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Self-Awareness and Self-Monitoring – Important Components of Best Educational Practice for Novice Drivers

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Abstract

Self-awareness and self-monitoring of driving are important higher-order cognitive skills indicative of good educational practice for novice drivers. But how can self-awareness and self-monitoring be productively applied in driver training/practice supervision? The author has found that, while many driving instructors consider such higher-order cognitive skills to be particularly important, few could give specific examples of how they actually apply them when teaching driving. This is unfortunate because, when the author followed a small sample of 16 year old Learner's Permit applicants through to their Provisional Licence, not only did most of these drivers respond well to prompts to self-monitor driving behaviour, but they volunteered how self-monitoring had enriched their learning to drive experiences. The paper first examines self-awareness and self-monitoring in the theoretical and research literature on learning to drive and then, as examples of best educational practice for novice drivers, translates this knowledge into practical teaching and learning techniques.

NOTATION

ATSB	the former Australian Transport Safety Bureau (now Department for Infrastructure, Transport, Regional Development and Local Government)
GADGET	Guarding Automobile Drivers through Guidance Education and Technology (European Union Project)
VTI	Swedish Road and Transport Research Institute

1. Introduction

Learning to drive is undoubtedly among the chief life achievements universally valued by young adults. However, it is a complex task, involving acquisition of a range of physical and higher-order cognitive abilities, which, if inappropriately actioned, may lead to crashes involving themselves and other people. Those entrusted with introducing and nurturing in novice drivers the range of skills and competencies required for safe driving should implement best practice approaches to teaching and learning that are commensurate with contemporary thought and research in education.

2. Why best practice?

Many road traffic authorities in Australia, are now requiring fixed amounts of supervised driving practice before a provisional or probationary licence can be gained. This is based on the significantly reduced crash risk beyond the learner phase found in Sweden for learner drivers who practised over two years and obtained an average of 118 hours of supervised driving practice, compared to those who practised for six months and achieved an average of 41 hours [1]. It is also based on the knowledge that the first six months of solo driving attract the highest crash rates for young drivers [2]. Professional driving instructors may supervise some of a learner's driving practice, as well as teaching sessions, but instructors' contact with students may well average just one hour per week.

Instructors often face consumer expectations that they will teach no further than is necessary to enable students to pass their practical driving tests, or to demonstrate set competencies as cheaply and as soon as possible [3]. At the same time,

instructors (as do lay supervisors) operate in what can rapidly become very intense teaching-learning situations. Such critical moments can have profound implications, not only for the safety of both learner and instructor, but also for other road users in the immediate vicinity. For all these reasons, instructors have a vital role to play in their interactions with novice drivers, and as such have a professional responsibility to ensure their teaching approaches accord with considered best practice. There is a growing recognition that such best practice should include a focus on promoting novice driver self-awareness and self-monitoring.

3. Self-awareness and self-monitoring by novice drivers – towards best educational practice

Self-awareness and self-monitoring are among various overlapping higher-order cognitive skills collectively termed ‘metacognition’, that is, forms of strategic processing or executive control, and include, for example: [4, 5, 6]

- Self-feedback
- Self-coaching
- Self-regulation
- Self-efficacy
- Self-reflection
- Self-learning
- Self-evaluation
- Self-reliance
- Self-control
- Self-direction
- Self-pacing
- Self-motivation.

Broadly speaking, metacognition concerns the abilities of individuals in predicting learning outcomes, apportioning learning time and priorities, explaining to oneself in order to improve understanding, self-coaching and noting failures to understand [4]. Whichever contemporary theoretical positions on metacognition are used as bases, numerous empirical investigations have demonstrated that various forms of learning are enhanced when individuals have knowledge of and apply appropriate monitoring or executive strategies during the learning process [7]. These enhancements can include significant changes in beliefs, attitudes and sometimes behaviour, simply by asking respondents to reflect on, or imagine a (driving) circumstance [8]. Moreover, promoting metacognitive strategies has become a common feature of adult learning approaches, which secondary and tertiary students, many of them young drivers, are not only familiar with but come to expect.

3.1 Self-awareness

A self-aware individual is one who is conscious of, or who gains insight in, the knowledge, skills and attitudes they have acquired [5]. The term ‘self-awareness’ can mean just that but, more commonly, its meaning encompasses a range of metacognitive skills, such as those listed above.

