as widely and as often as possible.

It is likely that one of the first things a would-be accredited instructor does is to the view the 'Keys2drive Instructor Video' on the website's home page. This short video introduces the unique nature of Keys2drive from an instructor's perspective and shows how to begin applying for accreditation. It contains testimonials from accredited instructors, with one or two promoting the importance of liaising with a novice driver's parents as they are the ones likely to fund future lessons. While the video points out that, in most cases, the supervising driver will be a young novice driver's parents, it does not pursue the value of nevertheless still liaising with parents who are *not* supervisors, and nor does this latter point appear to be reflected in the main body of the instructor training materials.

4.1.1.1 Accredited instructor training modules

The core instructor reference is a series of nine modules that a would-be accredited instructor works through online and/or in a group setting with fellow instructors. There is also a set of ten videos available in the instructor portal that trainee instructors watch in conjunction with working through the modules. Each trainee also has access to a coach/mentor to guide them through the modules and who marks written assessments. Additionally, there are several separate documents and external videoclips that the trainee will need to refer to.

The nine training modules are:

1. An introduction to your accreditation course

2. Background to Keys2drive

3. Enhancing the original concept

4. Solving the crash problem

5. Self-management and deep learning

6. Use deep learning to create long and wide experiences

7. Get P-plate drivers in safer cars

8. Deliver the free lesson

9. Administer the free lesson.

Module 1 introduces Keys2drive and the accreditation course, and covers novice driver crash risks and tips on studying. The trainee is required to watch the introductory video for instructors and read the Code of Practice before completing a related practical activity. The activity requires the instructor to self-rate how their conduct matches up to each of 13 required behaviours in the Code, giving reasons for their rating. Importantly, the fictitious example ratings shown indicate both high and moderate/poor levels of compliance. The trainee also has to complete a 12-item multiple choice quiz on the module content.

Module 2 extends the content of Module 1 in deeper detail, particularly in relation to road trauma. There are links to videos, with the practical activity involving self-reflection on their content. There is also a knowledge quiz on the module content. Importantly, the module includes discussion of the known ineffectiveness of exposure to graphic imagery as a behaviour change mechanism.

Module 3 focusses on the crash problem during the first six months on a P-plate, with crash rate graphs from several Australian and overseas jurisdictions. The information also covers the most prominent types of crash. However, the video contains the spoken statement: "…the only way a young person can be seen to be safer than their peers is if they have a significantly different learning experience, or if they don't drive or drive much less." While the intent of the statement is undoubtedly to stress the unique nature of the Keys2drive program, it ignores the proven role of Graduated Licensing Schemes in reducing road trauma during that critical period. True, the video does go on to generically list GLS requirements and conditions common across Australian jurisdictions, *but not so much* in the context of them substantially reducing risk. Nor is there any encouragement for instructors to reinforce the role of a GLS in reducing risk when they are conversing with a novice driver and supervisor during the Keys2drive lesson. There are resourcing implications for amending and/or expanding the video.

However, towards the end of the module is the statement: "Increasingly, programs like Keys2drive are being viewed by road safety authorities in a broader strategic context. We need to show that we can play a purposeful role in young drivers deciding to drive safer vehicles, travel at safer speeds and keep themselves and other people safer", providing some recognition of the Safe System.

There are two practical activities in Module 3; the first requires the trainee instructor to rate a learner driver having a Keys2drive lesson in terms of how optimistically (or not) that the learner perceives they will be a safe driver when they are on P-plates. The trainee is then asked to explore possible reasons generally for learners' self-ratings on optimism through identifying 'messages' or other indicators that the learners may be exhibiting. The second activity requires the trainee to explore the teaching implications of shifting the learning target from the end of the learner period to towards the end of the P-plate period.

Module 4 discusses instructors 'letting go of control' in favour of the Find Your Own Way approach by referring to 'growth mindsets' as a key way to address higher risk in the first six months on a P-plate. Growth mindsets are frames of mind that are integral to self-directed learning. The module's discussion is grounded in the work of Carol Dweck, one of the world's leading researchers in this field, and the module provides a link to instructors to see a videoclip of one of Dweck's talks. The module goes on to mention that self-directed and inquiry-based learning are not always found in schools. In fact, the concept of self-directed learning is currently somewhat contentious in debate about what curriculum content Australia's schools should be teaching and how. There are five practical activities the instructor needs to complete. The first two require the trainee to analyse and reflect on their teaching role over one or more Keys2drive lessons, for example when introducing the Find Your Own Way approach. The third activity involves recording and analysing a Keys2drive lesson with a learner, for sharing with the trainee's coach. The fourth and fifth activities help the instructor further explore the teaching/learning implications of shifting the learning focus to the first six months of solo driving.

CASR suggests that, while it is important that instructors learn to embrace Find Your Own Way, Module 4 could nonetheless still stress that there are some situations in which explicit teaching such as 'Do as I say' is more appropriate. These can include occasions in which a nervous beginning driver requests such an approach and when an instructor provides objective feedback. The situations also include explicit teaching about driver self-assessment when the value of this is not fully appreciated or understood by the learner or supervisor, and when initial discussion in the Keys2drive lesson indicates a driver is high sensation seeking and needs explicit advice that they are at a greater crash risk.

Module 5 focusses on the importance of deep learning; essentially, "Deep learning has the driver thinking deeply about their long and wide experience." It explains in simple terms, and by use of analogies, key concepts required in deep learning such as metacognition, self-assessment and being aware of emotions that can affect driving; concepts that are found in the GDE matrix. The five activity

sheets encourage the instructor to apply what they have just learned to teaching scenarios and/or their own driving. For example, in self-reflecting back on recent lessons they have taught, the instructor is encouraged to consider ways in which they have nurtured their learners' deep learning about driving manoeuvres taught or performed. In response to "I feel pissed off when drivers blast their horn at my learners", the instructor works through a series of questions to come up with practical, constructive and safe ways for dealing with the negative emotions. The second activity practises the skill of self-assessment, in which the trainee is asked to self-rate their performance in commentary driving. (It is in this module's practical activity that the skill of commentary driving is covered in some detail but is scarcely mentioned at all in other Keys2drive materials).

In Module 6, the previous coverage of deep learning is extended into a consideration of reaching a stage of automation of driving skills (see GDE matrix), allowing the learner to focus on development of higher-order thinking skills such as hazard perception. The module also explores calibration of driving skills, another feature in the GDE matrix. The remainder of the module looks at learners gaining wide experience as a way of consolidating their deep learning through application in diverse driving situations, in turn preparing learners for a better transition into the P-plate phase. There are three practical activities. The first requires the trainee to break down driving skills such as hill starts into individual skill components and then rate individually three learners' performances on each skill component, with a view to gauging when a learner has developed automaticity in performing the skill. The other two activities require the trainee to self-reflect on their role in encouraging learners in purposeful driving practice and in mixing elements such as Find Your Own Way and Long, Wide and Deep when delivering the Keys2drive lesson.

Module 7 covers the Safer Cars topic and video, together with a quiz.

Module 8 consolidates all previous modules through practical application in delivering a Keys2drive lesson to a learner and supervisor. The assessment component includes a quiz, self-reflection tasks and an opportunity to obtain objective feedback through asking a colleague to role-play a learner or supervisor during the discussion (theory) part of the Keys2drive lesson using the Road Map. The instructor 'delivers' that part of the Keys2drive lesson and follows through by asking for their thoughts on how the instructor performed. The instructor is also encouraged to repeat this exercise as many times as they feel they need to. The first of two activities require the trainee to self-reflect on their understanding of key messages in the Safer Cars module. In the second, the trainee self-assesses their performance in using the Road Map during a Keys2drive lesson.

Module 9 is devoted to explaining the administrative procedures instructors need to follow regarding record keeping before concluding the training package with a knowledge quiz.

In general, the content of the instructor training modules, together with the practical activities, are consistent with adult learning principles, particularly in relation to self-directed and self-paced learning, and in having immediate relevance when trainees self-reflect on their role in Keys2drive lessons they have given. The modules also embody aspects of the GDE matrix, particularly in relation to self-assessment and calibration of teaching skills. CASR considers there is no urgent need for amendment, except perhaps for stronger coverage in Module 3 of the role of a GLS in reducing novice driver crash risk, and modifications that may be indicated through feedback from coaches and module participants.

4.1.1.2 Code of Practice

The Keys2drive Code of Practice is a guide to the professional and operational conduct required of accredited instructors. It is based on similar codes adopted by various professional associations in the driver training industry. The introductory section of the Keys2drive Code draws attention to the need to encourage supervisors to gradually relinquish their control over the driving situation as the learner

accumulates more experience and assumes more control over the situation. However, this expectancy does not appear to be followed through in the main part of the code. It is not included at all, for example, in section 4.5 'Help New Drivers Become Safer Solo Drivers', as dot points such as "Teach only Keys2drive content during the free Keys2drive lesson" do not emphasise that the Code requires instructors to actively implement the 'Find Your Own Way' approach. However, the Code does cover in some detail the need to use a safe vehicle for program lessons.

4.1.1.3 Road Map

The Road Map is a pamphlet that folds out to an A3 size sheet (with 8 'panels'), that instructors can use to explain essential information to supervisors and learners new to Keys2drive. Topics covered in the 'panels' include: crash facts surrounding P-plate drivers; the differences between 'Do as I Say' and 'Find Your Own Way' learning approaches; aspects of deep learning or higher-order thinking skills such as self-assessment; the importance of learners gaining Long, Wide and Deep driving experience; and the importance of driving safe vehicles.

The first three panels, 'Our Problem', 'How Do You See the Problem?' and 'Become the Solution' would benefit from recognition of the role Graduated Licensing Schemes play in controlling the risks novice drivers face in their first six months on P-plates. As noted earlier, Rasch (2018) states there is an intention for Keys2drive to complement GLSs in Australia. While the Road Map rightly primarily promotes the benefits of participating in Keys2drive, these benefits occur within the broader system context of GLSs, which have done a great deal to reduce the road toll for P-plate drivers. Moreover, GLS requirements for learner drivers to gain substantial amounts of supervised driving experience in varied road conditions are reflected in Keys2drive's ethos of Long, Wide and Deep experience, as outlined in the Road Map's fifth panel.

Finally, it was revealed in the consultations that a handbook format was being considered to replace the Road Map to avoid misunderstandings surrounding the term 'map', to increase legibility through use of larger fonts, and to improve longevity as the current map sheet can be easily torn or stained. Also raised in the consultations was that alternative descriptions or slogans for Find Your Own Way and 'long wide and deep' would be desirable. Considering that these learning approaches are commonly referred to in schools, CASR suggests inquiries be made of schools as to how these approaches are termed, particularly when communicating with students and parents. Alternative ideas for slogans and terminology could also be gleaned through conducting focus group style discussions with former Keys2drive participants.

4.1.1.4 Self-coaching Tool for Delivering the Free Lesson (notes and video)

This self-coaching tool is aimed at assisting an instructor to introduce the Road Map to the learner and supervisor during the first half of the Keys2drive lesson. The tool is essentially a checklist which, with the accompanying website video 'Delivering the Free Lesson', provides a benchmark for instructors to self-assess themselves [note, on the website, the video is called 'Guide to Delivering the Keys2drive Theory]. The video depicts a typical discussion between an instructor, learner and supervisor during a Keys2drive lesson. Evident elements of best practice include:

- strong support for the program aims, such as '6 months on P with zero harm' and 'on-going support in the P-phase'

- reflection of adult learning principles such as recognition that not all adults learn the same way; choosing an informal learning environment and opportunities for sharing understandings; and finding out what driving experiences the learner has already gained

- a focus on higher-order thinking skills (e.g. that practising the Find Your Own Way and gaining Long, Wide and Deep experience in the learner phase carries over to the P-phase; being aware of current mental states such as apprehension when making a decision for a traffic manoeuvre)

- encouragement to the learner to self-reflect and self-appraise, such as on their perceived degree of safety as a beginning driver.

The accompanying notes outline to an instructor how to introduce each topic in the eight panels to the learner and supervisor, together with suggested questions to ask. However, while the notes give a total time guideline of just over 20 minutes for this discussion, the discussion shown in the video takes just over 30 minutes. Some instructors, particularly those new to the Keys2drive program, might find they experience difficulty reflecting all aspects of the program notes in a 20 minute 3-way discussion. Moreover, the 20 minute guideline does not take into account that some learners and supervisors may take longer, or give longer responses, to the instructor's questions. Feedback from instructors on how they use this guide may help in making adjustments to the tool.

Importantly, the notes provide space for the instructor to rate their performance on a 1 to 5 scale in relation to the desired performance: "I felt I explained each step well. I asked open questions (how, when, where, what and why) and got answers that told me I was relating the story (inherent in the Road Map) to the learner's and the supervisor's situation. They looked very interested. My timing was spot on." There is also space for the instructor to set their learning goal: 'How I can improve'. Some instructors may appreciate getting a fellow instructor to observe the discussion and provide third-person feedback (peer review).

4.1.1.5 Guideline for the Practical Activity

This document addresses the practical component of the Keys2drive lesson. Importantly the guide's preface states that the document is intended as a guide to the instructor "to up-skill or inform the *supervisor*", even if the practical activity chosen involves the learner driving. In the example given, if how to teach reverse parking is the chosen practical activity, the instructor's role is to assist the supervisor to encourage their learner to self-assess their parking efforts, as well as in providing tips on steering techniques for successful parking. Doing this blends both teacher and student-focussed approaches, as well as both high and lower order skills of the GDE matrix. Additional tips from the instructor encourage the supervisor to provide long experience through the learner performing parking repetitions, and wide experience through parking in different locations and situations. The guide's suggestion for having the learner sit in the front passenger seat allows the learner to provide a commentary on the supervisor's or instructor's parking efforts.

The remainder of the guide outlines, as examples, nine different activity scenarios for the practical component. Two are briefly discussed here.

In 'See a Driving Skill Being Taught', the stated objectives concern imparting to the supervisor the basic steps of teaching a skill and how to apply the Keys2drive principles of Long, Wide and Deep experience. For teaching a skill, the instructor explains the 'Do As I Say' approach compared with 'Find Your Own Way' and how to begin with the former, but work towards the latter. For Long, Wide and Deep, the instructor's tips include the need for practising repetitions of driving tasks (long), practising in different situations (wide) and self-assessment (deep learning).

In 'See a Driving Demonstration', the emphasis is on showing the supervisor and learner how to verbalise driving actions (Commentary Driving) but engaging in self-assessment in the verbalisations while conducting the drive. The guide suggests the instructor first demonstrate this, including deliberately making a small driving mistake. The instructor verbalises what the mistake was, along with

a self-assessment, and what they will do to correct the mistake. The self-assessment includes coverage of feelings that may have been experienced during the mistake, and which may have contributed to the mistake (e.g. feeling rushed).

4.1.1.6 Coach Using the Keys2drive Approach — Driving Instructor Guide (October 2019 draft)

Essentially, this guide introduces the concept of coaching and explains how it is different to traditional instructional approaches. The guide reflects a number of adult learning principles, such as recognition that not all adults learn the same way, that adults are self-directed and goal-oriented in their learning, and that their learning is relevant to their needs. For example, the guide's first pages stress that instructors should not so much use the guide prescriptively, but should choose and adapt what is relevant to them. The many opportunities for instructors to self-assess their abilities support and provide a feedback check on what they need to get from the guide.

Importantly, the guide informs instructors they should base their self-assessments across several lessons they have given rather than just one, because lessons need be adjusted with respect to the amount of driving experience their learner has already had prior to the Keys2drive lesson. The guide also suggests the instructor video or audio record the in-car component of the lesson (with the learner's permission). Making such an objective recording of the lesson would facilitate the instructor's self-assessment but it is also a means by which an instructor could seek a peer review of their performance if they wish to (noting there are privacy and other procedural matters that would need to be worked through to enable this to occur appropriately).

Encouraging instructors to assess themselves has the added bonus of illustrating to them, through the questions in the instructor self-check lists, how to encourage their learner drivers to self-assess. Encouraging learner self-assessment begins with asking learners to describe their feelings concerning a positive or negative driving episode, graduating to asking them to work out another way (or different driving experience) such that the learner can learn what they want to learn, but in a less risky way. An advanced format for self-assessment appears in the checklist instructors can use to help learners consider what driving experiences characteristic of the P-plate phase they can prepare for whilst still a learner. After using the checklist, learners are encouraged to consider the outcomes as a basis for discussion with the instructor of their future learning needs as a learner driver.

The guide reflects the GDE matrix with its references to both functional and higher-order driving abilities, as well as learners being aware of inner feelings that may affect their driving performance. It also does this through coverage of a novice driver's calibration of their driving skills, particularly with respect to feeling overconfident about their driving abilities.

The guide also advocates a balance between teacher and student-focussed learning. This occurs, for example, in 'Understanding Your Learner's Views' in relation to 'Find Your Own Way' but at the same time acknowledging that the converse 'Do As I Say' approach may be more appropriate for learners who are feeling over anxious, and indeed sometimes necessary on safety grounds. This need for balance between the two approaches is expanded in the segment, 'How to Use Find Your Own Way Discreetly', as some learners and/or supervisors may feel bewildered or threatened by Find Your Own Way and gentler instructor questions are called for. In fact, the guide could be usefully extended with some coverage devoted to how instructors can work with supervisors, particularly where the supervisor is somewhat hesitant or otherwise unsure about Keys2drive's methodologies.

Some sections of the guide advocate commentary driving in its very basic format. For instance, there are tips suggesting the instructor get the learner to say out aloud what they are about to do during their drive, and having the learner provide a commentary on the instructor's driving. Another section suggests the learner explain what is happening in the distance, or to the side, while they are driving. However, an

extended practice of commentary driving is not advocated, even in the 'Guide Learning Between Lessons' segment, which is an ideal opportunity for a supervisor and their learner to do so.

As previously mentioned, the Road Map does not address how Keys2drive complements a GLS. The Coaching guide could encourage instructors in a free lesson to refer to the GLS operating in the learner's jurisdiction and how it assists in the critical first six months of the P-phase, as well as in supporting Long Wide and Deep driving experience gained during the learner phase.

