

DEVELOPMENT OF NEW MODULES COMPLEMENTING MOPED RIDER TRAINING IN AUSTRIA

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ABSTRACT

Moped riders have always been a most interesting group in terms of research and most problematic group of road users in terms of safety. Juvenile risk taking and lack of experience are the ingredients of a cocktail of risk, which is not the optimum fuel for the upper half of a powered two-wheeler. In 1997, Austria has lowered the age limit for moped riding from 16 to 15, initially implementing a bunch of effective restrictions. These were removed bit by bit, elements of training were implemented as compensation. Within a few years, injuries sustained by 15 year old moped riders excelled those sustained by 16 and 17 year old riders. The latter did not respectively decrease.

For political reasons, there is no scope of extending the current amount of theoretical and practical training. Hence, the challenge is to improve training at no (additional) cost. The activity described in this abstract aimed at achieving improvements by adopting well-known and approved elements of rider training to the target group of 15-year-old candidates for a category AM licence.

Austria has recently implemented a **hazard perception training** as a mandatory element of rider training for all A-categories. The **psychological group discussion** is a well-known and accepted tool within the frame of the multiphase training model. One part of this research was adopting and testing these two elements upon their applicability for category AM candidates at the age of 15.

During research on braking performance of riders, KFV developed a “deceleration tester”, an apparatus, which uses light beams to measure speed and deceleration of any vehicle passing by. In post-licencing training, this was successfully used to generate feedback to trainees. They could increase deceleration carefully and largely avoid the risk of blocking the wheels. Furthermore, humans are single channel controllers but still have two brakes to handle. Although the front brake is by far for more effective, riders are – for safety reasons - told to use only the rear brake in practical training until they have reached an acceptable level of

vehicle control to start a session on use of the front wheel brake. Research found the average rider to use the front brake to only 60% of its theoretical capacity and the rear brake to 170% - probably an outcome of a systematically wrong training procedure. Concluding on these issues, it was assumed that an **improved training on braking** – using the deceleration tester and focus on the front brake – could improve braking performance of moped riders. This approach was tested.

The Austrian law requires AM-candidates to **prove** their **manoeuvring skills** at the end of the training. The trainer must assess these skills. Currently, there are no guidelines documented, how this assessment shall take place, what the criteria for success or failure are and which abilities the candidates should prove. The final part of this research was to develop an **innovative test procedure**, which keeps the trainer as the examiner, but is reasonably comprehensive, fairly objective and improves fairness and confirmability of the assessment.

The project including all these activities will be concluded by February 2018. Some interesting results regarding the training in general have already been discovered. Adding two hours of practical training in real traffic to six hours of mandatory track training triggered a radical change of the track training. Having addressed solely level 1 of the GADGET matrix earlier, the track training now focuses on level-2-skills. Therefore, a test procedure focussing on manoeuvring skills is not an option anymore. Conclusions on the applicability of group discussion and hazard perception training are not yet settled, but will also be addressed in the paper, as well as the detailed results about the training on braking and a test procedure.