Self-awareness is characteristic of the development of expertise and is considered to be relevant in the development of safe driving behaviour — for example, a driver who is aware they

cannot easily resist peer pressure, or who knows their skill limitations on slippery roads, can adapt their driving behaviour accordingly [9]. The significance of driver self-awareness has been recognised for some time. For example, according to Brown and Groeger (1988; cited in Lynam and Twisk [10]), successful hazard perception depends not only on identification of hazards, but also on the self-perceived ability of the driver to handle them.

Self-awareness and self-monitoring of one’s driving behaviour, are now among the higher-order cognitive skills considered in Australia’s National Road Safety Action Plan 2009 and 2010 to be integral to best educational practice for novice drivers. As well, they hold a key status in some recent theoretical models of driver development, and are characteristic of current driver training programs in Scandinavia.

For example, in Sweden, Mattsson [11] developed a 5-step model of the successive competencies that drivers need to acquire in order to demonstrate safe driving behaviour. The model represents a distillation of the conceptions of several well-reputed driving instructors and educational researchers on what needs to be learned in driving. The five steps required, from the basic level (i) to safe solo driving behaviour (v), are:

- i. **Vehicle Knowledge and Manoeuvring** [e.g. acceleration, understanding braking distances, cornering skills, use of gears, staying in lane];
- ii. **Applying Traffic Rules in Practice** [e.g. give way signs, road markings, drink drive rules, speed limits];
- iii. **Perception and Awareness (particularly of risky situations)** [e.g. scanning the road ahead, hazard perception, awareness of distractions];
- iv. **Communication and Adaptation to Situations** [e.g. appropriately early signalling of intentions to other drivers, staying within a traffic stream, planning trips according to road/traffic conditions]; and
- v. **Realistic View of Own Capacity and Others** [e.g. awareness of limitations in city/rural driving experience, not being overconfident].

Mattsson’s fifth step can be achieved through teaching/learning approaches that actively develop aspects of self-awareness, such as novice drivers’ abilities to more realistically self-evaluate their performance. Indeed, there is a growing move, particularly in Scandinavia, to adopt driver training approaches that require students to be actively involved in this way in their learning. For example, novice drivers in Finland compare their self-assessments of skills in vehicle manoeuvring and anticipation of risks alongside their instructors’ evaluations, and have reported they are more realistically able to analyse and predict (self-efficacy) their own driving performance as a consequence [12].

Assisting novice drivers to become more self-aware of their learning and driving ability may lead to drivers acquiring ways to modify their motives and goals for driving, in accordance with the risks they experience, their social needs for driving and the prevailing driving behaviour 'culture'. Differences have been found in Sweden in the ways a sample of crash-involved young drivers reflected on their driving, compared with the self-reflections of non-crash involved young drivers [13]. The crash-involved drivers tended to reflect over specific details of their driving such as physical control skills and compliance with regulations. By contrast, the non-crash group tended to express thoughts about their driving on a higher level that were "interwoven with the social context in which they live" [13, p. 4], without necessarily linking this to specific traffic situations. Gregersen [14] speculated that the limited self-reflection abilities of the crash prone young drivers may be due to the onset of a new phase of brain development, typically at ages 16-17. With respect to the non-crash drivers, Redshaw [15] has demonstrated a range of social and cultural dimensions of driving that can impact on crash risk, such as various values, attitudes, expectations and beliefs about how people drive or should drive. For example, Redshaw [16] found some young drivers, when discussing their speeding behaviours, were not so much wanting to merely demonstrate ability drive at higher speeds, but did so because fast driving was seen as a means to get to places quickly and flexibly, as a characteristic of their youth culture lifestyle. Significantly, Redshaw [16] also noted that driver education needs to encompass self-skills such as self-awareness and self evaluation by novice drivers, particularly of their personal control over their driving, adding that this is more empowering than relying on authoritative external controls on driving (such as compliance with regulations).