In the 'Empowering Learners with Find Your Own Way' segment of the guide, it is stated that, during the P-phase, "…there is no guidance from the passenger seat". While this statement acknowledges that the vast majority of driving trips during the P-phase occur as solo ones, it ignores the potential continuing learning experience for the P-driver when they are accompanied by an experienced driver sitting in the passenger seat and who may well provide advice in an ongoing mentoring capacity. As Barbaro and Hawthorn's (2019) survey shows, many supervisors are happy to do so.

A second minor area for improvement in the Empowering segment is the intimation that student empowerment is something that schools and parents generally avoid. Many parents, in fact, do seek to empower their children as it is integral to them becoming resilient. Resilience building through empowerment is also implicit in the Goals of Schooling in Australia (Melbourne Declaration, 2008). These broadly worded goals make an overarching commitment to support all young Australians through becoming confident individuals and active and informed citizens in particular. The school goals are further supported through the Australian Curriculum Assessment and Reporting Authority's (ACARA, 2013) mandated curriculum directions to achieve the agreed national goals. Empowerment through building resilience is a crucial component in school programs about resisting peer pressure to misbehave and in countering harassment and bullying. The Coaching Guide supports resilience building in learners, particularly through encouraging instructors to help learners become aware of and to control inner feelings that may affect their driving performance. It is likely learner drivers who have been involved in resilience building in school programs will find their school experience readily transfers to Keys2drive contexts. This point was confirmed in the consultations with Keys2drive staff.

4.1.1.7   Keys2drive Curriculum for Training Driving Instructors (draft by Jerrim, A., October 2019)

This document represents the latest initiative sought by AAA to ensure the professional development and performance standards of Keys2drive accredited instructors are evident in practice. It begins with a short history of the development of the Keys2drive philosophy, program content and delivery, while recognising some limitations. These limitations include the nature of the program (single session with ongoing support), but also the wider value of driver education programs generally.

The document correctly points out that long term positive effects of driver education programs have yet to be demonstrated, and that this may contribute to reasons why driver education is not usually included in Safe System models. This does not, however, mean that beginning drivers should receive no education at all. Similarly, most people would agree that beginning drivers require at least some training and consequently there is a quest to implement driver training programs that accord with best educational practice, in the informed expectancy that the training brings positive safety behaviours on the road.

In this regard, the document goes on to discuss the notion that a set of best practice principles has some validation for curriculum validation purposes in relation to "…how contact with participants can be prolonged, tactics multiplied [e.g. for remote areas] and integrated, and refresher training provided for instructors". It then asserts that the document has been developed as a curriculum for instructor refresher training. In particular, it was developed to "treat some of the problems the Keys2drive administration team has faced in communicating the pedagogical approach [Find Your Own Way] to

driving instructors and, through them, to learners and supervisors". Moreover, the document asserts, instructors' "…learning journey should be longer, wider and deeper and should ultimately contribute to Keys2drive achieving its aim". Bearing in mind that Keys2drive's pedagogy may be challenging for some instructors, consideration could be given to surveying how *confident* an instructor feels in delivering Keys2drive lessons. Value and knowledge are basic for an instructor to begin their Keys2drive lessons but confidence in their ability to coach rather than instruct (EU HERMES, 2010), for example, can indicate whether further support before they give Keys2drive lessons would be advisable.

The curriculum document differs from the face-to-face teaching approach of the former *Accredited Lesson Specification for Candidate Instructors (Driver Safety Services, 2009)* in that it is a self-paced version suitable for individual online completion, along with a set of practical activities. (It also covers the training and role of instructors' coaches, as discussed in Section 4.2). The 2009 and 2019 documents are both based on the same adult learning principles, but the latest one advises that the advantages of online delivery include that it improves accessibility and consistency, allows more time for completion and is financially practical. While online delivery limits opportunities for face to face peer interaction, the sharing of ideas can occur through the instructor's coach and a moderator.

4.1.1.8 Website Instructor Page – News & Newsletters

The instructor section of the website relates to some best practice principles from Table 2.3. It presents monthly newsletters that mostly provide updates and reminders regarding administrative matters such as record keeping and program promotion, but also news about Keys2drive (such as conference presentations), and an honour roll for long-serving instructors and those who have clocked record numbers of Keys2drive lessons. The 2019-2020 *Business Plan* reports that 'Instructor Milestones' are one of the highest clicked links in the newsletters.

However, there is potential for the newsletters to become interactive, perhaps by including short profiles and photos of instructors, short pieces written by instructors, or a Q&A style forum for discussing lesson issues and problems experienced in a generic sense. (Confidential, individual problems of course are best dealt with via the coaches/mentors and the Keys2drive staff). Again, as with the suggestion for the website providing an interactive component for novice drivers, doing so for instructors would require extra resources.

The news section contains links to detailed information on various administration 'FAQs' (such as filling in lesson feedback forms), but importantly also on various aspects of the Keys2drive philosophy and approach, including building resilience, parental involvement, coaching versus instruction, and optimism bias. Such information, reflecting best practice principles, is deserving of more focussed attention in the training modules and materials, rather than simply as links on the website.

4.1.2   Outcomes of gap analysis of accredited instructor materials

The above gap analysis is summarised in Table 4.1, based on the evaluation framework (Table 2.3).

Table 4.1

Principle	Evidence
General	
Program has a sound theoretical base	● (GDE matrix in Coaching guide; humanistic teaching in Lesson Specification)
Pursues program aims as stated in Section 2.5	● (e.g. in Self-coaching Tool; Coaching guide)
Facilitates parental involvement	● with supervisors who are the novices' parents (in training modules and website instructor News)
Instructors are encouraged to peer review	● (only via coach as peer; e.g. in training modules 4 and 8)
Teaching / learning approach	
In accordance with adult learning principles	● (e.g. in Self-coaching Tool; Coaching guide; training module 4; Lesson Specification; Curriculum for Instructors)
Both teacher and student-focussed approaches used	● (e.g. in Self-coaching Tool; Coaching guide; Guide for Practical Activity)
Provision of feedback – instructor/supervisor to driver	● (e.g. in Self-coaching Tool; Guide for Practical Activity)
Provision of feedback - driver to supervisor/instructor/Keys2drive management	● (e.g. in Self-coaching Tool)
Builds resilience	● (e.g. in Coaching guide; website instructor News topic)
Coaching approach	● (e.g. in Self-coaching Tool; Coaching guide)
Opportunities for driver peer to peer education	N/A
Demonstration of commentary driving	● (e.g. in Coaching guide (at a basic level); Guide for Practical Activity)
Promotes self-assessment / self-regulation at both functional & higher order GDE levels	● (e.g. in Self-coaching Tool; Coaching guide; Guide for Practical Activity; training modules)
Promotes self-explanation / self-reflection	● (e.g. in Self-coaching Tool; Guide for Practical Activity; training modules)
Content	
Knowledge & skills at both functional & higher order GDE levels	● (e.g. in Road Map; Self-coaching Tool); Guide for Practical Activity; training modules)
Understanding of risk increasing aspects at both functional & higher order GDE levels	● (e.g. in Self-coaching Tool; Coaching guide; training modules)
Indicative of the Safe System components	● (e.g. safest vehicles in Road Map; in training modules 3 and 7)
Complements and supports GLS (e.g. supervised practice in different road conditions)	● (e.g. in 'Self-coaching Tool; Guide for Practical Activity; training module 6)

● means evidence of the principle was found. N/A means not applicable as the principle essentially pertains to instructors and not novice drivers or supervising drivers.

It can be seen from Table 4.1 that the instructor materials were largely found to be in accordance with the best practice principles, except for the materials' absence of encouragement to inform and involve parents who are not their learner's supervisor.

4.2　Quality assurance

Two components of quality assurance are examined here:

- Monitoring of individual learner drivers and their supervisors

- Training and monitoring of instructors during their work with learners and supervisors

4.2.1　Monitoring of individual learner drivers and their supervisors

Monitoring of individual learner drivers and supervisors begins in the Keys2drive lesson when the instructor introduces and explains the Road Map with them. Panel 2 – 'How do you see the problem?' asks the learner and supervisor about what they believe in relation to the crash facts covered in the first panel. The accompanying rating scale asks learners to rate how safe a driver they think they will be when they get their P-plates. The responses indicate to the instructor how to adjust or pitch discussion of the remaining panels. For example, a learner who rates themselves on this scale as being safe may have already acquired much supervised practice and may be feeling overconfident of their abilities, whereas a low or midway scoring driver may have already developed a safety mindset, or they may just be a nervous beginner. The instructor should also be alert at this time to differing views between the learner and supervisor, a circumstance which may also become evident during the practice drive.

The monitoring continues after the practice drive when the instructor asks the learner to reflect on the experience. Here is an opportunity for the instructor to adjust their final comments on how the learner and supervisor can extend future practice driving into Long, Wide and Deep perspectives. Not long after the Keys2drive lesson, the learner and supervisor are each emailed follow-up questions by Keys2drive staff, though feedback on the lesson is also sought from the instructor.

The feedback questions to the learner are in multiple-choice style, with questions to supervisors worded slightly differently:

1) Was there a 15-30 minute theory presentation/discussion at the start of the Keys2drive lesson?
  　a) Yes, we talked about and went through a brochure - the Keys2drive Road map
  　b) We had a brief discussion but we weren't shown any brochure/information
  　c) No, we went straight into a practical driving lesson.

2) Did your supervisor attend the Keys2drive lesson with you?
  　a) Only for 30 minutes
  　b) For the full 60-minute lesson
  　c) Only the instructor and I went on the lesson
  　d) A supervisor different than the one I registered with attended the Keys2drive lesson with the instructor and me
  　e) My instructor told me I didn't need to bring anyone with me to the lesson.

3) Was there both a theory and driving component in your free Keys2drive lesson?
  　a) Yes, there was a presentation at the start and I drove for the rest of the lesson
  　b) Yes, there was a presentation at the start and the instructor drove for the rest of the lesson
  　c) No, we drove for the whole 60 minutes
  　d) No, it was all theory; we didn't get in the car.

4) What do you remember from the 'Drive a Safer Car' panel of the Keys2drive Road map? (tick all that apply)

        a) Buy the safest car you can afford

        b) You don't need a brand new car to drive a safer car

        c) The P-plater should drive the safest car in the household

        d) Don't remember

        e) There was no discussion about driving safer cars.

5) How did you hear about the Keys2drive free lesson?

        a) Friends or family

        b) Driving instructor or driving school

        c) Internet or social media

        d) Licensing authority

        e) Motoring club (RAA, NRMA, RACV, RACQ, RAC, RACT or AANT)

        f) Other, please specify.

While questions 1 and 3 (and question 4 to a lesser extent) essentially report on the instructor's performance, it is only question 4 that asks the learner and supervisor what they actually learned/recall. However, in Question 4 the five answer choices collectively preclude the learner reporting something else they remember from the 'Drive a Safer Car' panel. Question 5 asks how the learner/supervisor came to know about Keys2drive, which yields valuable marketing information. Question 2 is designed to indicate supervisor involvement in the Keys2drive lesson, which may indicate a need for follow up with the supervisor, although the instructor's role in the responses may also be pertinent.

CASR appreciates that such a post Keys2drive lesson survey needs to be sufficiently brief and concise to maximise learners' and supervisors' responses. However, there is no opportunity for learners and supervisors to report on what they learned and/or what was most valuable to them. This is prime information relating to the learning value of the program that, aside from Safer Cars, deserves to be sought. The approach to collecting learning outcomes was a discussion topic during the consultations, as covered in Chapter 6. At this point, though, it is suggested that, at a bare minimum level, consideration be given to trialling a sixth open-ended question, placed as the first question, and simply asking learners and supervisors what was the most useful things(s) they learned. This would have the effect of potentially collecting large amounts of data requiring textual analysis of some form and therefore require a specific skill set and accompanying resources.

Alternatively, such a learning outcome question could be structured in a similar format to current questions 1 to 5, but containing simplified versions of the GDE matrix levels, for example:

What things did you learn or discuss? (Tick as many as apply)

        a) How to use controls in the car (e.g. the handbrake)

        b) How to drive in traffic

        c) Planning a driving route

        d) How to think about how safely I drive.

It is also suggested that questions 1 to 4 have a free response / other comments option. Not all respondents will have something to say here but the responses that are provided may still afford valuable feedback on the program's content and delivery. Again, noting that responses would require textual analysis of some form and therefore require a specific skill set and accompanying resources.

In sum, while a post-lesson survey is essential to monitoring learners, supervisors, and instructors, it needs to be kept brief. Nonetheless, there are some opportunities to obtain more information from learners and supervisors on the learning value of the program.

4.2.2   Training and monitoring of instructors

Jerrim's (2019) draft Keys2drive Curriculum for Training Driving Instructors outlines the same nine training modules as in the Instructor Specification reviewed in Section 4.1. He backs up his curriculum document with references to a number of appendices, acknowledging that they are largely based on the work of Alan Drummond. It is therefore founded on many of the learning principles outlined in Chapter 2, such as the various aspects of metacognition, calibration and self-awareness skills in the GDE matrix. Drummond's work also recognises the need for instructors to encourage learner drivers to look ahead and pre-plan for their solo driving by identifying learner driving experiences that lead up to that next stage (e.g. encouraging learners to ensure they maintain adequate distance from the vehicle in front helps prepare them for solo driving).

Importantly, Jerrim emphasises that, during their accreditation course, instructors need to reflect on what they have learned and done, including the required practical activities, and to think deeply about their instruction of learner drivers and supervisors. Each module also has quizzes to assess knowledge learnt, but evidence of deeper learning comes through the reflective tasks requiring self-assessment as well as self-reporting of what was learned in the practical activities. The curriculum document acknowledges the subjective bias in this assessment approach, but that, aside from auditing of performance during an instructor's training, it is the only realistic option. Assigned coaches prevent instructors from moving to the next training module until the learning objectives of the previous module have been adequately demonstrated, providing a necessary quality assurance step.

For these reasons, an appendix of Jerrim's curriculum document provides a number of guidelines for coaches when assessing trainee instructors. Expressed in a style easy to interpret, these include:

- Participation: They gave it a good go

- Understanding: They get it well enough to move on to the next part of the module

- Self-reflective: They're questioning their practice and seeing ways to improve

- Change: They're beginning to change their practice and want to keep learning.

Each of these desired behaviours is sub-divided into three behavioral criteria, according to the evidence being sought, for example 'Understanding - Their responses suggest they're integrating requirements into their normal practice'. The coach then rates the response on a 5-point scale to assist in making decisions about the trainee.

On completion of the accreditation training package, trainees complete a course evaluation form covering how well they considered the training objectives were met and rating several training elements such as the assessment activities. There is also an opportunity to provide feedback comments that can contribute to consideration of course improvements.

The *Keys2drive Business Plan 2019-2020* indicates that monitoring driving instructor behaviour and compliance through learner and parental feedback is a current important feature. The eighth training module in the curriculum documents outlines to instructors how they will be monitored once they are accredited; for example that Keys2drive staff regularly audit the Keys2drive lessons through surveying learners and supervisors as outlined in Section 4.2.1. From both discussion about the audit frequency during the consultations and the program record data used for the demographic profile, CASR has

estimated that despite the attempt to audit all lessons, approximately one-fifth of Keys2drive lessons each year are able to be audited in this way. Information collected from the audits is required to be sent to the Commonwealth Government as the major program funder. The surveying also includes asking learners and supervisors to provide general comments on the Keys2drive lesson, as a means of identifying any issues being experienced that may warrant a follow-up phone call, whether some instructor refresher training would be advisable, or just clearing up any confusion.

However, the prime reason to obtain feedback from learners and supervisors on the content and approach of the Keys2drive lesson is that it is the most practicable means of gauging to what extent the program is being delivered according to its aims, and to advise Keys2drive management of any further modifications that may be needed. The Business Plan propounds an intention to "Upskill all instructors *to maintain minimum and consistent lesson delivery standards*". While such upskilling is laudable, it is chiefly through obtaining learner and supervisor feedback that maintenance of delivery standards can be assured. This matter is critical because, as the research of Rodwell et al. (2018) and Bates et al. (2019) demonstrated (discussed in Section 2.2), the content and skills driving instructors say they taught learners is not necessarily matched in those learners' perceptions of what they have been taught. Moreover, the consultations revealed that the basic Certificate IV in Driving Instruction does not necessarily equip all instructors to the same standards. Furthermore, the consultations revealed that some parents and supervisors, particularly those from non-English speaking backgrounds, can find the Find Your Own Way approach difficult to understand. Some parents and supervisors may even be averse to Find Your Own Way, believing it is the instructor's role, and not theirs, to teach their child to drive. Consequently, the monitoring of instructors' performance standards is essential for several reasons.

Learners and supervisors are also asked to rate their instructors on a 1 to 10 scale for how likely they would recommend the instructor to other family members or friends. The ratings contribute to an instructor's overall Net Promoter Score (NPS). An NPS on its own, however, may be an inaccurate indicator of an instructor's overall performance quality. Just because a learner or supervisor is likely to recommend an instructor to others does not necessarily mean the Keys2drive lesson was a quality one in terms of the Keys2drive aims for its Keys2drive lessons.

Keys2drive has recently developed and implemented a systematic format for monitoring instructor performance called All Stars, which is based around a number of measures. However, as discussed in Section 2.3.7, there is an opportunity to strengthen the instructor monitoring process through allowing instructors on a voluntary basis to peer review one another's Keys2drive lessons, as this affords some objectivity that balances the subjectivity of self-assessment (albeit monitored by a coach). Such a peer review could simply involve a checklist of the objectives for the Keys2drive lesson in which the peer reviewer rates and/or comments on attainment of the lesson objectives, while quietly observing a lesson (with the learner and supervisor's consent). AAA notes that, while the concept of peer review has theoretical merit, there would be a number of obstacles to its incorporation beyond an occasional mutual arrangement between two instructors. These obstacles include that instructors are often in competition with one another; there is no guarantee that the reviewer delivers better quality lessons than the reviewee; it would have cost implications in payments to the reviewer; and that the best reviewers would be coaches, who are already busy enough with their coaching role. Hence, it is suggested that instructors could simply be given information about peer reviewing if this is something they would like to try voluntarily.

