

A Model of Self-Evaluation

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Abstract

This paper is based on a presentation delivered at the Joint 3rd Scientific NORBIT Conference and 5th Japanese-Nordic Conference on Traffic and Transportation Psychology at the University of Turku, Finland on the 23rd of August 2010.

The development of a driver's ability to self-evaluate their own driving performance is increasingly being seen as a vital element in driver education. This paper aims to provide a simple model of the self-evaluation process, a model that could be used by driving instructors and others involved in driver education as a basis for constructing educational approaches to help drivers develop their self-evaluation abilities. The paper also provides a simple example of how the model could be incorporated into an in-car driving lesson.

Rationale for Self-evaluation

The Organisation for Economic Cooperation and Development (OECD) report, Young Drivers the Road to Safety (2006) identified inexperience as being the 'universal problem' (p.14) for young novice drivers. If this is correct then there is a very strong case to investigate how a driver can be trained to accelerate the experiential learning process. Learning from experience does not necessarily have to be, and should not be, a purely passive process since the quality and quantity of the learning that takes place is dependent on the learner's own ability to actively engage in the learning process. As Boud (1995) identifies: "Experience does not necessarily lead to learning: there needs to be an active engagement with it" (p.30). It therefore seems sensible within driver education to consider ways in which a driver's own self-evaluation skills can be developed. This type of education is likely to be most successful if it is based on a clear understanding of the self-evaluation process.

A Model of Self-evaluation

Self-evaluation could be viewed as 4 overlapping stages consisting of:



- Self-monitoring
- Self-identification
- Self-analysis
- Self-development

Whilst this paper will briefly consider each stage in turn, it is important to remember that to be effective the self-evaluation process must be seen as a continuous process, as outlined in figure 1. It is also necessary to recognise that for self-evaluation to be successful the driver must not only be able to self-evaluate their own driving performance at the time of the event, but also any possible influence that their emotions, life goals, journey goals, etc. had on their driving performance. These issues are frequently referred to as the higher levels of the Goals for Driver Education (GDE) (Hattaka et al 1999).

Figure 1 Self-evaluation Model: NORBIT Conference, Edwards I., (2010)

Self-monitoring

Self-monitoring is the first element of the self-evaluation process, and within this stage the driver should be actively monitoring their own performance with the aim of identifying any 'learning opportunities' that may occur. A learning event is any event which does not fit with the driver's previous learning experience, or which offers an opportunity for further learning to take place. In order for the next stage, the self-identification stage, to be effective the learner must have a clear internal picture of what they are attempting to achieve whilst driving and be able to monitor their own driving performance. Without this clear internal picture it is difficult to see how a driver will be able to easily identify opportunities for self-development. Of course, as with most driving tasks, some trade off between self-monitoring and other safety critical tasks will have to be made, and for this reason it is necessary for the self-monitoring stage to be a highly automated, almost passive process, until a learning opportunity occurs.

Self-identification

In order for the driver to identify a 'learning opportunity' more easily it may be useful to term a 'learning opportunity' as a 'trigger event', as their occurrence needs to instigate the driver to move from the automated self-monitoring stage to active self-analysis stage of the model. In order to help the driver identify a trigger event the driver should be encouraged to develop a list of such events. These events could include: harsh braking or steering, being taken by surprise by the presence of another road user, a near collision, the successful negotiation of a difficult situation, dealing with a novel situation, etc

Self-analysis

Once the driver has successfully identified a 'trigger event' the driver needs to be able to critically analyse the event and identify a **number** of possible solutions, or coping strategies. It is important, where possible, that the driver considers a number of options rather than a single option as the single option, whilst obvious, may not be the best option when compared to other possible solutions. The self-analysis process should not be limited to actual events but should also include the driver considering if their emotional state, life goals, journey goals, etc. had influenced their judgements.

Self-development

Once a number of options have been identified the driver should then be able to select the one they feel is most appropriate to implement in their future driving behaviour. Once implemented they should then start the process of self-monitoring their driving with the view of assessing whether the new strategy has been successful and to identify further 'trigger events' that may occur.

Implementation in Driver Education

There are many ways an instructor could help the development of a driver's own self-assessment skills using the self-evaluation model outlined in this paper. A simple example is below:

Self-monitoring and identification

The instructor asks the driver what they think is meant by the term 'self-evaluation'. Once agreed the instructor introduces the concept of 'trigger points' and encourages the learner to develop a list of personal trigger points, these could include: harsh braking or steering, being taken by surprise by the presence of another road user, a near collision, the successful negotiation of a difficult situation, dealing with a novel situation, etc. Once these triggers have been agreed the instructor should ask the learner to drive and monitor their own performance with the aim of identifying when a 'trigger point' occurred.

Self-analysis and development

Once the trigger point has occurred, and ideally been identified by the driver, the instructor should ask the learner to suggest a number of options to prevent the situation occurring again, or how they could incorporate the learning strategy in their future driving. These options should be carefully considered and discussed with both the benefits and negatives clearly identified and discussed. Once all the possible options have been discussed the driver should be asked which of the possible options could be incorporated in their driving.

This is a simple example and uses a number of the approaches outlined in the EU- HERMES (2010) project.

Summary

Driving instructors can never show learner drivers every situation they are likely to encounter, so it is vital that not only does an instructor help to develop the vehicle and traffic skills needed to drive but also the skills needed to maximise the learning process post-test. For this reason, a driving instructor should take every opportunity to maximise the development of the driver's own self-evaluation skills. It is hoped that the development of this simple model of self-evaluation will aid instructors to develop their own understanding of self-evaluation and help them to develop simple but effective educational interventions to maximise the development of this vital skill. As Engström et al identifies:

Not only is self-evaluation seen as an important tool in driver training but also in the development of driving skills after training.

Engström I., et al, 2003, Young and Novice Drivers, Driver Education and Training – Literature Review., p.56

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