Novice driver self-awareness is gaining increasing recognition in Australia, not just in the National Road Safety Action Plan [17], but in its reflection in the adult learning approaches favoured in the current national Novice Driver Education Curriculum Trial. In the Trial's curriculum document [18], the developers state that they consider the program to represent a best practice approach as a development program for novice drivers who have acquired six months of solo driving experience. In particular, they consider it is sound from both an educational and behaviour modification perspective. The curriculum is focused on providing young drivers with greater appreciation of the risks they face and their own limitations. The aim is to deliver an education program to young newly licensed drivers using an adult education approach, with a view to changing their on-road behaviour in such a way as to reduce their crash risk. It comprises four modules focusing on behavioural factors that lead to a higher level of crash involvement among novice drivers and features best practice learning methods, including facilitated group discussion of safety issues and an on-road mentoring session. [19] The funding partners involved include the Federal Government (Department of Infrastructure, Transport, Regional Development and Local Government), Victorian Government

(VicRoads and TAC), New South Wales Government (RTA), Insurance Australia Limited (IAL), Royal Automobile of Victoria (RACV) Ltd and Federal Chamber of Automotive Industries. [19]

This new Australian curriculum is also based on a hierarchical driver behaviour model developed in the European Union project, GADGET [9]. The Swedish National Road and Transport Research Institute (VTI) also utilised the GADGET model when developing its current curriculum for driver training and licensing in Sweden [20]. The GADGET model places emphasis, not just on vehicle manoeuvring and control skills, but more critically on higher-order skills, such as developing the novice driver's understanding of the nature of risk, factors influencing driving risk, and risky driving behaviour. Also importantly, novice drivers are encouraged to develop abilities in self-evaluating any risky tendencies and impulses, along with self-evaluating their driving goals and personal driving styles (represented by the peak stage of the GADGET model).

In the model, failures and successes at the higher self-awareness, motivational and attitudinal levels affect psychomotor or physical skills, and hence overall driving performance. In fact, if these higher levels fail to translate to a careful strategy for driving, then no amount of skill in mastering traffic situations or vehicle handling will be sufficient to alone produce a safe driving outcome. This may well explain the apparent failure of much advanced skills driver training to result in hoped for crash reductions [21].

3.2 *Self-monitoring*

Self-monitoring is an aspect of self-awareness involving a cyclic process in which learners monitor the effectiveness of their learning methods and progress, and respond to this feedback in a variety of ways [22]. In a study by Bailey [23], thirteen 16 year old novice drivers were invited over several weeks to self-monitor their strengths and difficulties experienced when learning to drive, and to consider factors they perceived to be influential (causal attributions) on those successes or difficulties. A novice driver who, in self-monitoring, identifies several factors of influence on their learning to drive provides much material for fruitful discussion with an attentive instructor and in group settings with other novice drivers.

In particular, Bailey found that the novice drivers who self-monitored to a greater extent were those whose causal attributions for their driving successes or difficulties over time tended consistently towards a high degree of internality and personal control, considered in the research literature to be most adaptive to the driving task [24]. For example, one driver in Bailey's study attributed inadvertently cutting another driver off to his own failure to notice the other driver in time. When self-monitoring her learning to drive, another considered she herself had "become better able to 'suss' things out".

The high self-monitoring drivers were often strongly aware of their learning needs and gaps in skills and knowledge. One driver reported how she repeatedly made sure she improved her driving through watching other drivers' manoeuvres and behaviours. These drivers also tended to be aware of automated learning occurring (i.e. without deliberate or conscious thought, such as use of clutch and gear changing). They also tended to appreciate the power of personal motivation in achieving learning success. One such driver said that now he knew what to do in his driving, it made it easier for him to be more relaxed and confident, but also to be more aware of the road ahead.

The high self-monitoring drivers were also very aware of the nature and extent of driving mistakes made, including the contribution of lack of personal effort. One of these drivers conceded she should have slowed down in order to better observe an intersection she was about to pass through. Another in his self-monitoring admitted to a tendency to blame other drivers, but nonetheless understood that many of his errors were mistakes in his own judgment.

Some among this sub-group of drivers were not just aware of their learning needs, but had even developed their own self-coaching strategies and goals, to ensure successful driving performance. For example, they mentally rehearsed correct or otherwise successful driving task sequences for their practice driving, much as they did for other areas of their learning, such as in sports competitions or playing a musical instrument.

The self-monitoring statements made by the novice drivers were in response to prompts from Bailey to self-monitor their driving, either in an overall sense or in relation to specific instances (e.g. "What factors do you think helped you to change lanes so smoothly when you were last driving?"). These prompts were offered by Bailey when discussing previous and future driving sessions with the drivers, either singly or in small groups. Such approaches, as discussed in the next section, are readily transferable to real driving instruction contexts.