An alternative approach to peer review would be a formal in-vehicle observational audit conducted by a Keys2drive staff member of one or more lessons given by an individual accredited instructor. In general, driving instructors would be familiar with such auditing as it is the main method by which Australian driver licensing authorities monitor the performance of its licensed driving instructors, particularly those

entitled to administer a practical driving test or other formal assessment of a learner driver for the P-plate phase. Such formal audits are commonly triggered by apparent irregularities in records kept by the instructor, unusual pass/fail rates of learner drivers, or complaints from learner drivers and parents. However, while formal auditing of accredited instructors is occasionally performed by Keys2drive staff, for example to investigate complaints, it would be very costly to implement on a systematic basis (in particular outside Adelaide where the Keys2drive team is based), even though it would yield more objective evidence of instructor performance standards. During the consultations, it was pointed out that, aside from monitoring performance standards at the individual instructor level, permitting observations of lessons would facilitate more rigorous evaluations of the value of the whole Keys2drive program. It would also more accurately identify those areas in which instructors tend to need more support.

Trainee coaches' reflections and feedback are used to further refine the curriculum for instructors and learners. Additionally, systematically monitoring consistency and differences across instructor performance was raised by Jerrim (2019), who suggested exploring questions such as:

- Do instructors teach in a significantly different way [i.e. with Find Your Own Way, etc.] than they did prior to their training course?

- If so, what are those ways and what effect does this have on how their learners learn, what they learn and their preparation for solo driving?

- To what extent do Keys2drive instructors teach in ways that are different to each other?

While exploring such questions has potential to yield much valuable information for refining program delivery to learners and supervisors, as well as in refining instructor professional development, it would require a substantial amounts of time of learners, supervisors and instructors.

In sum, the latest curriculum resource for training instructors is derived from relevant best practice principles. While the current monitoring of instructor performance is more subjective than objective, it does combine personal reflection with client feedback. There is an opportunity to strengthen quality assurance in the program through encouraging instructors to peer review and by exploring consistency and differences across instructors. Cost benefit analyses of these options would be a useful first step.

4.3 Alignment with current road safety knowledge

Current road safety knowledge is epitomised in the *National Road Safety Strategy 2011-2020* which, in turn, is based around the Safe System approach. At least one of the practical activities in the instructor training modules requires instructors to download and peruse the strategy, and answer questions on its content. Moreover, as indicated in Table 4.1, some instructor materials explicitly refer to the Safe System component of Safer Vehicles. Hence, on this level, the instructor materials can be considered to be in alignment with current road safety knowledge, (with the exception of inclusion of the role of a GLS in reducing crashes and crash risk among novice drivers, as previously mentioned).

It should also be appreciated that the nature of a Keys2drive free lesson is that, while it includes a practical driving component, the lesson in its entirety is not a traditional practical driving lesson that teaches how to drive. Instead, the focus is on *learning how to learn* about safe driving, specifically through the Find Your Own Way and Long, Wide and Deep focuses, and engagement in self-reflective processes. Consequently, the Road Map's second panel on crash facts does not mention specific causes of crashes such as excessive speed as the panel's prime focus is on what the learner and supervisor believe about the facts in relation to the learner's future driving. This is not to imply that knowledge of causes of crashes is not important in learning to drive, just that, in the confines of an hour

lesson, the focus is on critical learning processes. (Of course, during the discussion, topics such as speed and drugs may well arise, and that is entirely appropriate).

5 Considerations for program penetration — jurisdictions and remoteness areas

It is generally considered that factors relevant to learning to drive include: access to licensing services, roadworthy vehicles, a variety of driving environments and learner driver supervisors/mentors, as well as demographic sensitivities. Such factors are particularly salient in regional, remote and disadvantaged areas. Nonetheless, while Keys2drive is designed as a program to be accessible to most Australian learner drivers, critical practical limitations are that the program can only be delivered in locations where an accredited instructor is prepared to deliver Keys2drive lessons and where there are available supervising drivers.

Austroads has recently released a report, *Improving Driver Licensing Programs for Indigenous Road Users and Transitioning Learnings to Other User Groups* (Rajan, 2019), which, as the title indicates, while primarily targeting Indigenous groups, is nevertheless quite relevant to those in regional, remote or disadvantaged circumstances. Its recency and comprehensiveness makes it the most current and substantial guide available on improving driver training and licensing support for those in Australian regional, remote and disadvantaged areas.

The policy principles and delivery strategies formulated in Rajan's (2019) report were based on a literature review, consultations, and from a working knowledge of community-based program delivery, and are considered by Rajan to be applicable from local program delivery to national policy:

Removing and mitigating barriers to participation

Rajan (2019) writes that identifying, removing and mitigating barriers to obtaining a driver licence should be included in a) program design, b) the preparation of the program operating environment and c) in the education and engagement of local communities. For example, access to suitable safe, registered and insured vehicles and insurance cover for supervising drivers tends to be problematic in regional, remote and disadvantaged communities, but this fact has previously been applied successfully as a means of encouraging corporate sponsorship of driving programs.

As another example, working with local communities (e.g. in regional towns, remote areas and in migrant communities) to develop more relevant learning materials and learning contexts can be a very effective way of initiating local engagement and participation. Modifications to learning materials may mean greater use of graphics to assist with low levels of literacy and numeracy, and development of bilingual materials where required.

In regional and remote areas, providing a mix of mobile and on-site program delivery can address barriers of isolation. On site delivery could include at schools, workplaces, community centres and even at correctional facilities (provided supervising drivers are available).

Program design promoting participation and outcomes

"Program effectiveness will be enhanced by evidence-based design to provide the highest quality training and maximise participation and outcomes" (Rajan, 2019, p.36). Such design is also enhanced by outcome-focussed evaluations, and this includes evaluation of learning outcomes.

Flexible design and contextualised programs

Rajan (2019) notes that applying a rigid program model is unlikely to succeed in needs-specific communities, such as those in regional or remote areas or in disadvantaged circumstances. The

diversity in location, protocols, language, values and resources across such communities often means that a customisable approach, together with the ability to respond to and engage with specific community characteristics, is likely to be the most effective approach. For example, the range of driving environments available in a locality may well need to be considered in program delivery. Similarly, sensitivity to gender values in a particular community may be relevant to the selection of a driving instructor for a pupil.

However, there is a caveat to bear in mind: modifying program content and approach to suit particular client/community needs may compromise Keys2drive's strong alignment with the identified best practice principles. For example, some families/communities may be averse to a student-focussed teaching approach, as discussed in Section 4.1.1.6, such that an instructor has to predominantly rely on teacher-focussed approaches. Similarly, to the extent program delivery can be expanded to geographical locations lacking diversity in driving environments / road conditions, there will be limited contexts for the instructor to address risk increasing aspects at lower and higher-order GDE levels.

Community engagement and ownership

Consultation and indeed close collaboration with key individuals or groups in a community will help determine the most effective ways to deliver a locally relevant program. These can include major employers such as mining companies or agricultural businesses in regional/remote areas, local agencies supporting socio-economically disadvantaged individuals, and leaders in Indigenous and some migrant communities. Emphasising the mutual benefits for both program providers and local groups can result in additional resources being made available to support driver training programs, while also bringing broader outcomes such as improved community access to employment, and to education and health services (for example through community transport and/or ride-sharing).

Rajan's (2019) principles have implications for Keys2drive in its planning to better meet the needs of those in regional, remote and disadvantaged areas. For example, community engagement can be pursued by Keys2drive through closer collaboration with existing community programs supporting learner drivers, as discussed in Section 5.4 along with the outcomes of the demographic profiling.

5.1   Demographic profile of program penetration— aims and methodology

Haythorpe and Rasch (2018) have indicated that Keys2drive was designed to be applicable to all Australian states and territories. However, it is not clear from the Haythorpe and Rasch document to what extent the program has been delivered to, or is applicable to, participants in regional and remote regions. In particular, the AAA (2017) recommended, among its proposed improvements for Keys2drive, that:

- There be a more even distribution, geographically, throughout the year; and across different socio-economic groups, and

- There be better take-up in regional areas that may not be currently well served by driving instructors.

It was considered by CASR that a demographic profiling of Keys2drive clients would assist translation of Rajan's (2019) principles and delivery strategies into suggestions applicable to the program, as discussed in Section 5.3.

CASR obtained a sample of Keys2drive program records (in Excel) from 2014 to 2019 covering numbers of Keys2drive lessons given, by date, location and learner driver date of birth and sex, and by accredited instructor details (n = 1,383). Data from the years 2014 to 2019 were selected rather than including an

earlier period as the analysis focus was on *current* program penetration and a six year period comprising full calendar years of data would afford a sound driver sample size for analysis.

A relatively small proportion of the program record sample (less than 5%) proved to be erroneous. For example, there were 4,353 cases where CASR's subtraction of a driver's date of birth from the Keys2drive lesson date resulted in a zero age, or less than age 16. Moreover, while it is not unknown for learner drivers to be middle-aged or even older and some of these do take Keys2drive lessons, an initial examination of the program records revealed 5,060 learner drivers aged over 100. Clarification with Keys2drive staff suggested that the most likely explanations in such cases were errors in filling in the electronic application form, for example when supervising drivers or parents recorded their own date of birth rather than the learner's, or the lesson date was filled in instead of date of birth. Sometimes, a driver had applied for a Keys2drive lesson, but had not taken it up. The identified anomalous records were not included in the analyses, leaving 174,375 drivers for 2014-2019

5.1.1   Overall demographic profile of learner drivers

The average age of those in the Keys2drive learner driver sample was 17.9 years (standard deviation (*SD)* =2.86). Learner drivers may drive with a supervising driver from 15 years and 9 months in the ACT and from 16 years in other Australian jurisdictions. The relatively high average participant age of 17.9 suggests that some participants become learner drivers at age 17 rather than 16. Alternatively, some may be taking a Keys2drive lesson after they have acquired extensive amounts of supervised practice by which time they are aged 17. It would be useful to record the numbers of hours attained from the driver's official logbook at the time of the Keys2drive lesson. Not only would this enrich any future analyses of program record data, but would instantly indicate to an accredited instructor how to pitch the free lesson according to how much driving experience the novice has already accumulated.

With erroneous records removed, the age profile of Keys2drive drivers aged 16 to 30 (very few drivers in the program are aged over 30) is shown in Figure 5.1 (refer Appendix A1). Slightly over half of the drivers (55.1%) in the sample identified as female and 2.3% self-identified as Aboriginal or Torres Strait Islander.
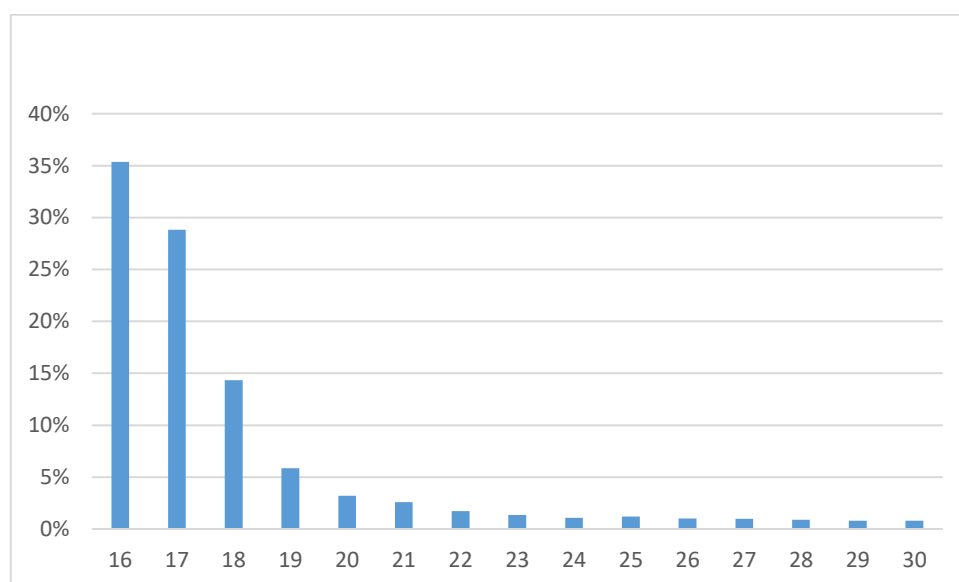

Figure 5.1
Proportions of Keys2drive drivers by age (2014-2019)

Noting that the vast majority (77%) of its learner driver clients in 2019 were aged 16 to 18 inclusive, the AAA requested that the demographic profile of Keys2drive focus on that age group and for the most recent time period, 2018 to 2019. As this is a best-practice evaluation, there were no methodological barriers to this.

5.1.2 Penetration profile approach

The AAA assisted CASR to identify an appropriate methodological approach to calculate the "reach" or penetration of Keys2drive lessons across Australia in different jurisdictions and in different geographical areas. The AAA then assisted CASR to identify and analyse the relevant data to calculate the penetration rates of Keys2drive lessons for jurisdictions and remoteness areas.

The ABS provides annual estimates of population by jurisdictions broken down by age group (ABS, 2019a, 2019b).

The ABS divides Australia into 5 classes of remoteness on the basis of a measure of relative access to services. (https://www.abs.gov.au/websitedbs/D3310114.nsf/home/remoteness+structure). They are major cities of Australia, inner regional Australia, outer regional Australia, remote Australia and very remote Australia. As Table 5.1 shows, not all jurisdictions have all five remoteness areas.

Table 5.1
ABS Remoteness Areas by Jurisdiction

Jurisdiction	Major Cities of Australia	Inner Regional Australia	Outer Regional Australia	Remote Australia	Very Remote Australia
New South Wales	Yes	Yes	Yes	Yes	Yes
Victoria	Yes	Yes	Yes	Yes	NO
Queensland	Yes	Yes	Yes	Yes	Yes
Western Australia	Yes	Yes	Yes	Yes	Yes
South Australia	Yes	Yes	Yes	Yes	Yes
Tasmania	NO	Yes	Yes	Yes	Yes
Northern Territory	NO	NO	Yes	Yes	Yes
Australian Capital Territory	Yes	Yes	NO	NO	NO

The ABS also provides data on population estimates by remoteness areas for all jurisdictions. At the time of this review, the latest published figures relate to 2018. As the review is focused on 2018 and 2019, it was necessary to project population by remoteness areas for 2019.[2]

Using data from 2008 to 2018, the proportions of population in each remoteness area for different jurisdictions were identified for each year from 2008 to 2018. This shows that proportions were relatively stable across time (e.g. approximately 74% of NSW population resided in 'Major Cities' and this 74% figure was consistent across the 2008 to 2018 time period). The average remoteness area proportions over 2008 to 2018 were calculated and then applied to the populations of those aged 16, 17 and 18

---

[2] At the time of finalising this report the ABS has released only preliminary population estimates by remoteness areas at June 2019.

years old. This assumes the remoteness area proportions would remain constant in 2019 and would apply consistently across different age groups. This result then provided estimates of the population for different remoteness areas by jurisdiction for those aged 16, 17 and 18 years old, for 2018 and 2019

Using these data, ABS estimates of population for those aged 16, 17 and 18 years old by jurisdiction and remoteness areas were identified as a starting point to identify relevant denominator data for the calculations. While this would yield the number of people in these age categories in jurisdictions and remoteness areas, it would not identify learner drivers in these categories.

The Queensland Government's Department of Transport and Main Roads publishes the number of learner licence holders for those aged 16, 17 and 18 years old (at June 2019). This was compared with the equivalent population group in Queensland (as outlined in Section 5.1.2) to determine an approximate learner licensing rate for Queensland.

As the number of learner licence holders are not readily available for all jurisdictions, the Queensland learner licensing rate was used as a proxy and applied across the other jurisdictions and remoteness areas. The goal was to estimate the number of learner licence holders aged 16, 17 and 18 years old for all jurisdictions and remoteness area. The assumption was made that Queensland's learner licence rates would be a suitable proxy measure to apply across jurisdictions and remoteness areas. The objective of this approach was to best estimate the potential audience for Keys2drive lessons.

Penetration rates were then calculated by taking the ratio of Keys2drive lessons delivered by jurisdiction and remoteness areas (for those aged 16, 17 and 18 years old), compared to the estimation of learner licence holders for the equivalent jurisdictional / remoteness area groups.

The same process was applied to specifically examine those aged 16 years old, who represent more than a third of Keys2drive lessons delivered in 2019. The same process was also applied to equivalent 2018 data to afford a 2018 / 2019 comparison.

The AAA advised CASR that the results from a penetration analysis of Keys2drive lessons by jurisdiction and remoteness areas would be sufficient to assess policy and program options in the context of this review. This analysis is presented in Section 5.2.

5.1.3   Socio-economic perspectives

CASR initially investigated socio-economic perspectives using the ABS Index of Relative Socio-economic Advantage and Disadvantage (IRSAD). In its consideration of the advantages and disadvantages of using the IRSAD, the AAA noted that the most important data cube of the IRSAD is the SA1 level index based on a sub-set of postcodes. Moreover, the only accurate way to calculate penetration of Keys2drive lessons in IRSAD areas would be to map the street addresses of Keys2drive participants to SA1 areas and then identify the number of possible participants in the Keys2drive program by each SA1 area. The AAA considered that such an approach would be well beyond the scope of the evaluation and estimates would be a less robust than an analysis of penetration by jurisdiction and remoteness area.This is because, with using the IRSAD, assumptions would need to be extended to *smaller* geographic locations and the validity of the assumptions would diminish.

5.2   Penetration profile

The penetration analyses first considered 16, 17 and 18 year olds collectively, then with a focus just on 16 year olds.

