

Development of a Driver Assessment Test: Evaluation of Critical Road Safety Factors

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Abstract

When considering causes for the road traffic accidents in world as well as in Sri Lanka, driver behaviour has been highlighted as a significant contributory factor. When it comes to Sri Lanka, three wheelers (3W) and motorcycles (MC) has been found as the most susceptible vehicle types to meet with an accident and as mentioned above the driver contribution towards the root causes of such accidents are also found to be high in the recent literature. It is a well-known fact that most of the 3W and MC drivers in the country are representing the younger generation and the aberrant behaviour of such drivers can be observed daily on SL roads. One of the main reasons for such behaviour could be the lack of experience but by monitoring their behaviour more closely it can be observed that young driver's knowledge in rules and regulations is also limited. As a result, their driving standard has fallen below the acceptable levels and also it is observed that their reaction to on road situations is unsatisfactory. When looking at the big picture, it can be stated that all these issues stem from one source, that is poor learning and assessment techniques/procedures used in the country when issuing the driver's license. This study is mainly focused on finding out how prominent these observed issues are among young drivers and a simulation based test material was developed to achieve the said objective. 3W and MC drivers were focused in this study and two different tests were developed since the conditions may vary with vehicle type. In these tests, a series of situations are simulated and questions were asked from the drivers, who already have a drivers' licenses, to evaluate their response to different conditions. Different conditions for tests were selected from the literature, based on a systematic literature review carried out to screen the situations where drivers have underperformed over the years. In each test, multiple video questions with multiple choices (15 approximately) were given to a driver to mark a choice. For each question a weighted score was assigned based on an expert judgement, mainly considering the severity of the anticipated outcome with a wrong decision. These weights were introduced because the severity expected and complexity of the situation may vary from one question to another. From a sample study with 150 participants (75 drivers from each category) it was found that on average 50% of the drivers (both categories) have failed to provide the correct answer for each question. More importantly, these tests revealed more information (based on the answers provided for each question) about driver behaviour and knowledge which are important to identify in order to uplift the driving standards of the young (new) drivers. On the other hand, this testing mechanism and the principle can be used as a tool to strengthen the testing mechanism of driver's license issuing with further modifications.

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