3.3 How facilitated discussion opportunities can boost self-awareness and self-monitoring

Various isolated small-scale empirical studies have reported low reductions in traffic offences and/or crash rates for drivers following programs of structured discussions [21]. However, an unexpected but often neglected finding from a landmark study of 4 500 Swedish Telecom drivers was that, a group undertaking traffic safety personal goal setting during group discussions achieved the best road crash costs reduction in the following three years, compared with driver education, financial bonus, media campaign and control groups [25].

Based on a focus group study, Harrison [26] has concluded that discussion of driving errors experienced, although stressful for the learner, may assist in higher-order cognitive processing of the knowledge gained as a result of the errors. Elliott, in discussing an evaluation of a Netherlands post-licence driver training

course, wrote how group discussion became highly valued by the participants,

"The discussion of the way in which somebody contributes to an unsafe situation, for instance, assumes another dimension when this is brought up in discussion. Learning from each other is not the only important issue here. They also realise that other people also have shortcomings." [27, p. 186]

This suggests that self-monitoring was occurring, involving awareness by participants of their own shortcomings, as well as those of others.

Facilitated discussions emphasising higher-order thinking skills such as self-evaluation of driving ability and of crash risk, and/or consideration of causal attributions, seem likely to feature in emergent programs of motor driving instructor training, such as in the draft competency unit Apply Safe Driving Behaviours, being developed by Australia's Transport and Logistics Skills Council [28]. Both Finland's driver training scheme [29] and Sweden's new curriculum [20] already incorporate group discussions to analyse the possibilities of safer driving through reflecting on personal experiences. However, techniques of facilitated discussion and promoting forms of self-awareness go beyond the set of teaching skills driving instructors have traditionally held.

4. How well do driving instructors provide best practice teaching/learning experiences, such as forms of self-awareness?

Despite the critical nature of their teaching situations, very few studies have explored driving instructors' approaches. A study by Britain's Department for Transport [30] involving long-term video-camera recording of twenty learner drivers and their instructors yielded some useful information about instructors' teaching approaches. For example, the teaching comments made by these instructors to their pupils tended to only occur when specific driving tasks were performed. Little advantage was taken of opportunities in between these times for the instructors to draw drivers' attention to broader aspects of the driving task in the context of the surrounding traffic, such as may apply when in novel driving circumstances. In fact, only about six per cent of all instruction made reference to hazards or road dangers and/or traffic judgments, such as whether to show initiative or to hold back. Moreover, while over half of all instruction constituted information advice that was neutral in tone, critical comments were the next most frequent, with praise for effort shown being quite rare. The researchers concluded that adjusting the imbalance in favour of praise-related comments, as best practice by instructors, might encourage greater self-reliance in learning to drive, through decreasing dependency on the instructor. It is significant that increasing self-reliance (though not to the point of overconfidence) is the ultimate step seen earlier in Mattsson's model of the necessary competencies for acquiring safe driving

behaviours.

More recently, Rismark and Sølvyberg [31] recorded ‘behind the wheel’ dialogues between 17 instructors and 32 pupils in Norway. They found that instructors and pupils tended to exhibit different understandings about aspects of the driving task, due to a conceptual mismatch in language use (‘scientific’ concepts versus ‘everyday’ concepts). Their conclusion was that successful learning to drive outcomes are contingent on instructors not just endeavouring to use dialogue techniques that elaborate on the student’s meaning, but aim at co-constructing shared knowledge about particular driving contexts the student has faced or will face. Developing shared understandings would be a best practice pre-requisite skill for instructors in promoting forms of self-awareness by students, such as self-evaluation and self-monitoring of driving, and who then assist the student, through discussion, to identify how this self-feedback may improve their learning to drive.

In Australia, Fitzgerald and Harrison [32] held in-depth interviews with fifty driving instructors to investigate the methods used to teach cognitive-based driving skills. The instructors were asked to select what they thought were the most important skills for safe driving to develop in novice drivers, and they chiefly nominated various high-level cognitive functions such as critical decision making and hazard perception. However, the researchers found that, while the instructors were aware of the skills that are relevant for safe driving, they were generally unable to suggest instructional strategies or teaching approaches specifically targeting these skills. They concluded that there is a need for further work in developing appropriate teaching strategies for driving instructors, especially in relation to developing higher-order thinking skills in novice drivers.