5.2.1 Penetration profile of 16, 17 and 18 year olds

The penetration rates (by population) of Keys2drive lessons for 16, 17 and 18 year olds, by remoteness area for 2018 and 2019 can be seen in Figure 5.2 (refer Appendices A2 to A5).
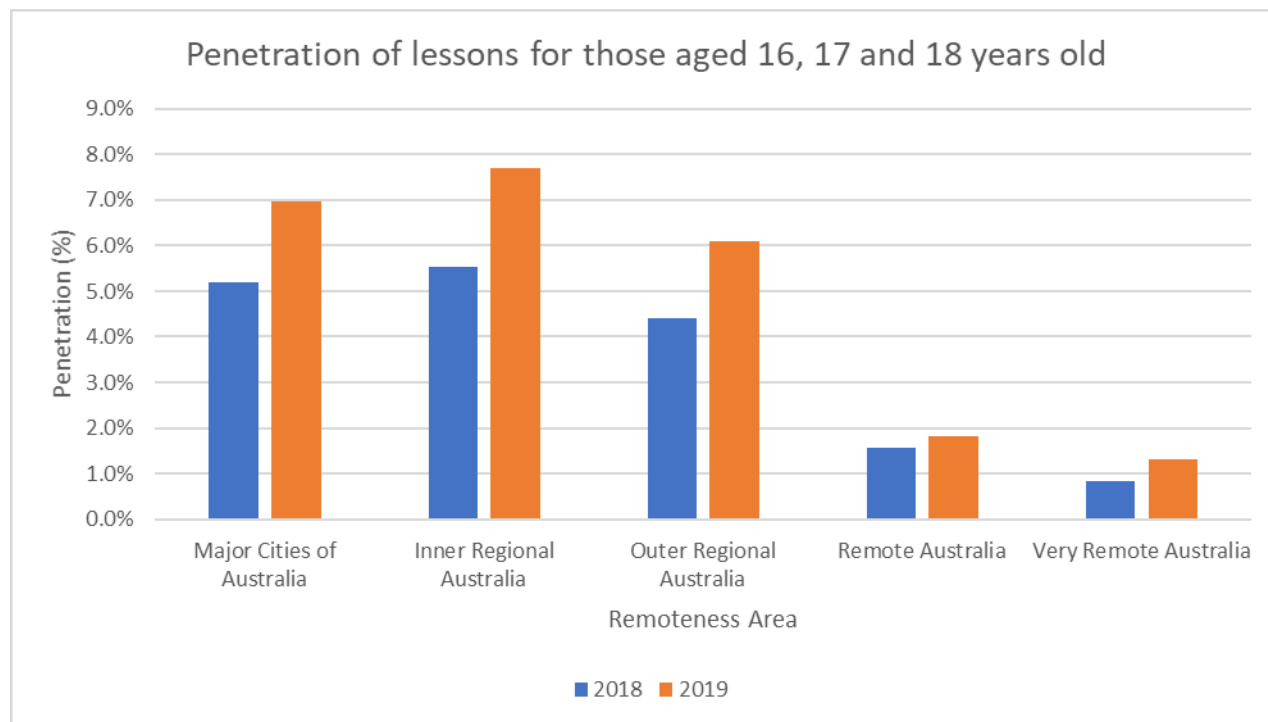

Figure 5.2
Penetration of lessons by remoteness area for those aged 16, 17 and 18, in 2018 and 2019

It can be seen in Figure 5.2 that penetration rates (per population) increased from 2018 to 2019 in all remoteness areas.

The five remoteness areas for Figure 5.2 were then regrouped into three: major cities of Australia; regional Australia (inner plus outer regional areas); and remote Australia (remote plus very remote). The results can be seen in Figure 5.3 (Appendices A2 to A5).
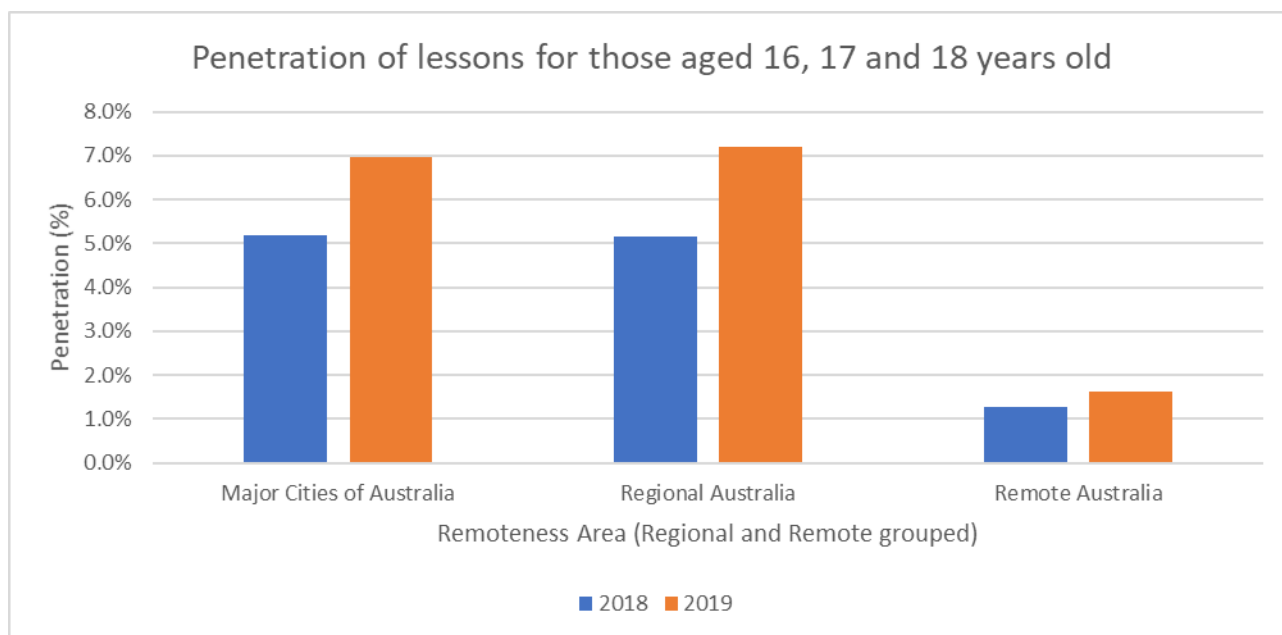
Figure 5.3
Penetration of lessons by Major Cities, Regional Australia and Remote Australia for those aged 16, 17 and 18, in 2018 and 2019

It can be seen that Figure 5.3 reinforces the overall trend in Figure 5.2 of a strengthening penetration across all geographical areas in 2019 compared to 2018. However, Figure 5.3 shows that, in 2018, the penetration rates for Major Cities and for Regional Australia were at a similar level, with this equivalence continuing into 2019. Additionally, whereas the penetration rates in Major Cities and in Regional Australia increased by 2% from 5% to 7% from 2018 to 2019, the penetration rate in Remote Australia increased by less than 0.5% across the two years.

Figure 5.4 indicates the penetration rates across jurisdictions and nationally, for 16, 17 and 18 year olds, for the years 2018 and 2019. (Appendices A2 to A5)
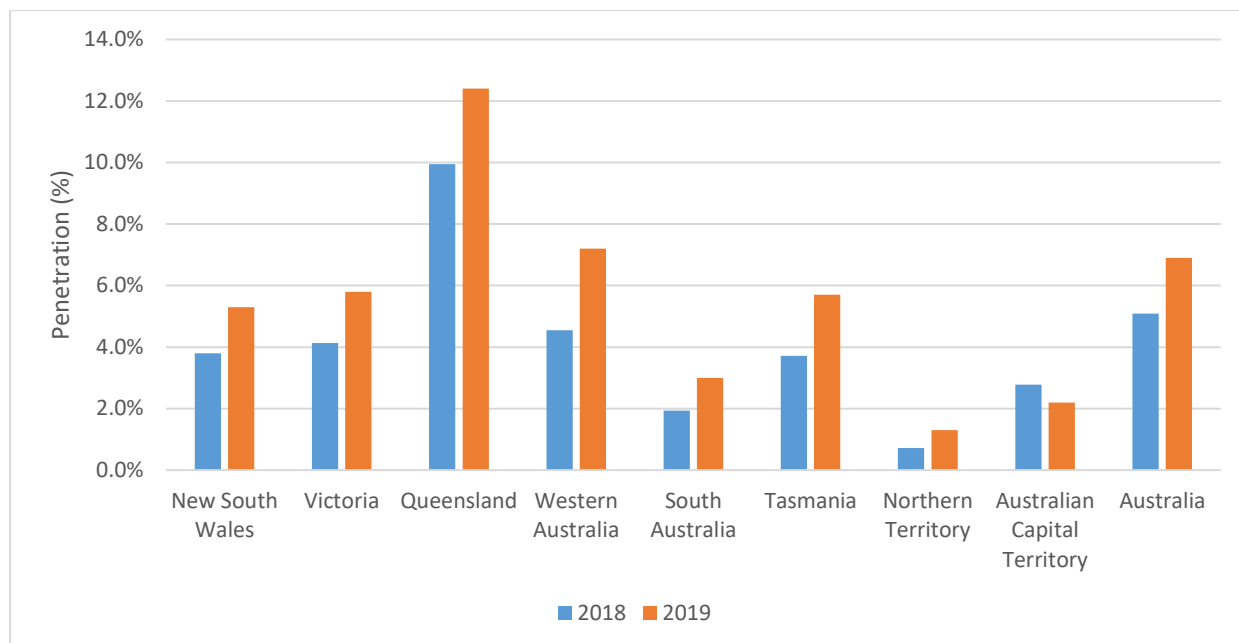
Figure 5.4
Penetration of lessons by jurisdiction for those aged 16, 17 and 18, in 2018 and 2019

It can be seen in Figure 5.4 that, in all jurisdictions (except the ACT), and nationally, the 2019 penetration rates were higher than those in 2018. The highest penetration rates in 2019 were in Queensland and Western Australia. The lowest 2019 rates were in South Australia, the Northern Territory and the ACT.

The penetration rates (by population) of Keys2drive lessons for 16, 17 and 18 year olds, by both jurisdiction and remoteness area for 2019 can be seen in Figure 5.5 (see Appendix A5).
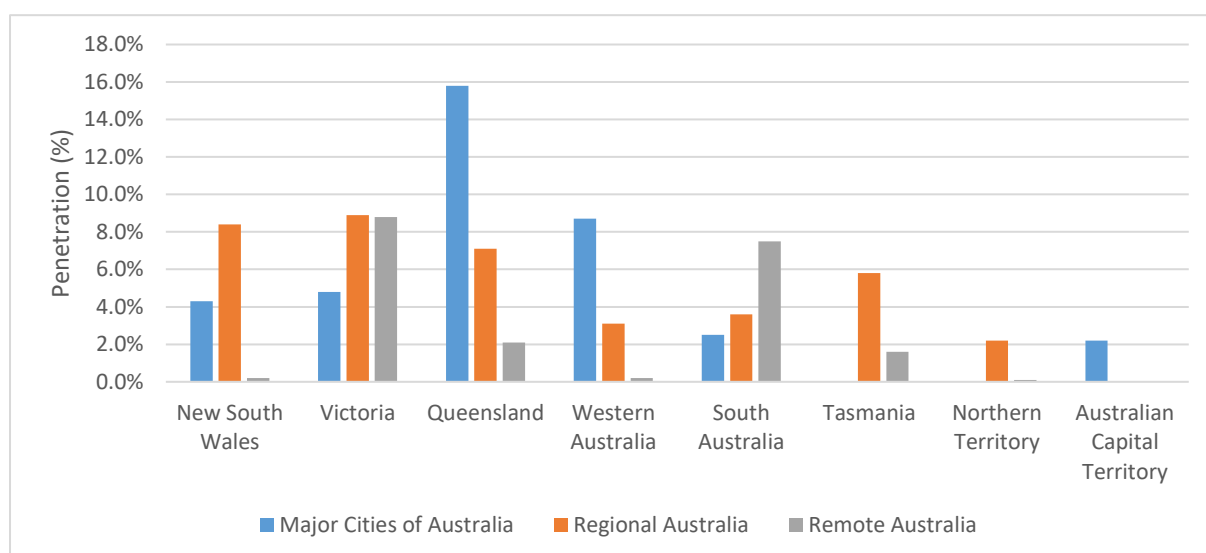

Figure 5.5
Penetration of lesson by remoteness area in each jurisdiction for those aged 16, 17 and 18, in 2019

It can be seen in Figure 5.5 that major cities in Queensland and Western Australia have the highest penetration of Keys2drive lessons. Figure 5.5 also shows that New South Wales and Victoria have the highest penetration of Keys2drive lessons in regional Australia and that Victoria has the highest penetration of Keys2drive lessons in remote Australia. There are relatively low penetration rates for remote areas in New South Wales, Queensland and Western Australia. This profile helps identify areas for policy and program attention.

5.2.2   Penetration profile of 16 year olds

The penetration rates of Keys2drive lessons for 16 year olds only, by remoteness area, and for 2018 and 2019 can be seen in Figure 5.6 (see Appendices A6 to A9).
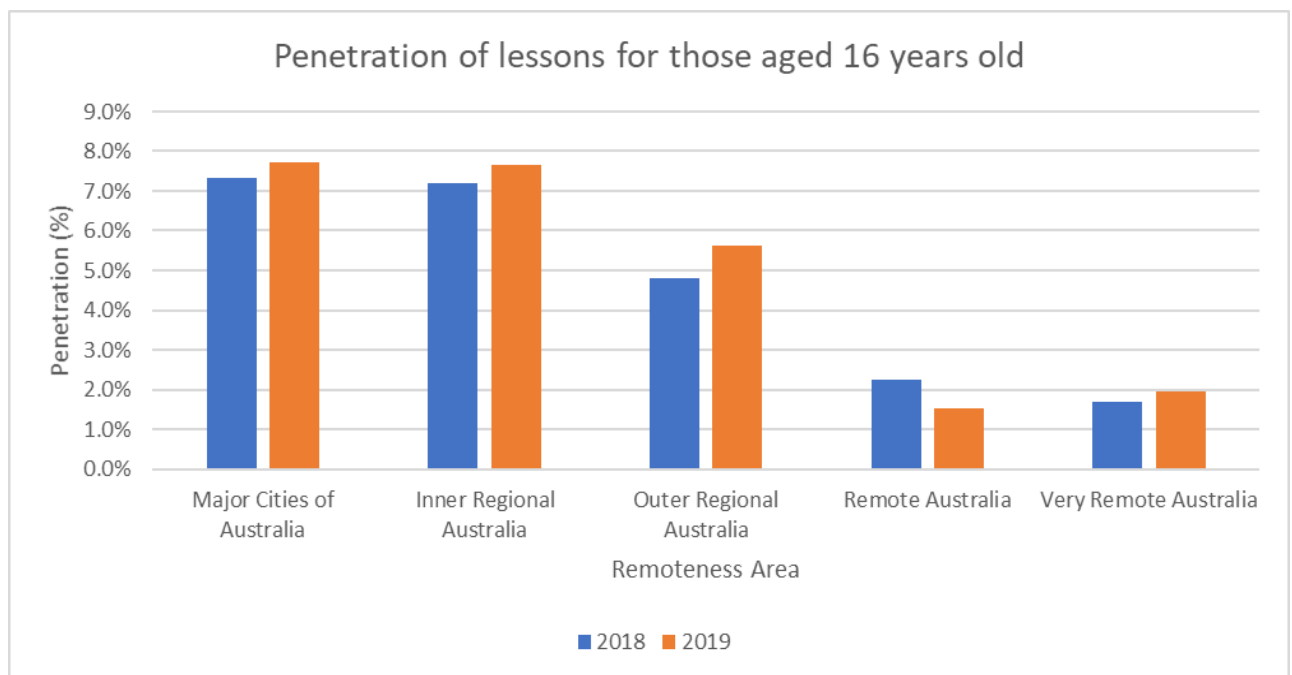

Figure 5.6
Penetration of lesson by remoteness area for those aged 16 in 2018 and 2019

It can be seen in Figure 5.6 that major cities of Australia, inner and outer regional Australia, and very remote Australia experienced slightly increased penetration rates between 2018 and 2019.

Regrouping the areas into: major cities of Australia, regional Australia and remote Australia produced the trends for 16 year olds shown in Figure 5.7 (see Appendices A6 to A9).
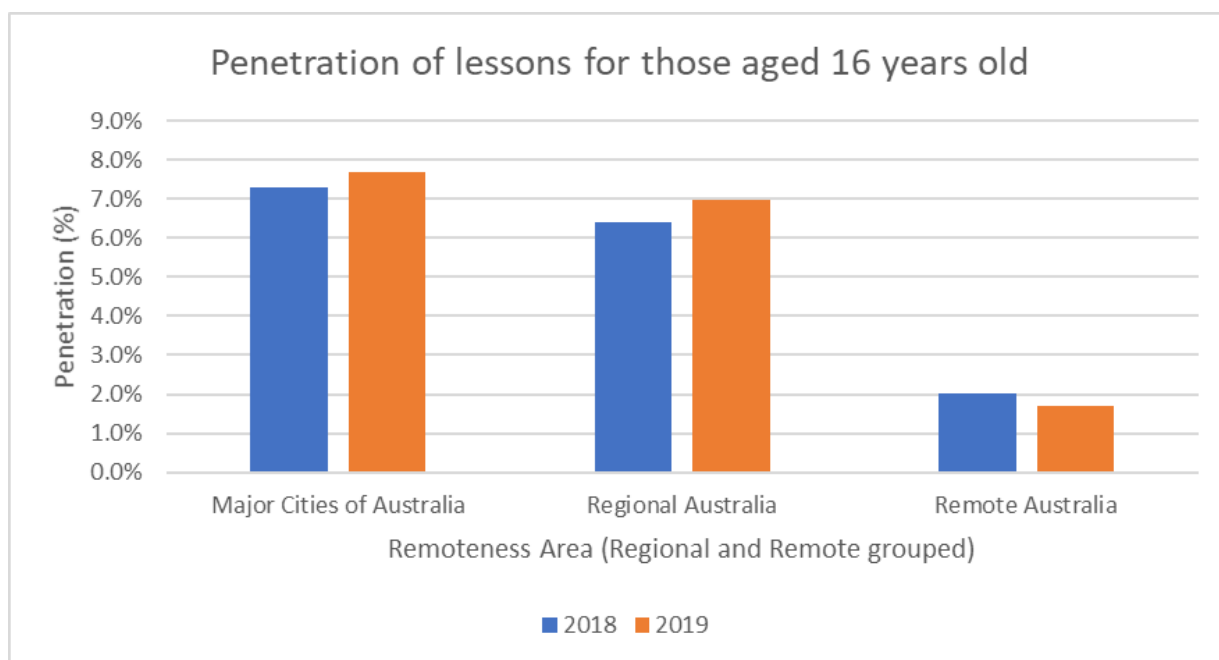
Figure 5.7
Penetration of lesson by Major Cities, Regional Australia and Remote Australia for those aged 16, in 2018 and 2019

It can be seen in Figure 5.7 that, while penetration rates in 2019 were higher than those in 2018 for Major Cities and Regional areas, the penetration rates for Regional areas in 2019 were slightly lower than those for Major Cities in 2019.

Figure 5.8 indicates the penetration rates across jurisdictions and nationally, for 16 year olds, for the years 2018 and 2019 (see Appendices A6 to A9).
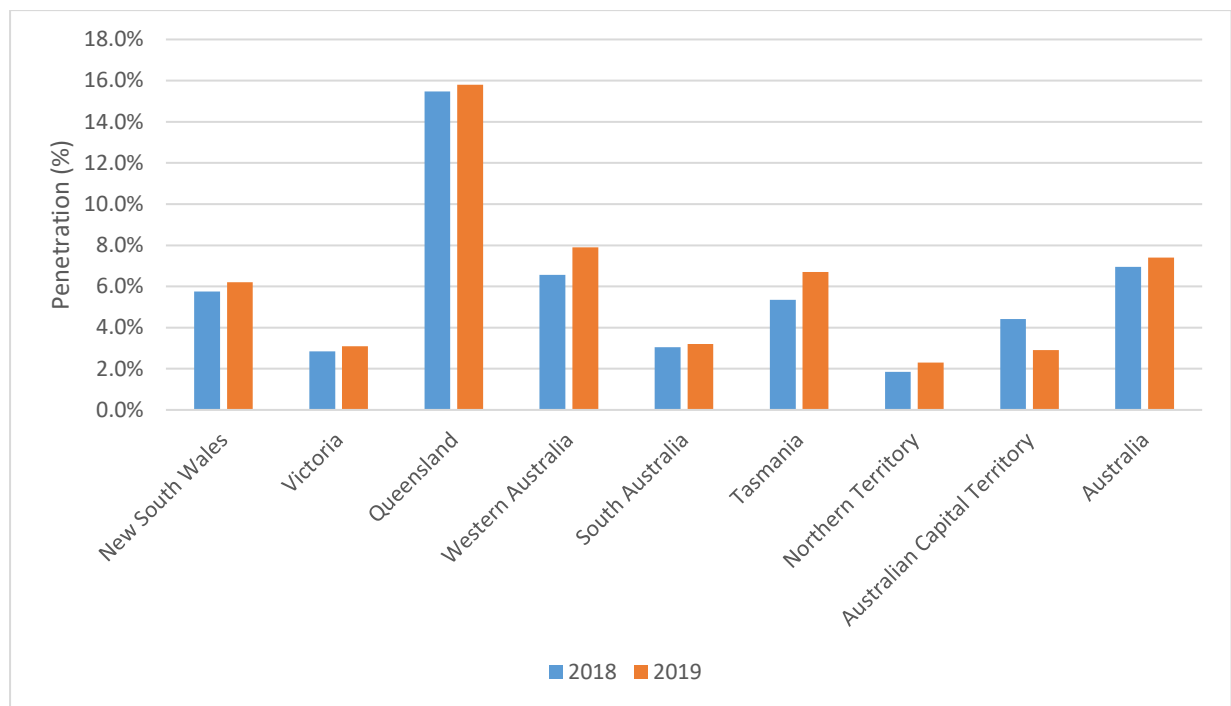
Figure 5.8
Penetration of lesson by jurisdiction for those aged 16 in 2018 and 2019

It can be seen in Figure 5.8 that, similar to Figure 5.4, nationally in all jurisdictions (except the ACT), the 2019 penetration rates were higher than those in 2018. The highest penetration rates for 16 year olds in 2019 were in Queensland and Western Australia. The lowest 2019 rates were in South Australia, Victoria, the Northern Territory and the ACT. (see Appendices A6 to A9)

The penetration rates (by population) of Keys2drive lessons for 16 year olds, by both jurisdiction and remoteness area for 2019 can be seen in Figure 5.9 (see Appendix A9)
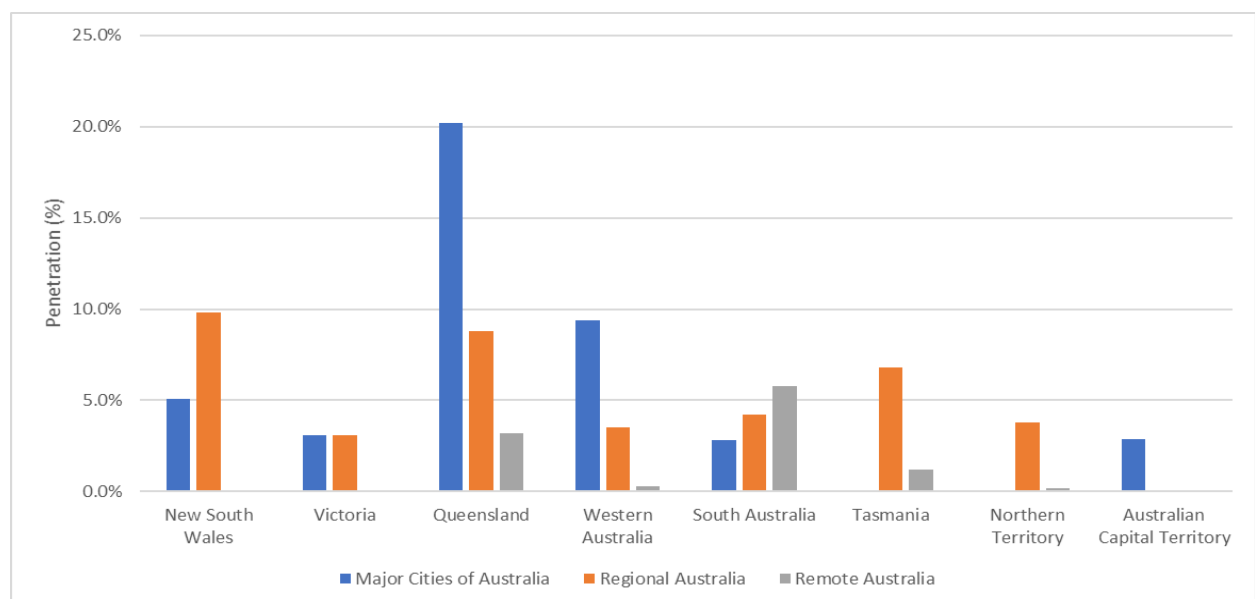

Figure 5.9
Penetration of lesson by Major Cities, Regional Australia and Remote Australia in each jurisdiction for those aged 16, in 2019

Figure 5.9 shows a slightly different pattern of penetration of Keys2drive lessons for 16 year olds than it does for the 16, 17 and 19 year olds. This profile further helps identify areas for policy and program attention.

5.2.3 Key point summary of penetration profile

- Penetration rates for 16-18 year olds increased from 2018 to 2019 in all areas

- Penetration rates in major cities and in regional Australia increased by 2% from 2018 to 2019, but in Remote Australia increased by less than 0.5%

- The highest 2019 penetration rates occurred in Queensland and Western Australia.

- The lowest 2019 penetration rates occurred in SA, the NT and the ACT

- Relatively low remote area rates were found for NSW, the NT and WA, jurisdictions with large remote areas.

5.3 Implications for improving Keys2drive's geographical penetration

The *Keys2drive Business Plan 2019-2020* includes program improvements to be implemented which aim to increase delivery of lessons in regional locations. While learner drivers based in major cities and in regional areas are generally well serviced by the program, drivers are relatively underserviced in remote areas and therefore there is scope to improve penetration of the program in remote areas.

Noting the statement in the first paragraph of this chapter indicating that penetration rates are very much dependent on accredited instructor availability, instructor numbers and their spread:

- NSW has 430 accredited instructors, with 328 located in metropolitan NSW and 102 in regional areas. There are no instructors in remote NSW.

- Victoria has 372 accredited instructors, with 308 located in metropolitan areas and the remainder located in regional Victoria.

- Queensland has 334 accredited instructors, with 255 located in metropolitan areas, 76 in regional, and 3 in remote.

- WA has 162 accredited instructors, with 149 located in metropolitan areas and the remainder located in regional WA.

- SA has 53 accredited instructors, with 44 in metropolitan areas, 7 in regional, and 2 in remote areas.

- Tasmania has 24 accredited instructors.

- The NT has 3 instructors.

- The ACT has 7 accredited instructors.

The highest penetration of Keys2drive lessons in remote areas are in Victoria and SA and the lowest rates of penetration in remote areas are in NSW, WA and NT.

The *Business Plan* proposes meeting the challenges of increasing penetration of Keys2rive lessons through: presentations in targeted regional centres; arranging for instructors to spend several days in

one location to deliver blocks of lessons; developing promotional packs for instructors; and targeted marketing campaigns.

Meeting the challenge is also recognised in Rajan (2019) as a means of removing and mitigating barriers to participation in driver training. Rajan recommends using a mix of mobile and on-site delivery. It is suggested Keys2drive consider supplementing the basing of instructors in one location for a few days with a mobile instructor service to better service *remote* locations (and/or financially assisting remote area novice drivers to travel to a location where an instructor has been temporarily based). As mentioned earlier in this chapter, such central locations could include schools, workplaces and community centres (provided supervising drivers are readily available). However, as discussed during the consultations, such options come at high financial costs that can be hard to justify when the number of Keys2drive lessons that could be offered instead under the program's regular provision of Keys2drive lessons is considered. In particular, provision of mobile and/or on-site services would incur high travel costs and would require extra office staff to administer. Moreover, as stressed during the consultations, moving instructors into regional and remote areas, even temporarily, relies on their willingness to do so, and that willingness may largely depend on it being financially viable for the instructors' own driving instruction businesses. (Keys2drive lesson payments to accredited instructors amount to 'only a small fraction of an instructor's income' - consultations). Nonetheless, it would be essential for any instructors operating in remote areas to be fully supported in their professional development and liaison with fellow instructors. In this regard the *Keys2drive Business Plan 2019-2020* proposes master classes run by a coach, which could be communicated via live videoconferencing, the Keys2drive's website instructor portal and travelling roadshows. The master classes could be devoted to topics such as role-playing, marketing and problem solving. It was emphasised during the consultations that such face to face approaches in instructor professional development are the most effective and valued formats among instructors, particularly those working largely in isolation from each other.

In his set of principles, Rajan (2019) also emphasises the importance of evidence-based program design. As was seen in Sections 3.2.1 and 4.1.2 of the present report, the learner driver and the instructor materials and approach used in Keys2drive already embody almost all of the best practice principles identified in the literature review. Consequently, major changes to the learning materials and approach to help better meet the needs of those in regional and remote areas do not appear to be warranted at this time. There was also consensus on this point during the consultations.

In relation to principle of 'Flexible design and contextualised programs', Rajan (2019) wrote that a customisable approach that responds to specific community characteristics is likely to be the most effective way. The diversity in location, protocols, language and values may mean that improving the involvement of some parents in regional and remote areas may require a customisation of that involvement (while noting the caveat in the first part of this chapter).

For example, the instructor's Code of Practice accreditation module 4 discuss instructors 'letting go' in their control over the learning situation in favour of the Find Your Own Way approach. This is reflected in the Road Map segment asking supervising drivers not to be controlling and to listen, not argue. Some parents, whether or not they are also supervising drivers, may find this approach confronting (as may some instructors). This could be the case with parents from cultural backgrounds that value an authoritarian approach to training and schooling. It is suggested that the accreditation program and learning materials for instructors be augmented with more extensive coverage of how to customise the Keys2drive lesson where parental perceptions (and perhaps of learners themselves) are clearly at odds with those of Keys2drive. For example, where a parent (supervising driver or not) expects a 'Do as I say' approach and rejects Find Your Own Way, a reasonable compromise might be for a Do as I say approach to be used, but there is acceptance of encouraging the learner to self-evaluate their driving performance if not self-direct their further learning. During the consultations, it was noted that use of the

term 'lesson' rather than 'session' may be exacerbating any parental expectancy of a traditional style of teaching/learning in Keys2drive. An alternative strategy in such situations might be for the instructor to promote the notion that a supervisor's/instructor's role is more akin to that of a coach who empowers learners, as outlined in the draft Driving Instructor Guide (2019). In fact, it was revealed during the consultations that many instructors find they are tasked with providing as much encouragement and support to the supervisor as they do for the learner, further complicating the reach of the Keys2drive lesson.

The Road Map's sixth panel encourages learners to acquire diverse driving experiences, such as in different road conditions, different routes, etc. This obviously can be problematic where learner drivers are located in remote and in many regional areas that have uniform local driving environments. Instructors may need to be ready to explore possibilities and make suggestions to learner drivers and their parents when discussing this panel. Instructors operating in regional and remote areas could be prepared to share a list of driving experience suggestions in discussion with learners, supervisors and parents in a specific locality. Options to access to a safe vehicle may need to be discussed where a roadworthy vehicle is not available in disadvantaged family settings. For example, a family may not be able to afford a car, but would support a community-based program that can supply their teenager with a supervisor and access to a vehicle. Establishing a community-based program is well beyond the remit of the Keys2drive program but relates more to the offering of driver training more generally.

Access to diverse driving environments, safe vehicles and indeed supervisors are topics that could be discussed at the broader local community level among relevant agencies (e.g. local council community engagement staff) and various community leaders, as discussed by Rajan (2019) under 'Community engagement and ownership'. Many regional communities and migrant communities already have support programs that match local learner drivers and volunteer supervisors (with or without a vehicle). One of the consultees expanded on such discussion with local communities by saying that, if we seek how to better communicate with more diverse groups, then we would need to sit with people who are highly experienced at communicating with such groups and work with them to identify ways to better communicate the messages of Keys2drive. Such people can typically be found in the many community-based programs that match a learner driver with a volunteer supervisor/mentor and which can provide access to a subsidised vehicle. One of the largest such programs, the L2P program implemented across Victoria in a funding submission by the Youth Advisory Council Victoria (Mitchell, 2017) has acknowledged the complementary potential between L2P and Keys2drive.

Moreover, as noted by Rajan (2019), to cater better for low levels of literacy and numeracy among learners, supervisors and other parents, interpretation of the Road Map may improve with development of a low literacy version containing visuals (photos, cartoon figures) in preference to words, along with avoidance of the graph-style format used in panels 1 to 5 and 7. Consideration could also be given to producing bilingual versions in English and a community language. Having said that, the story or journey approach of the Road Map is a strength, as such a story-telling approach can be highly valued among some cultural groups.

Just as servicing greater proportions of novice drivers in certain regional and remote areas and better meeting their unique needs are likely to involve some financial outlay, so too might this apply in the case of drivers from disadvantaged backgrounds. Given the educational challenges in working with clients from disadvantaged backgrounds, a case could be made for providing a longer period of interaction with an accredited instructor. During the consultations, the possibility of providing clients with two lessons was suggested and it was revealed that many instructors are supportive of that. CASR suggests giving consideration to allowing a second lesson on a user pays basis, but also investigating criteria to gauge whether a novice driver should be offered a partly or fully subsidised second lesson, depending on their ability to pay. Devising and implementing a "means test" approach for Keys2drive lessons is likely to be

administratively complex and costly. Some clients may find value in having two lessons reasonably close together to allow for consolidation and implementation of the learning gained in the first lesson. However, ideally, it would be more valuable for a novice driver to have a Keys2drive lesson soon after beginning driving and any second one closer to the end of their required supervised driving hours term. This would encourage the novice to self-assess their progress over a longer period of time and more accurately their readiness for driving solo (calibration of skills).

During consultation discussions concerning drivers from migrant backgrounds, there was a comment to the effect that that new drivers of any age have a higher crash rate in their first six months of solo driving, with young adult drivers especially so. It was also pointed out that migrant drivers with an overseas licence are required to serve a learner's permit period as a pre-requisite for getting an Australian licence, but no P-plate phase. Furthermore, some of these drivers held a licence previously then attempt to regain one as a learner. Currently, such drivers are ineligible for a Keys2drive free lesson. However, they may well still find a Keys2drive lesson valuable and would be willing to pay for it. CASR suggests giving consideration to extending access to a Keys2drive lesson to such learner drivers and their supervisors willing to pay the full cost.

5.3.1   Key point summary of implications for meeting regional and remote needs

- The greatest challenge lies in increasing accredited instructor supply

- Funding a mix of mobile and on-site delivery is suggested

- Instructors servicing regional and remote areas require financial viability for their business and adequate professional support

- Major changes to learning materials and approach are currently not warranted

- Diversity in location, protocols, language and values may require a customisation of an instructor's involvement with drivers, supervisors and parents

- Access to diverse driving environments and safe vehicles can be discussed with parents and supervisors, and with relevant agencies and community leaders

- Interpretation of the Road Map may be facilitated with development of a low literacy versions and bilingual versions

- Consideration could be given to allowing a second lesson on a user pays basis, but also a partly or fully subsidised second lesson, depending on financial circumstances.

6 Consultations

CASR sought to supplement its review of Keys2drive through consultations with relevant personnel, focussing on program content and approach and identification of potential modifications to better meet the needs of regional, remote and disadvantaged people. Specifically, the topics needing to be discussed were general issues and challenges concerning program content and approach when delivering a national learner driver support program, but also specific educational challenges for Keys2drive in implementing the teaching/learning materials and in delivering the program in regional/remote areas and to those in disadvantaged circumstances.

The consultations were timed to commence after the gap analyses and demographic profiling were nearing completion, so that the questions asked during the consultations could be informed by the outcomes of these research approaches. During these steps, however, it was considered by the authors that it was essential that the consultation process involve persons with in-depth knowledge of the unique nature and operating context of Keys2drive in order to obtain *informed and relevant* information and opinion. Consequently, it was decided to interview all four staff of the Keys2drive program, as well as an external curriculum writer with substantial experience in working for a range of driver training providers across Australia, including for Keys2drive. The five consultees were:

Ben Haythorpe, Keys2drive National Project Manager

Kate Hall, Keys2drive Operations Manager

Sioban O'Halloran, Key2drive Project and Compliance Manager

Andrew Rasch, Keys2drive Research and Development Manager

Alex Jerrim, Director, Driver Improvement Consultancy (Tas) Pty Ltd.

The responses reported below are direct quotations, organised according to major themes raised under the questions asked.

6.1 General challenges experienced

Question: *What challenges have you experienced in providing the Keys2Drive program content on a national level?*

Effects of interjurisdictional differences on Keys2drive

- Getting the support of different states and territories can be problematic because Keys2drive is federally funded.

- Feedback from instructors indicates there is a bit of inconsistency as to how instructors can teach due to different road rules and GLS requirements (e.g. required supervised hours on learners, SA has 75, NSW has 120) which affects Keys2drive messages too.