Bailey [33] has made a similar finding in a questionnaire/interview study of 36 driving instructors’ teaching approaches. Various questions were used to engage the instructors in describing their teaching approaches for beginning novice drivers and then for more experienced novices. Bailey found that, although the instructors generally considered that experienced learner drivers are more capable of making their own complex driving decisions, it seemed many instructors were uncertain about how to support this learning. Specifically, they experienced difficulty in giving many tangible examples when responding to open-ended questions about their teaching approaches, even when different prompts were given. Very few instructors, for example, mentioned getting students to comment aloud on their driving while actually driving (commentary driving), drawing diagrams, using model cars, or drawing on other motorists’ behaviours as discussion material.

No instructor in Bailey’s study [33] mentioned learner driver self-awareness, let alone how to foster it. Perhaps instructors tend to lack understanding in this area, but this is unfortunate, given Bailey’s earlier finding [23] that learner drivers are likely to respond well to prompts to self-monitor their driving

behaviour. Moreover, in a recent Australian study of 159 young drivers’ risk perceptions and speeding behaviours, Machin and Sankey [34] concluded that instructors implementing self-awareness exercises can help young drivers gain insight in to how personal motives, such as their tendency to crave excitement and their risk perception, may affect their willingness to speed.

5. What are the implications for instructors in embracing best practice teaching/learning experiences?

While driving instructors certainly require expert knowledge and skills related to driving, expert subject knowledge alone does not produce expert teaching ability [4]. Instructors also need to know how to tap into their students’ learning needs and motivations, and how to meld these with ways of representing aspects of the driving task and learning to drive that make them more comprehensible (put simply, the aspects that make learning to drive easy or difficult). Instructors who foster forms of self-awareness in learners about their learning to drive abilities, needs and motivations will benefit the learner but, just as crucially, the instructor as well, through feedback solicited on his or her attempts to make aspects of driving more easily learned.

Aspects of higher-order thinking in driving, including forms of self-awareness, are best developed in learner drivers by instructors who provide active forms of learning, including self-evaluation, feedback, experiential learning approaches and facilitated group discussion of problems encountered and other experiences [9]. In consequence, the ATSB Novice Driver Curriculum [18] requires driving instructors to possess a much broader and more complex set of teaching skills than they traditionally have had. Importantly, these include a focus on learner-centred and active approaches, such as the following skills favoured by Hatakka et al [9]:

- Modern, participatory/interactive approaches to adult learning, such as coaching and mentoring novice drivers in respect to skills like gap selection, speed control, scanning and hazard perception [the ATSB curriculum includes coaching/mentoring guidelines for instructors to implement];
- Instructors giving feedback to novice drivers, but also instructors receiving feedback on their driving from the novices [and possibly also receiving feedback on their style of teaching];
- Fostering novice drivers’ reflection and self-evaluation skills through appropriate open-ended questioning techniques;
- Facilitating small group discussions, including of participants’ driving experiences and their choice of other driving topics.

Professional development programs that encourage instructors

to self-reflect on and discuss their teaching experiences, in conjunction with formal training, may assist instructors to better understand the newer teaching / learning methods, their relevance to higher-order cognitive skills, and equally important as components of best practice, how to apply them. In this context, this remaining section of the paper focuses on practical coverage of promoting forms of self-awareness in learning to drive. The approaches are not exclusive to instructors, as some techniques can be just as easily implemented by lay supervisors given some guidelines.

5.1 Fostering self-awareness, such as self-monitoring and self-evaluation

Self-awareness, monitoring and evaluation can be fostered in learner drivers simply through instructors asking more open-ended questions requiring reflective answers, for example, “Did you notice anything odd about the way you went around that corner?” However, driving instructors who do this in conjunction with providing learning to drive experiences that successfully connect the current knowledge of the learner with the learning task ahead achieve the shared knowledge basis advocated by Rismark and Sølvsberg [31], as well as a best practice foundation for fostering various forms of self-awareness.

For example, such driving instructors might assist novice drivers by drawing diagrams or showing video clips of different driving scenarios (either potential or recently experienced by the student) and discuss how the drivers think they might react (or ought to have reacted) to them. Various layers of complexity can be added by the instructor, such as new stationary or moving vehicles, road markings or traffic signals. The driver could be asked to make choices based on his/her own position and to consider how other drivers might perceive the situation and respond [31].