Instructors working with parents and supervisors

- It is difficult for parents to understand that their role in their learner's journey is actually very important and the lesson is as much for them as it is for the learner. But then most parents are great. Most people absolutely love it. They probably get more out of it than their child. One of the instructors said yesterday sometimes it's good having them there because the learners are

so nervous that they don't take in all the information. So that's why it's good having them there, so they can fill in the gaps.

- We would love to say 'free session' instead of 'free lesson', because people often expect a traditional 60 minute on-road practical lesson and don't understand why a supervisor also needs to attend. Or, some parents or supervisors might say 'no' to a chat between learner, supervisor and instructor, adding "You just teach my kid to drive and I'll pay you $60 and I'll go down to the pub for an hour."

- And it's supporting the supervisor as well because nobody is there to support the supervisor and talk about the emotions and the arguments and the stress.

Instructors' professional standards

- The program relies heavily on the quality of our driving instructors. They need a Certificate IV to be a driving instructor, which was something they had to go to TAFE to do and it was quite intense. Now people tell me that, with the rise of Registered Training Organisations (RTOs) and people that are happy to sign off on Recognition of Prior Learning (RPL) you can get a Certificate IV in driving instructing in under a week. We're all aware some of this is quite complex stuff to understand. It requires deep thinking. It's difficult for people with English as a second language (ESL). A huge percentage of our instructors have ESL. I think it's important that we set the bar high but the bar can't be so high that we don't have instructors involved. We've had to keep that in mind as we devise the refresher training, or boost it a bit. We don't want to put people off and make it too hard.

- For instructors, long gaps between learning are not consistent with adult learning principles so that's why we're doing some work now to do refresher training and come up with the driving instructor's guide. It's a really important resource to have in the car and to have it fresh in their mind that they can refer back to.

- I guess we have to be confident we're teaching it right and they're teaching it to that person and that person's teaching it to that person, the supervisor. So, we have to manage that and that's why we have auditing so we can help check up on that.

- We were talking about offering an incentive thing for our driving instructors, because one thing they like is sort of being part of a team and a sense of belonging. Incentives instructors would like to receive include feedback, certificates and fuel vouchers. We regularly (bi-annually) do roadshows with instructors where we do a presentation, have pizza and answer questions. When we make the effort to go to them it helps enthuse them about selling the message because we're so passionate about selling the message. Face to face is important.

Evaluation of program outcomes

- At the level of individual learner driver outcomes, there is a simple tool on the Keys2drive website called Check if you're P plate ready, or something like that. That tool was the first shot at designing something that a driving instructor could use through observation to gather evidence as the qualities of self-supervision, self-instruction and self- assessment.

- But I would say the greatest challenge at the moment is nothing to do with education design and everything to do with how the program is managed in terms of an educational program that's delivered.

- If you were to review the program through an educational design lens and you were to look at the mechanisms that need to be in place to manage reliability of delivery you will find there is absolutely zero processes in place to manage that, because it's not been set up that way.

- How do we know if a driving instructor follows the process of guiding someone on Find Your Own Way and in developing the meta-cognitive skills of self-management, or even if the learner actually learns those skills? We don't know if driving instructors actually apply the educational principles of Keys2drive. We don't know if those who have been trained actually do it. And, if they do it, we don't know how well they do it. If they do it well, for the learners who are exposed to these instructors — is their subsequent behaviour different as a consequence of participating in the program? All those things I think are easy to find out if there is sufficient will to find it out. So, I think the main challenge isn't an educative one, it's in the how the program is managed. It's currently not managed to find these things out.

- So, if we were to manage the program properly, we would be training driving instructors and then we would be putting observers in their cars, or at least perhaps videoing them. We would be monitoring what they are doing, making behavioural observations in terms of what we wanted them to do as a consequence of doing the driving instructor's course and we would actually find out does the driving instructors course achieve the learning objectives that are set. Whether achieving those learning objectives actually influences the students, who knows, that's another incredibly important question.

- But the main question is, can we actually teach driving instructors to deliver the program, or at least include in their teaching practice? For example, can we normalise adoption of the Keys2drive pedagogical approach within a given cohort of driving instructors who want to be involved. Can we teach them what we want to teach them — that would be a really good question to answer and it would not be a hard question to answer.

- It would also perhaps give us some idea of the level of ongoing support for instructors who are trained and who normalise this new teaching behaviour. Currently, there is no support mechanism that would reinforce the desired behaviours we need post-instructor training and continue the education, professional developments of this cohort. So, we would find out what degree of support people need to maintain and improve their performance applying this approach.

- In sum, the important evaluation questions to ask are:

  1. Can driving instructors be taught to implement the Keys2drive approach? If the answer is yes, that's good.

  2. If instructors can be taught to do that, do the people they train change their behaviours as a consequence of having this experience?

  3. If they do change their behaviour as a consequence of engaging in Keys2rive, what specific forms of engagement are needed to get the shift that we require?

  4. How much exposure to an accredited driving instructor by learner drivers is needed before there is evidence of some significant change (e.g. in developing metacognitive skills to drive safely).

  5. If someone is trained in this way and they develop these self-management skills by the time they sit their driving test, then how do they behave post-driving test?

  6. If Keys2drive is found to produce safer outcomes than another program, we need to know why.

Program administration and marketing

- We have run this program way better than any charity in this country. At the moment only about 20% of our costs are in overheads, and the other 80% goes to lessons. And it has been as high as 85%. Our overheads don't actually change it's just the percentage of lessons, so when we deliver heaps, our overheads look even better.

- We're always looking for new ways to do things, even internally, such as improving the way instructors have to do their administrative tasks, ways to improve accessibility of lessons, ways to provide feedback and all that sort of stuff, so I think we're not set in our ways.

- Not a lot of people know about Keys2drive and that's one of our battles. How do you nationally market a program? It's not as simple as putting on TV or in newspapers, because then we spend all the money on advertising and everyone wants a lesson but there's no money for lessons.

- There was discussion about the possibility of providing postcards promoting Keys2drive when people obtain learner's permits at licensing service centres. This was done some years ago, but you need to contact the right people in the service centres as some won't allow the postcards to be handed out, nor posters displayed if the poster doesn't have a state logo.

- We have previously got coaches to observe an instructor doing a lesson but found it was expensive and took three hours. We only have five coaches, who all run their own businesses [in addition to their Keys2drive work].

- It is important to re-educate instructors rather than getting rid of them, as we have already invested in them.

- We have found inconsistencies with face-to-face training of coaches.

- Now that it is online, there is consistent training for everyone (e.g. the set of modules). It is accessible for all (it was previously physically difficult for some instructors to get to city/Adelaide for training). Instructors can complete the training at their own pace, and there is ability to offer refresher modules (e.g. on safer cars)

- We tend to lose instructors because they leave the industry, not because they don't like Keys2drive.

6.2   Challenges for regional and remote areas

Question: What are the challenges for regional areas?

- Lack of internet access is a problem. We've had driving instructors complain to our members that they can't get access to the training for the program because there's no internet in their area.

Instructor provision

- Because it's voluntary, we can only have instructors where they want to be involved, which is unfortunate for some of the regional and remote kids. One instructor suddenly pulled out of training because all of the adults/parents in Geraldton work full time and he didn't want to be spanning his day out of business hours. What can you do about that?

- We can't deliver lessons where it's not viable for an instructor to have a business. Keys2drive income provides only a small fraction of the income needed to be a driving instructor.

- People will not travel a 300-400km round trip to a town just to do a lesson and then come back.

- Also, in areas up north WA they get paid $100-$110 an hour, or more; this is before we raised the rates, but they'd be effectively taking a pay cut to deliver Keys2drive lessons.

- Boarding schools have trouble as well because they've no parents available to be supervisors and they just don't have the staff to send a mentor out with every kid.

- The requirement to get more lessons out into regional and regional areas is good, because of higher crash rates there; but we have these difficulties that we just can't shift. We're doing our best as statistically 29 or 30 % of our lessons are delivered currently in regional Australia, which is in line with the population.

- Queensland seems to be going quite well with regional and remote. There are three big schools up there who have taken it on board. All instructors must be accredited and they market the hell out of it. Now everyone has to deliver Keys2drive because they have to be competitive. And that was mirrored in the early days of the program and it used to be Victoria. RACV was the biggest driving school and mandated all of their drivers to be accredited and all did one Keys2drive lesson a week — 20 a month, that was their target. And so then what that did was force all the little guys to be in it as well. In the first 5 years of the program, Victoria was delivering 30% of the lessons.

- The regional and remote areas have been our focus — we don't always have Keys2drive instructors in the middle of nowhere. We sent out 100 letters to instructors out around the country to regional and remote areas to encourage them to become involved. We got a response rate of around 10% but no-one as yet has taken it up. They all go, "Yeah this is great", but when it comes to doing the training, finding the time to do it, that has to come from within.

- Then we bumped up the lessons, we introduced a pay-scale to kind of incentivise the travel, and/or to become accredited in those areas. Now we are looking at maybe running some trials in WA where we look at basing an instructor in a certain area to deliver lessons and try to book a block of lessons but that's not really a sustainable solution. It's labour intensive.

- We know price is a big lever for lesson-based demands so we could offer differential payments (some areas are more costly than others – but would be problematic if instructors find we are paying some instructors more than others), but there might be a slow movement in that direction.

6.3   Challenges for disadvantaged people

Question: What are the challenges for disadvantaged people?

- Access to a supervising driver — in Victoria they've got that L2P program but of course not every state has something like that. We suggest to anyone who doesn't have a supervisor to contact local councils or universities, to see if they have mentoring programs available; but we don't know where they exist, how many, what the requirements are because every state's different.

- We also have issues with English as a second language (ESL). We're dealing with content that's complex to understand let alone to pass it on to other people. We had that issue recently about people, it's not just ESL instructors, it's anyone.

Question: How you think Keys2drive might be able to expand to a wider audience?

- Technically Keys2drive is first time learners only. We do have a lot of internationals coming here who have had a licence overseas. Technically, they're not eligible. Sometimes we find internationals are the ones who may need it the most. They may have purchased their licence which doesn't necessarily mean they've actually driven before.

- I think if you were to take the current content and say just deliver to more diverse group I couldn't see that working. However, if we were to say, 'How can we better communicate the program to regional or a more diverse group?', then then we would need to sit with people who are highly experienced at communicating with such groups and work with them to work out ways to communicate the content in their language and the stories that resonated would empower them.

- I'm not sure if you're aware of our Licence to Work program that we're running at the RAA where we've been working with Seaton, Findon and LeFevre high schools and we've been putting 30 kids through the whole [required] 75 [supervised driving] hours. We don't include a K2D lesson as part of that 75 hours because of the lack of a supervisor, that's a real problem even in urban Adelaide. They're all FLOW kids. Not mainstream, at risk of leaving school at an early age.

6.4   Program content and approach

Question: Is there anything that you would like to change regarding program content and approach?

- I don't think, there's anything that stands out as major flaws that we haven't ironed out along the way.

- I can't see why it would need changing because the program's all about thinking for yourself in a way that people can retain it. I think Keys2drive was purposely designed to suit all people, to be accessible to everyone. There's not really a curriculum so much as just a way of teaching.

- The methodology of asking rather than telling, it certainly makes the learning period so much better, and for the instructor as well. It's empowering. Especially for the people who have lost control of other aspects of their lives, the power is in their hands to make their lives better by changing their crash risk, and that's why it is for everyone because everyone has the same crash risk once they're on their Ps. It's about planting the seeds in the parents' heads that they're not good drivers, that they're still a beginning driver and that supervision still needs to continue when they get their Ps.

- More lessons per learner are needed, at least two. This allows an instructor in the second lesson to reconfirm the first one. Instructors are very on board with that.

- Keys2drive is not going to solve the young driver problem — it's just one hour of one person's life. I guess we use the term 'planting the seed' because it all contributes to that changing of attitudes. It's not one thing but part of a broader scheme of a variety of programs that people get over a long period of time that will help change the attitude of young people.

- I have faith, but not scientific evidence, that the meta-cognitive principles of what we are aiming to communicate have validity. I think it would be extremely exciting to work with educators who are experienced in working with remote and regional communities to work out ways to communicate. I think it would be phenomenally exciting, maybe a world first. They might even be able to judge if the current material works for them.

6.5 Challenges in developing and using the Road Map

Question: ***Have you experienced any issues specifically relating to the 8 panels in the Road Map when delivering in regional and remote areas or to those who are disadvantaged?***

- An early challenge for Keys2drive was trying to implement a program which delivered what we originally wanted — to have a sophisticated online learning management system, so that a fair whack of the education in terms of content and process was facilitated through the website.

- We needed to communicate new innovative sophisticated ideas to driving instructors [such as Find Your Own Way and Long, Wide and Deep learning], as well as building relationships and experiences through bringing together the instructor, learner and the supervisor in one place. The website was to play a major role in the Find Your Own Way experience and supporting those three people.

- Instead, we wanted to maintain the Find Your Own Way, empowering the learner, approach with offering support to supervisors. So, we developed the Road Map. One page coherently explained the novice driver crash problem and the pedagogical solution that we were arguing to treat the problem. Most driving instructors got their head around the idea and felt moderately comfortable communicating it to parents and learners. And I think because that tool was so robust and reliable, I think that's one of the things that has kept Keys2drive going.

- A lot of the instructors say the writing is too small. We are going to change that, the whole panel thing, and create a handbook, more permanent. The content would stay the same, the change will just be in the way it's presented.

- We would like to change some of the slogans. For example, Find Your Own Way was interpreted by one instructor as getting a learner driver to plot their route using a street directory.

6.6 Comments by CASR on themes raised in the consultations

Keys2drive is one of the few driver training support programs in Australia that not only recognises the importance of the supervisor as a mentor throughout the learner period but also, because of that, that the supervisor is deserving of focussed support, albeit in the confines of a single free lesson. The consultation comments indicate that attempts to offer such support are sometimes rebuffed due to lack of understanding of the nature of Keys2drive, although, as discussed in Section 4.2, sometimes the rebuff may still be aversion to the Find Your Own Way approach even after this has been explained by the instructor.

There was consensus that while the educational principles of Keys2drive are sound, there are some shortcomings in how adequately those principles are communicated to learners and supervisors, but also to instructors.

The development and maintenance of instructors' professional standards represent a critical issue for Keys2drive, particularly given that there can be variable quality in their initial training certificates before joining the Keys2drive program, and that some instructors have ESL backgrounds. While provision of online accreditation and refresher training ensures training outcomes should be of a uniform level, clearly instructors highly value a face to face interactive component in their training, which should be a counterbalance to the online components.

For some consultees, the evaluation of learning outcomes of Keys2drive for learners and supervisors, and the evaluation of instructor training lead into a much broader issue, that of evaluation of the whole program. A view was expressed that a different approach to the evaluation of the program is needed,

such that it can be said we have actually gained knowledge about effective driver training processes from the many years that the program has been running. This would involve setting up a program management structure that can determine the extent to which Keys2drive actually influences the teaching behaviour of its instructors, and consequently the learning outcomes for drivers. This could involve trialling the educational concepts with a cohort of instructors and then measuring any behavioural changes. This would be a significant research project.

Another area of challenge lies in balancing the allocation of funds in the recognition that stronger marketing initiatives attract increased demand for free lessons, which previously strained the free lesson budget in the form of payments to instructors, but for which allowances are now made in anticipation of the effects of marketing promotions. Similarly, spending extra on bringing the program into more regional and remote areas, and on potential adaptations for disadvantaged people, can also mean reduced availability of funding for free lessons elsewhere.

The greatest challenge in boosting regional and remote area delivery, however, lies in finding instructors willing to operate in those areas, even on a temporary basis. Even if instructors are willing to do this, it can come at the expense of the financial viability of their driving instruction businesses.

There appears to be some justification as well as demand (by both learner drivers and instructors) for providing more than one lesson to an individual learner driver and supervisor. This notion is discussed in Section 5.3 but it could be explored further through discussion with community agencies and leaders experienced in working with socio-economically disadvantaged people.

7 Summary of suggestions

The aim if this review was to assess Keys2drive against its current objectives as a program designed for *all* learner drivers in Australia, with regard to:

- Identification of considered best practice principles in teaching/learning relevant to driving instruction, and analysis of the extent to which Keys2drive is aligned with best practice, for novice drivers, their instructors and supervising drivers

- A demographic profiling of Keys2drive penetration, particularly with respect to individual jurisdictions and remoteness

- Identification of ways in which the program can be modified to better suit the needs of novice drivers, particularly those in regional/remote areas.

CASR considered that its fulfilment of these aspects would make a substantial contribution to the AAA's proposed improvements:

- A curriculum refresh (including accredited instructor re-training)

- A more even distribution across different socio-economic groups

- Better take-up in regional and areas not well-served by driving instructors

- Better collection and reporting of program data.

In consequence, this concluding Chapter is structured around those four proposed improvement areas, with some suggestions that AAA and Keys2drive could consider. For each of the suggestion topics, the corresponding section number is given to allow the reader to refer back to the original discussion giving rise to the suggestion. The AAA has requested that each suggestion be flagged as to whether CASR considered it is within the current purpose and remit of Keys2drive (**WPR**) or beyond its current remit and purpose (**BPR**).

7.1 Curriculum refresh

Following the sequence used in Chapters 3 and 4, CASR's suggestions for a curriculum refresh begin with the novice driver learning materials, then those for supervisors and finally those for instructor training and professional development.

7.1.1 Novice driver learning materials

The gap analysis of novice driver learning materials showed that they are largely reflective of the best practice principles identified for this project, and this view was confirmed in the consultations. Hence, most of the suggestions below are relatively minor in nature.

Just Got Ls (Section 3.2.3)

Skill automation is recognised in the GDE matrix as a key stage in learning to drive, and the instructor materials also refer to it. The Just Got Ls learning module mentions practising car control skills to achieve skill automation. Skill automation is the most beneficial stage for a learner to engage in commentary driving as their mental capacity to provide a commentary is not hampered by having to think about car control manoeuvres. CASR suggests expanding the coverage of skill automation with a short definition that would be informative to novice drivers and their supervisors. **WPR**

Had Ls a While (Section 3.2.4)

This module contains several sub-topics encouraging various driving experiences. One of these is 'How to parallel park', which contains encouragement to the novice driver to self-reflect on their performance and discuss this with their supervisor. CASR suggests that *all* the sub-topics in this module, such as driving as on country roads, contain such encouragement. **WPR**

Nearly at Ps (Section 3.2.5)

This module begins with the sub-topic 'Nearly at Ls' which, logically, would be more appropriately placed within the initial Learn to Drive module, than in the 'Nearly at Ps' module.