In promoting driver self-evaluation, instructors should become adept at helping drivers to articulate what the drivers themselves consider to be their driving strengths and weaknesses (as distinct from the instructor’s observations and deductions). Other active learning methods, such as questionnaires, rating scales, competency skill assessments, and discussions among groups of novice drivers are also valuable aids in promoting self-evaluation of driving experiences [9]. Note, however, self-evaluation and other self-awareness abilities may not be readily present in some drivers, but may require development through training and practice [9].

5.2 Commentary Driving

Commentary driving is a powerful learning technique that involves talking 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 cognitive 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. Besides this learning value for the student, the instructor can readily notice what things the driver is attending to and discuss as needed. One of several available useful practical guides to the commentary driving procedure is provided by VicRoads [35].

The instructor should first demonstrate commentary driving for the student to follow, although not every driver finds commentary driving easy, but many do with practice [36, 37]. It is most suited to the later learning consolidation phase, when the student has acquired some automated skills 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.

5.3 Helping learners identify causal attributions for their driving performance

Instructors can help learners become more self-aware of their driving through discussing with them the learners’ explanations (causal attributions) for driving tasks they have performed well, or tasks with which they have had difficulty. Such discussion can lead to learners valuing internal attributions such as their personal control and effort over and above externalities in their driving environment, as factors of influence on their driving performance. An example of this would be when a driver attributes a near crash to their own failure to look out or brake sooner, rather than simply blaming the other driver for not looking where they were going. Internal attributions are considered to be more adaptive to the driving task than attributions to external causes. In-depth information about this and how causal attributions can be discussed with learner drivers can be found in Martin and Horneman [24] and Bailey [23].

5.4 Facilitated discussion sessions

Facilitated discussion (one to one or in a group), as discussed earlier, can rank as a high-quality learning experience for novice drivers, particularly if it prompts self-awareness of learning to drive. Not only may discussion prompt drivers who rarely self-monitor their driving, to do so, it may also offer enrichment to high self-monitoring drivers by encouraging them to reflect on a wider and deeper range of factors surrounding their learning to drive experiences than they had previously considered. Driving instructors can facilitate such discussion before a lesson begins, to provide a reflective focus for the driving tasks to be covered during the lesson. Discussion can also occur during a lesson (once a pupil has pulled over), to discuss possible factors of influence on instances of safe driving, not just mistakes made. As far as is practicable, lessons should frequently conclude with an instructor facilitating some discussion with the driver to prompt self-reflection and self-monitoring on what

was learned and what needs to be learned.

5.5 Improved feedback for the learner

Learner self-evaluations of strengths and weaknesses and areas to focus on (identified through various active learning approaches) can be juxtaposed with instructor/mentor evaluations and feedback. Phrased in appropriately supportive ways, by the instructor, such feedback can stimulate further development of the range of self-awareness skills, now considered to be essential at the higher levels of cognition and behaviour, and which are present in the best practice theoretical models of driver learning and instruction. The United Kingdom's Department of Transport study [30] also demonstrates the importance of feedback that praises drivers, not just for correct manoeuvres executed smoothly and safely, but for exercising sound judgment when making decisions.

6. Conclusions

All these approaches towards promoting self-awareness, and consequently self-reliance in driving, afford life-long self-learning utility once the novice no longer has an instructor alongside to guide them. Not only are they commensurate with best practice as indicated in the theoretical and research literature, but they are best practice teaching/learning approaches that young people are already quite familiar with in a variety of learning endeavours. It is recommended that driving instructors seek to include more best practice educational techniques with learner drivers, and promoting self-awareness and self-monitoring in particular, in order to enhance the total learning to drive experience, right from the first lessons, through to the self-learning that must occur once an instructor is no longer present. In addition, as mentioned early in this paper, instructors operate in what can rapidly become very intense teaching-learning situations with significant safety implications. As well as these professional considerations, instructors also operate in a commercial enterprise environment, one in which driving lessons are not compulsory steps towards a driving licence.

There is a clear need to devise appropriate professional development programs for driving instructors that not only promote best practice educational techniques but, given the factors surrounding their unique teaching situations, also provide motivation for undertaking the professional development. One productive starting point for such programs might be to encourage instructors to reflect on, self-monitor and discuss the strengths and difficulties they perceive to be for the approaches they use in teaching driving. This would set the stage for introducing the notion of promoting self-awareness and self-monitoring among novice drivers.

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