The next sub-topic, 'Before Going for Your Ps', briefly encourages the learner to self-assess by: "taking a good, hard look at your driving ability". CASR suggests augmenting this coverage with specific examples of relevant driving abilities to self-assess (e.g. keeping within the speed limit, anticipating other road users' likely movements). **WPR**

Safe Driving on Ps (Section 3.2.6)

CASR suggests augmenting the 'Assess Yourself' sub-topic with practical illustrations of a P-plate driver or two self-assessing themselves. For example, a male and female P-plate driver could be depicted narrating their self-assessments. Such illustrations would more meaningfully demonstrate to the reader what is involved in self-assessment of one's driving. **WPR**

Feedback mechanisms (Section 3.2.7)

Rodwell et al. (2018) demonstrated the importance of instructors obtaining feedback from their novice drivers to ensure the concepts and skills they teach are perceived that way by the novices. Moreover, Bates et al. (2019) found that some psychosocial dispositions such as high sensation seeking may affect learners' beliefs about what aspects of driving are important to learn and master. CASR suggests including in the novice driver materials encouragement to novice drivers to provide feedback to their instructors (and/or to Keys2drive staff). **WPR**

Peer to peer education (Section 3.2.7)

As discussed in Section 2.3.5, opportunities for peer to peer education are a common feature of contemporary education programs and are a key ingredient to building resilience. While there are no practical opportunities during the free lesson for novice drivers to interact with their peers, this is achievable in the context of the website. CASR suggests displaying on the Keys2drive website (and perhaps its Facebook page) examples of feedback comments made about the program and give consideration to a monitored online discussion forum where Keys2drive participants can post comments or questions, with responses as needed from the staff team. CASR notes that providing a monitored online forum however, would have implications for the allocation of resources. **BPR**

Keys2drive website (section 3.2.8)

CASR suggests that the website's 'Learn 2 Drive' section display an overall 'contents' listing, site map or other overview of links to specific topics on the left hand side of the home page. Additionally, some users might appreciate being able to download a single document, containing all the sub-topics, as a pdf file. Furthermore, consideration could be given to developing a phone app specific to learner drivers and containing all website content pertaining to learner drivers. All **WPR.**

CASR suggests that the introductory videoclip for novice drivers could show learners gaining experience in country driving conditions, as well as in urban areas. Moreover, the footage could include a wider age range of learners, reflecting the full age range of novices taking up the program. Additionally, both male and female presenters could be employed. Finally, CASR suggests Keys2drive staff review the juxtaposition of the scene where a supervisor uses his hand to increase the learner's turning of the steering wheel with the spoken words encouraging a learner to take control of their own learning to drive. **WPR**

CASR also suggests relocating the 'Safer Cars' page from the 'News' menu of the website to under the Learning2Drive and the Teaching Someone2Drive menus, where it would likely be viewed by more learners and supervisors. **WPR**

7.1.2   Supervising driver learning materials

It was seen in Table 3.2 that the materials aimed at supervising drivers embody nearly all of the best practice principles listed in Table 2.3. Further evidence of this comes from West's (2019) survey of supervisors and Barbaro and Hawthorn's (2019) interviews and focus groups among supervisors (see Section 3.3.4). Again, most of the suggestions below are relatively minor in nature.

A basic before you drive checklist (undated) (Section 3.3.2)

Despite the title, this information sheet is intended for supervising drivers. CASR suggests that if the prime intention is to inform supervising drivers, a more pertinent title would be advisable, to make it more likely that supervising drivers read the checklist. **WPR**

Question How You're Going checklist (undated) (Section 3.3.3)

Similarly, while this checklist is aimed at supervisors, it is suggested that this aim be stated on the hardcopy version. **WPR**

Facilitating parental involvement (Section 3.3.5)

One issue noted in the discussion following Table 3.2 relates to facilitating parental involvement. CASR suggests the Teaching Someone 2 Drive module on the website, together with the materials available in the module, remind supervisors that if they are not the learner's parents they should seek to share and explain information about the program with the parents; this is particularly if the parents have literacy issues. **WPR**

It is also suggested this module contains prompts for supervisors to remind novice drivers they should read through appropriate novice driver materials on the website, and to check what the novices might not understand. This is important because not all novices can read well and some may have no access to a computer with reliable internet connections. **WPR**

Coaching (Section 3.3.5)

Another area in Table 3.2 where no direct evidence was found relates to coaching. CASR suggests the introduction of the terms 'coach' and 'coaching' into the supervisor materials as a way of illustrating the differences in the teaching approach used in Keys2drive compared to traditional methods. **WPR**

Website (Section 3.3.5)

Finally, it is suggested Keys2drive staff seek feedback on the website's structure and content from supervisors and instructors through post-program evaluation surveys and through providing an online feedback facility. **WPR**

7.1.3   Driving instructor accreditation and professional development

It was seen in Table 4.1 that the materials for instructor training and professional development embody all of the best practice principles listed in Table 2.3.

Accredited Instructor Training Modules (Section 4.1.1.1)

The video accompanying Module 3 contains the spoken statement: "…the only way a young person can be seen to be safer than their peers is if they have a significantly different learning experience, or if they don't drive or drive much less" which ignores the proven role of Graduated Licensing Schemes in reducing road trauma during that critical period. As Rasch (2018) noted, there is an intention for Keys2drive to complement GLSs in Australia. While the video does go on to generically list GLS requirements and conditions common across Australian jurisdictions, CASR suggests setting this in the important context of GLSs substantially reducing risk. CASR also suggests adding encouragement for instructors to reinforce the role of a GLS in reducing risk when they are conversing with a novice driver and supervisor during the free lesson, particularly the first three panels of the Road Map. All **WPR.**

CASR also suggests that, in Module 4, it is pointed out that there are some instructional situations where explicit teaching such as in 'Do as I say' is more appropriate than Find Your Way. There may be instances, for example, in which a nervous learner requests such an approach or needs assistance in self-assessing and would benefit from explicit teaching of the process. **WPR**

The modules collectively could benefit from seeking and incorporating feedback from coaches and instructor trainees. **WPR**

Code of Practice (Section 4.1.1.2)

The introductory section of the Code draws attention to the need to encourage supervisors to gradually relinquish their control over the driving situation as the learner accumulates more experience and assumes more control over the situation. CASR suggests following through this expectancy in the main part of the code, for example in 'Help New Drivers Become Safer Solo Drivers', to emphasise that the Code requires instructors to actively implement the 'Find Your Own Way' approach. **WPR**

Road Map (Sections 4.1.1.3, 5.3 and 6.5)

The first three panels, 'Our Problem', 'How Do You See the Problem?' and 'Become the Solution' would benefit from recognition of the role Graduated Licensing Schemes play in controlling the risks novice drivers face in their first six months on P-plates. **WPR**

CASR suggests inquiries be made of schools as to how approaches similar to Find Your Own Way and 'long wide and deep' are termed, particularly when communicating with students and parents. Alternative ideas for slogans and terminology could also be gleaned through conducting focus group style discussions with former Keys2drive participants. **WPR/BPR**

In order to cater better for low levels of literacy and numeracy among learners, supervisors and other parents, interpretation of the Road Map may improve with development of a low literacy version containing visuals (photos, cartoon figures) in preference to words, along with avoidance of the graph-

style format used in panels 1 to 5 and 7. Consideration could also be given to producing bilingual versions in English and a community language. Having said that, the story or journey approach of the Road Map is a strength, as such a story-telling approach can be highly valued among some cultural groups. **WPR**

Guideline for the Practical Activity (Section 4.1.1.5)

The guide's additional tip suggesting the learner sit in the front passenger seat has the effect of allowing the learner to provide a commentary on the supervisor's or instructor's parking efforts. The guide would benefit from explicit mention of this valuable opportunity to engage in commentary driving. **WPR**

Coach Using the Keys2drive Approach — Driving Instructor Guide (Section 4.1.1.6)

This guide could be usefully extended with some coverage devoted to how instructors can work with supervisors, particularly where the supervisor is somewhat hesitant or otherwise unsure about Keys2drive's methodologies. **WPR**

Some sections of the guide advocate commentary driving in its very basic format. For instance, there are tips suggesting the instructor get the learner to say out aloud what they are about to do during their drive, and having the learner provide a commentary on the instructor's driving. However, an extended practice of commentary driving is not advocated, even in the 'Guide Learning Between Lessons' segment, which is an ideal opportunity for a supervisor and their learner to do so. **BPR**

In the 'Empowering Learners with Find Your Own Way' segment of the guide, it is stated that, during the P-phase, "…there is no guidance from the passenger seat". While this statement acknowledges that driving during the P-phase is solo, it ignores the potential continuing learning experience for the P-driver when they are accompanied by an experienced driver sitting in the passenger seat and who may well provide advice in any mutually agreed, ongoing mentoring capacity. As Barbaro and Hawthorn's (2019) survey shows, many supervisors are happy to do so. **WPR**

Keys2drive Curriculum for Training Driving Instructors (Section 4.1.1.7)

Face to face training has a particular advantage over online training in that it facilitates peer to peer interaction among instructors. For this reason, occasional classroom-based workshops, while costly, can be beneficial in refresher training or for ongoing professional development, as a complement to online training. It is suggested that instructor training employ online methods but incorporate occasional face to face opportunities where feasible. **WPR/BPR**

The document concludes with a feedback questionnaire. CASR suggests adding a further question concerning how *confident* the instructor feels in delivering free lessons. **WPR**

Website Instructor Page (Section 4.1.1.8)

There is potential for the newsletters to instructors to become interactive, perhaps by including short profiles and photos of instructors, short pieces written by instructors, or a Q&A style forum for discussing lesson issues and problems experienced in a generic sense. Again, as with the suggestion for the website providing an interactive component for novice drivers, doing the same for instructors would require extra resources. **WPR/BPR**

The news section contains links to detailed information on various aspects of the Keys2drive philosophy and approach, including building resilience, parental involvement, coaching versus instruction, and optimism bias. Such information, reflecting best practice principles, is deserving of more focussed attention in the training modules and materials, rather than simply as links on the website. **WPR**

7.1.4   Instructor quality assurance

In this section are suggestions for improving quality assurance through modifications to the mechanisms for feedback from learners and supervisors to Keys2drive management and the monitoring of instructor performance standards.

Monitoring of individual learner drivers and their supervisors (Sections 4.2.1 and 6.1)

CASR appreciates that the post free lesson survey needs to be sufficiently brief and concise to maximise responses. However, there is no opportunity for learners and supervisors to report on what they learned and/or what was most valuable to them. This is prime information relating to the learning value of the program. The paucity of a systematic approach to collecting learning outcomes was a discussion topic during the consultations, as covered in Chapter 6. It is suggested that consideration be given to trialling at least a sixth open-ended question, simply asking learners and supervisors what was the most useful things(s) they learned. Alternatively, such a learning outcome question could be structured in a similar format to current questions 1 to 5 but containing simplified versions of the GDE matrix levels. **WPR**

It is also suggested that questions 1 to 4 in the survey include a free response / other comments option. **WPR**

Monitoring of instructor performance standards (Section 4.2.2)

There is an opportunity to strengthen the instructor monitoring process through encouraging instructors to peer review one another's free lessons. This affords some objectivity to balance the subjectivity of instructor self-assessment. The peer review structure could be as simple as a checklist of the objectives for the free lesson in which the peer reviewer rates and/or comments on attainment of the lesson objectives, while quietly observing a free lesson (with the learner and supervisor's consent). **BPR**

7.2   Increasing penetration rates

In terms of individual jurisdictions and geographical areas, the greatest areas of need appear to be:

- South Australia, the ACT and the Northern Territory overall

- Remote areas in NSW, WA and the NT.

As noted at the start of Section 5.3, there are other areas of disadvantage that can be exacerbated if socio-economic disadvantage is also present. These situations include learner drivers without access to a supervisor and/or a roadworthy vehicle, and clients with poor levels of English literacy. Many of the suggestions in the Curriculum Refresh discussion would generically improve the learning experience for socially disadvantaged clients, along with the following specific suggestions.

Access to supervisors (Section 5.3)

Rajan (2019) has emphasised that consultation and close collaboration with key individuals or groups in a community will help determine the most effective ways to deliver a locally relevant program. This includes identification of local or state-wide support networks that match learner drivers with volunteer supervisors, such as Victoria's L2P program mentioned in Section 5.3 and also in the consultations.

CASR suggests Keys2drive investigate the possibility of developing an online training module for supervisors, based on the Keys2drive ethos. As revealed in the consultations, many supervisors need support, for example in dealing with stress and arguments with the learner. Such a module could be offered to community learner driver support programs as a supervisor professional development

opportunity in exchange for the support program's assistance in identifying volunteer supervisors for potential Keys2drive clients who have no access to a supervisor. **WPR**

Such consultation with community groups may require, as Rajan (2019) has said, a tailored or customised approach. As another example, it was mentioned during the consultations that some programs, such as 'Licence to Work' for socio-economically disadvantaged areas in Adelaide and run by the RAA, have instructors paid for the whole 75 supervised driving hours required of learner drivers. The AAA and Keys2drive could consider whether such instructors could be, in effect, supervisors for purposes of a Keys2drive free lesson if this is the only way Keys2drive could be taken up by those socio-economically disadvantaged learner drivers. **BPR**

Wider access to Keys2drive on equity grounds (Section 6.3)

During consultation discussion on drivers from migrant backgrounds (Section 6.3), it was pointed out that migrant drivers with an overseas licence are required to serve a learner's permit period as a pre-requisite for getting an Australian licence, but no P-plate phase. Furthermore, some drivers held a licence previously then attempt to regain one as a learner. Currently, such drivers are ineligible for a Keys2drive free lesson. However, they may well still find a Keys2drive lesson valuable and may be willing to pay for it. CASR suggests giving consideration to extending access to a Keys2drive lesson to such learner drivers and their supervisors willing to pay the full cost (noting this would require implementing a system of payment which is not currently part of the program's remit). **BPR**

In fact, as a broader consideration, CASR suggests Keys2drive and the AAA examine whether there would be any impediments to an accredited instructor offering a Keys2drive lesson on a user-pays basis to any driver and supervisor currently ineligible for a free lesson. In such a scenario, the instructor would essentially be offering the lesson in a private capacity although Keys2drive materials such as the Road Map would still be used. **BPR**

Allowing clients access to a second Keys2drive lesson (Section 6.4)

As a corollary to its suggestion of permitting Keys2drive lessons on a user-pays basis, and that the notion was flagged during the consultations, CASR suggests Keys2drive give consideration to allowing its clients a second lesson on a user pays basis. This should be done by also investigating criteria to gauge whether a novice driver should be offered a partly or fully subsidised second lesson, depending on their ability to pay (noting considerable hurdles to overcome in designing and administering a system of means testing). **BPR**

For clients wanting a second lesson, some may prefer having two lessons reasonably close together to allow for consolidation and implementation of the learning gained in the first lesson. Ideally, however, it may be more valuable for a novice driver to have a first free lesson soon after beginning driving and any second one closer to the end of their required supervised driving hours term, or at least once skill automation has been attained. This would encourage the novice to self-assess their progress over a longer period, and more accurately and in a more timely fashion, their readiness for driving solo **BPR.**

Instructor deployment (Section 5.3)

Supplying sufficient instructors is the greatest challenge in achieving a more balanced program delivery in regional and remote areas. It is suggested that Keys2drive consider supplementing the basing of instructors in one location for a few days with a mobile instructor service to better service *remote* locations (and/or financially assisting remote area novice drivers to travel to a location where an instructor has been temporarily based). However, such options come at high financial costs such as high travel costs and extra office staff. Moreover, as stressed during the consultations, moving

instructors into regional and remote areas, even temporarily, relies on their willingness to do so, and that willingness may largely depend on it being financially viable for the instructors' own driving instruction businesses. It would be essential for any instructors operating in remote areas to be fully supported in their professional development and liaison with fellow instructors through both online and face to face dialogues (in person or via Skype, etc.). **WPR/BPR**

Access to diverse driving environments (Section 5.3)

The Road Map's sixth panel encourages learners to acquire diverse driving experiences, which can be problematic where learner drivers are located in remote and in many regional areas that have uniform local driving environments. It is suggested instructors operating in those areas be prepared to share a list of driving experience suggestions in discussion with learners, supervisors and parents in a specific locality. Options to access a safe vehicle may need to be discussed where a roadworthy vehicle is not available; for example, a community-based program that can supply access to a vehicle and a supervisor if needed. **WPR/BPR**

It is also suggested that access to diverse driving environments, safe vehicles and supervisors are topics that can also be discussed at the broader local community level among relevant agencies (refer Section 7.2). **WPR/BPR**

Internet access (Section 6.2)

During the consultations, it was mentioned that internet access can be problematic for clients and instructors in remote areas. Provision of phone apps would be useful in areas where internet access is poor or unavailable, as discussed in Section 7.1.1. **WPR**

7.3   Better collection and reporting of program data

Driver date of birth (Section 5.1)

As noted in Section 5.1, a relatively small proportion of program records proved to be erroneous. In many cases, this appeared to be due to inaccuracies surrounding the record of the birth date of the learner driver. It is suggested that, to assist in the identification of such record anomalies, the program record database include calculations of the client's age at the time of the free lesson as a check as to whether the entry contains errors. **WPR**

Supervised driving hours gained (Section 5.1)

The average age of the Keys2drive learner driver sample was 17.9 years. This suggests that many participants become learner drivers at age 17 rather than 16. Alternatively, many participants may be taking a Keys2drive lesson after they have already acquired extensive amounts of supervised practice. It would be useful for instructors to record the numbers of supervised hours attained from the driver's official logbook at the start of the free lesson. This gives the advantage of allowing the instructor to easily see how much prior driving experience the learner has gained, and in what road conditions, in order to pitch the lesson according to the learner driver's stage of development. At the program management level, data on what proportion of Keys2drive lessons are given to drivers who have already obtained a substantial number of supervised hours could indicate the need for some tips in the instructor training modules for adjusting the lesson pitch more appropriately. **WPR**

Program evaluation (Section 4.2.3)

In his draft curriculum for training instructors, Jerrim (2019) remarks that operational feedback mechanisms (such as the learner/supervisor feedback survey) are insufficient on their own to answer questions critical to determining the longer-term effectiveness of Keys2drive (Section 4.2.3). Moreover, Rajan (2019) asserted that evidence-based program design enhances program effectiveness (Chapter 5). In other words, obtaining information on the educational outcomes of programs informs the evidence base for improving program design. Similar views were expressed during the consultations (Section 6.5). CASR suggests consideration be given to a program structure that expands beyond administering and delivering a high quality learner driver education program into embracing mechanisms to record program outcomes needed to inform evaluation questions such as those raised in Sections 4.2.3 and 6.1). **BPR**

Acknowledgements

References

Assailly, J. P. (2017). Road safety education: What works? *Patient Education and Counseling*, *100*, S24-S29.

Australian Automobile Association (AAA). (2017). Keys2drive program evaluation. Canberra: AAA.

Australian Bureau of Statistics (2019a). *Australian Demographics Statistics.* Catalogue no: 3101.0. Canberra: ABS.

Australian Bureau of Statistics (2019b). *Regional Population Growth, Australia, 2017-2018,* Catalogue no: 3218.0. Canberra: ABS.

Australian Curriculum Assessment & Reporting Authority (ACARA). (2013). *Revised Australian curriculum: Health and physical education curriculum foundation to year 10*. Retrieved on 8/11/2019 from: https://www.australiancurriculum.edu.au/f-10-curriculum/health-and-physical-education/

Bailey, T. J. (2006). *Differences in motor driving instructors' approaches to teaching. Report* 1/06. Adelaide: Department for Transport, Energy & Infrastructure.

Bailey, T. J. (2009). Self-awareness and self-monitoring — important components of best educational practice for novice drivers. *Journal of the Australasian College of Road Safety 20*(4), 44-51.

Barbaro, M. & Hawthorn, E. (2019). *Keys2drive Learner Driver Supervision Research*. [internal report]. Perth: Painted Dog Research.

Bates, L., Hawkins, A., Rodwell, D., Anderson, L., Watson, B., Filtness, A. J., & Larue, G. S. (2019). The effect of psychosocial factors on perceptions of driver education using the goals for driver education framework. *Transportation Research Part F:Ttraffic Psychology and Behaviour*, *66*, 151-161.

Beanland, V., Goode, N., Salmon, P. M., & Lenné, M. G. (2013). Is there a case for driver training? A review of the efficacy of pre-and post-licence driver training. *Safety science*, *51*(1), 127-137.

Buckley, L. & Watson, B. (2014). *Best practice in peer-led curriculum content: Informing an interactive program to improve passenger safety among high school seniors.* Proceedings of Australian Road Safety Research, Policing and Education Conference, Canberra, October 2016.

Cantwell, S. J. Isler, R. B. &Starkey, N. J. (2013). The effects of road commentary training on novice drivers' visual search behaviour: A preliminary investigation. *Proceedings of the 2013 Australasian Road Safety Research, Policing & Education Conference*, 28-30 August, Brisbane.

Chen, J.C. (2014). Teaching non-traditional adult students: adult learning theories in practice. *Teaching in Higher Education, 19,* 406-418.

Collins, J. (2004). Education techniques for lifelong learning: Principles of Adult Learning. *RadioGraphics, 24,* 1483-1489.

Courage Partners. (2013). Final report Keys2drive documentation review and stakeholder consultation project. Unpublished report. Canberra: Department of Infrastructure and Transport.

Crundall, D., Andrews, B., van Loon, E., & Chapman, P. (2010). Commentary training improves responsiveness to hazards in a driving simulator. *Accident Analysis & Prevention*, *42*(6), 2117-2124.

EU HERMES. (2010). *EU Hermes Project Final Report.* Retrieved 5 August 2019: http://www.alles-fuehrerschein.at/HERMES/documentation/HERMES%20final%20report.pdf

Hatakka, M., Keskinen, E., Gregersen, N. P., Glad, A., & Hernetkoski, K. (2002). From control of the vehicle to personal self-control; broadening the perspectives to driver education. *Transportation Research Part F: Traffic Psychology and Behaviour*, *5*(3), 201-215.

Haythorpe, B. & Rasch, A. (2018). Keys2drive: the evolution continues. *Proceedings of the 2018 Australasian Road Safety Conference*, 3-5 October 2018, Sydney.

Imberger, K., Healy, D., John Catchpole, J., Mitsopoulos-Rubensa, E., McIntyre, A. (2017). Examination of the Victorian Graduated Licensing System's Effect on Young Novice Driver Safety. In *Proceedings of the 2017 Australasian Road Safety Conference* 10th – 12th October, Perth.

Kennedy, A., Cullen, B., Firman, D., Fleiter, J. J., & Lewis, I. (2018). Peer passenger intentions to speak up to a risky driver: A theoretically-guided investigation of the effects of a high school road safety education program. *Transportation Research Part F: Traffic Psychology and Behaviour*, *54*, 15-27.

Kumrow, D., & Dahlen, B. (2002). Is peer review an effective approach for evaluating teachers? *The Clearing House*, *75*(5), 238-241.

Kloeden, C. N. (2008). *The crash and offence experience of newly licensed young drivers* (AP-R331/08). Sydney: Austroads.

McNeely, C., Nonnemaker J. & Blum, R., (2002). Promoting school connectedness: Evidence from the National Longitudinal study of Adolescent Health, *Journal of School Health, 72(4),* 138-146.

Melbourne Declaration on Educational Goals for Young Australians, (December 2008), Ministerial Council on Education, Employment, Training and Youth Affairs. Retrieved on 8/7/2019: http://www.curriculum.edu.au/verve/_resources/National_Declaration_on_the_Educational_Goals_for_Young_Australians.pdf

Mitchell, J. (2017). Supporting young people's access and equity through the L2P program. Youth Affairs Council Victoria. Retrieved on 19/1/2020:
https://www.google.com.au/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=2ahUKEwi56tWt_JXnAhVBzTgGHeweAr0QFjABegQIBhAB&url=https%3A%2F%2Fwww.yacvic.org.au%2Fassets%2FDocuments%2FSUB-Supporting-young-peoples-access-and-equity-through-L2P-Feb2017.docx&usg=AOvVaw3Tjby6iV-1v8RH2D8rJhfO

Molloy, O., Molesworth, B. R. C., & Williamson, A. (2018). Cognitive training interventions to improve young drivers' speed management behaviour: effects, implications and perspectives. *Transportation Research Part F, 55,* 325-340.

Ogden, K. (2010). *Keys2drive: Program Evaluation.* Ken Ogden and Associates Pty Ltd.

Organisation for Economic Co-operation and Development (OECD). (2006). *Young drivers – the road to safety*. Paris: OECD.

Passmore, J., & Rehman, H. (2012). Coaching as a learning methodology: A mixed methods study in driver development using a randomized controlled trial and thematic analysis. *International Coaching Psychology Review*, *7*(2), 166-184.

Pierce, M. J. (2016). *Let's chat about a whole school approach to road safety and health.* Proceedings of Australasian Road Safety Conference, Canberra, October 2016.

Prabhakharan, P., & Molesworth, B. R. (2011). Repairing faulty scripts to reduce speeding behaviour in young drivers. *Accident Analysis & Prevention*, *43*(5), 1696-1702.

Raftery, S. J., Bailey, T. J., Wundersitz, L. N. & Thompson, J. P. (2016). *Best practice review of the New South Wales Traffic Offender Intervention Program Report 2: Gap analysis and ations*. Sydney: Transport for New South Wales. [unpublished report]

Rajan, P. (2019). *Improving driver licensing programs for indigenous road users and transitioning learnings to other user groups* (Report No. AP-R594-19). Sydney: Austroads.

Rasch, A. (2018). Keys2drive: *Ten years on. Is it best practice in 2018?* Retrieved 16 July 2019 from: https://www.keys2drive.com.au/ten-years-on

Rasch, A. (2019). From hindrance to help — parental influence in novice-driver education. *Proceedings of the 2019 Australasian Road Safety Conference*, September 2019, Adelaide.

Rismark, M. & Sølvberg, A. M. (2007). Effective dialogues in driver education. *Accident Analysis & Prevention, 39(3), 600-605.*

Rodwell, D., Hawkins, A., Haworth, N., Larue, G. S., Bates, L., & Filtness, A. (2018). A mixed-methods study of driver education informed by the Goals for Driver Education: Do young drivers and educators agree on what was taught? *Safety Science*, *108*, 140-148.

Senserrick, T., Ivers, R., Boufous, S., Chen, H. Y., Norton, R., Stevenson, M., van Beurden, E. & Zask, A. (2009). Young driver education programs that build resilience have potential to reduce road crashes. *Pediatrics*, *124*(5), 1287-1292.

Senserrick, T. & Boufous, S. (2017). *Is Keys2drive associated with reduced crash risk for young drivers? An analysis of police-recorded crashes in New South Wales.* Sydney: Transport and Road Safety Research, University of New South Wales.

School Drug Education and Road Aware (SDERA). (2009). *Principles for School Road Safety Education.* Perth: Government of Western Australia. Retrieved on 14/8/2019 from https://www.sdera.wa.edu.au/media/2245/overview-of-principles-for-school-road-safety-education.pdf

Shell, D. F., Newman, I. M., Córdova-Cazar, A. L., & Heese, J. M. (2015). Driver education and teen crashes and traffic violations in the first two years of driving in a graduated licensing system. *Accident Analysis & Prevention*, *82*, 45-52.

Steer Davies Gleave. (2004). *Evaluation of the ACT Novice Driver Safety Program – Road Ready - Has Road Ready made a difference?* Final Report for the ACT Department of Urban Services, Steer Davies Gleave, Adelaide.

VicRoads. (2018). Guide for supervising drivers. Retrieved on 9/8/2019: https://www.vicroads.vic.gov.au/-/.../learner_kit_guide_for_supervising_drivers_english.pdf

Watson-Brown, N., Scott-Parker, B., & Senserrick, T. (2018a). Development of a higher-order instruction coding taxonomy for observational data: Initial application to professional driving instruction. *Applied Ergonomics*, *70*, 88-97.

Watson-Brown, N., Scott-Parker, B., & Senserrick, T. (2018b). An exploratory study of professional driving instruction and encouraging the development of a self-regulated safety orientation in novice divers. *Proceedings of the 2018 Australasian Road Safety Conference*, 3-5 October 2018, Sydney.

West, C. (2019). *Project Parent Final Report*. Keys2drive1908B. (Unpublished consultant's report).

Weston, L., & Hellier, E. (2018). Designing road safety interventions for young drivers−The power of peer influence. *Transportation Research Part F: Traffic Psychology and Behaviour*, *55*, 262-271.

Williams, A. F. (2017). Graduated driver licensing (GDL) in the United States in 2016: A literature review and commentary. *Journal of Safety Research*, *63*, 29-41.

Zines, D. (2016). *Evaluation of Keys for Life pre-driver education.* Proceedings of Australasian Road Safety Conference, Canberra, October 2016.

Appendix A – Demographic data tables

Table A1
Proportions of Keys2drive drivers by age, 2014-2019

Age	N	%
16	61,627	35.3
17	50,262	28.8
18	24,989	14.3
19	10,226	5.9
20	5,561	3.2
21	4,522	2.6
22	3,030	1.7
23	2,337	1.3
24	1,890	1.1
25	2,108	1.2
26	1,790	1.0
27	1,699	1.1
28	1,532	0.9
29	1,419	0.8
30	1,383	0.8
Grand Total	174,375	100

Table A2

Penetration of *2018* K2D lessons for learner licence holders aged 16, 17 and 18 years old

	New South Wales	Victoria	Queensland	Western Australia	South Australia	Tasmania	Northern Territory	Australian Capital Territory	Australia
Major Cities of Australia	3.1%	3.4%	13.0%	5.5%	1.6%	NA	NA	2.8%	5.2%
Inner Regional Australia	6.5%	5.5%	6.6%	2.8%	1.8%	2.4%	NA	0.0%	5.5%
Outer Regional Australia	4.8%	11.9%	2.9%	0.8%	3.0%	6.9%	1.3%	NA	4.4%
Remote Australia	0.7%	10.5%	0.9%	0.5%	6.9%	0.7%	0.0%	NA	1.6%
Very Remote Australia	0.0%	NA	2.9%	0.0%	0.0%	0.0%	0.0%	NA	0.8%
Total	3.8%	4.1%	9.9%	4.5%	1.9%	3.7%	0.7%	2.8%	5.1%

Table A3

Penetration of *2018* K2D lessons for learner licence holders aged 16, 17 and 18 years old (Regional and Remote areas grouped)

	New South Wales	Victoria	Queensland	Western Australia	South Australia	Tasmania	Northern Territory	Australian Capital Territory	Australia
Major Cities of Australia	3.1%	3.4%	13.0%	5.5%	1.6%	-	-	2.8%	5.2%
Regional Australia	6.1%	6.7%	5.1%	1.8%	2.4%	3.8%	1.3%	0.0%	5.2%
Remote Australia	0.6%	10.5%	1.7%	0.2%	5.2%	0.5%	0.0%	-	1.3%
Total	3.8%	4.1%	9.9%	4.5%	1.9%	3.7%	0.7%	2.8%	5.1%

Table A4
Penetration of *2019* K2D lessons for learner licence holders aged 16, 17 and 18 years old

	New South Wales	Victoria	Queensland	Western Australia	South Australia	Tasmania	Northern Territory	Australian Capital Territory	Australia
Major Cities of Australia	4.3%	4.8%	15.8%	8.7%	2.5%	NA	NA	2.2%	7.0%
Inner Regional Australia	8.6%	7.7%	8.9%	5.1%	3.1%	4.7%	NA	0.0%	7.7%
Outer Regional Australia	7.6%	14.1%	4.6%	0.8%	4.3%	8.0%	2.2%	NA	6.1%
Remote Australia	0.2%	8.8%	0.8%	0.3%	9.8%	1.4%	0.1%	NA	1.8%
Very Remote Australia	0.0%	NA	4.0%	0.2%	0.4%	2.3%	0.1%	NA	1.3%
Total	5.3%	5.8%	12.4%	7.2%	3.0%	5.7%	1.3%	2.2%	6.9%

Table A5
Penetration of *2019* K2D lessons for learner licence holders aged 16, 17 and 18 years old (Regional and Remote areas grouped)

	New South Wales	Victoria	Queensland	Western Australia	South Australia	Tasmania	Northern Territory	Australian Capital Territory	Australia
Major Cities of Australia	4.3%	4.8%	15.8%	8.7%	2.5%	NA	NA	2.2%	7.0%
Regional Australia	8.4%	8.9%	7.1%	3.1%	3.6%	5.8%	2.2%	0.0%	7.2%
Remote Australia	0.2%	8.8%	2.1%	0.2%	7.5%	1.6%	0.1%	NA	1.6%
Total	5.3%	5.8%	12.4%	7.2%	3.0%	5.7%	1.3%	2.2%	6.9%

Table A6
Penetration of *2018* K2D lessons for learner licence holders aged 16 years old)

	New South Wales	Victoria	Queensland	Western Australia	South Australia	Tasmania	Northern Territory	Australian Capital Territory	Australia
Major Cities of Australia	4.6%	2.9%	20.1%	7.8%	2.6%	NA	NA	4.4%	7.3%
Inner Regional Australia	10.1%	2.5%	10.8%	4.6%	3.0%	3.6%	NA	0.0%	7.2%
Outer Regional Australia	6.5%	4.2%	4.4%	0.9%	4.2%	9.5%	3.1%	NA	4.8%
Remote Australia	0.4%	0.0%	0.9%	1.0%	11.7%	1.5%	0.0%	NA	2.3%
Very Remote Australia	0.0%	NA	5.4%	0.2%	0.0%	0.0%	0.2%	NA	1.7%
Total	5.8%	2.8%	15.5%	6.6%	3.0%	5.3%	1.9%	4.4%	7.0%

Table A7
Penetration of *2018* K2D lessons for learner licence holders aged 16 years old (Regional and Remote areas grouped)

	New South Wales	Victoria	Queensland	Western Australia	South Australia	Tasmania	Northern Territory	Australian Capital Territory	Australia
Major Cities of Australia	4.6%	2.9%	20.1%	7.8%	2.6%	NA	NA	4.4%	7.3%
Regional Australia	9.2%	2.8%	8.1%	2.9%	3.6%	5.4%	3.1%	0.0%	6.4%
Remote Australia	0.3%	0.0%	2.8%	0.6%	8.8%	1.2%	0.1%	NA	2.0%
Total	5.8%	2.8%	15.5%	6.6%	3.0%	5.3%	1.9%	4.4%	7.0%

Table A8
Penetration of _**2019**_ K2D lessons for learner licence holders aged 16 years old

	New South Wales	Victoria	Queensland	Western Australia	South Australia	Tasmania	Northern Territory	Australian Capital Territory	Australia
Major Cities of Australia	5.1%	3.1%	20.2%	9.4%	2.8%	NA	NA	2.9%	7.7%
Inner Regional Australia	10.3%	2.8%	11.0%	6.1%	3.7%	5.6%	NA	0.0%	7.7%
Outer Regional Australia	8.0%	4.1%	5.7%	0.6%	4.9%	9.4%	3.8%	NA	5.6%
Remote Australia	0.0%	0.0%	1.1%	0.3%	7.6%	1.6%	0.2%	NA	1.5%
Very Remote Australia	0.0%	NA	6.2%	0.3%	0.0%	0.0%	0.2%	NA	2.0%
Total	6.2%	3.1%	15.8%	7.9%	3.2%	6.7%	2.3%	2.9%	7.4%

Table A9
Penetration of _**2019**_ K2D lessons for learner licence holders aged 16 years old (Regional and Remote areas grouped)

	New South Wales	Victoria	Queensland	Western Australia	South Australia	Tasmania	Northern Territory	Australian Capital Territory	Australia
Major Cities of Australia	5.1%	3.1%	20.2%	9.4%	2.8%	NA	NA	2.9%	7.7%
Regional Australia	9.8%	3.1%	8.8%	3.5%	4.2%	6.8%	3.8%	0.0%	7.0%
Remote Australia	0.0%	0.0%	3.2%	0.3%	5.8%	1.2%	0.2%	NA	1.7%
Total	6.2%	3.1%	15.8%	7.9%	3.2%	6.7%	2.3%	2.9%	7.4%