

Abstract for the Humanist Brno workshop, session 8, January 2005

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Representing VTI

In addition, a C.V. is added:

"Driver education by simulation and assessment of fitness to drive for learner drivers and people with disabilities"

In 50 years time, the number of citizens 65+ will increase by 100%, to represent 30% of the total population in 2050. Within the 65+ cohort, the prevalence and the incidence of disabilities are larger than for any other cohort. Facing approximately 10-20% of the entire future driving population being disabled requires assessments of their fitness to drive, prior to any training or re-training.

Driving assessment is, however, a complicated issue. In order to do it scientifically sound, we need to know what driving really is, i.e. we need a commonly accepted model of driving; simple as it may seem. Despite the fact that driving has been an everyday activity for almost 100 years for many people, there is, however, no such general model. Not even the driving test itself is a valid and reliable predictor of who will drive safely and who will not. Different driving assessment screening tools are tested and used in several clinics on a regular basis. None of them has a sensitivity and specificity of 100%, respectively. This means that in a driving assessment situation, we will face the trade off problem of either reducing capable but wrongly categorized safe drivers' mobility or reducing the traffic safety for all road users by wrongly categorize unsafe drivers as safe. The way to address this inevitable fact is discussed in terms of mobility versus safety. Furthermore, driver education varies with respect to content, as well as to quantity and quality.

For this reason the TRAINER project developed a new cost-effective Pan-European driver training methodology, based on simulator technology, which paid significant attention not only to gain experience of driving and handling the vehicle, but also to the enhancement of risk awareness of learners drivers. A number of scenarios for application in simulators were developed. The scenarios addressed the most important needs of learner drivers, based on accident statistics and an extensive literature review. They have been structured in accordance with the four hierarchical levels of the GDE-matrix. The results from the project show that it is possible to improve driving behaviour by including simulator training in the driver education. Using the same strategy for re-training of disabled older drivers requires new scenarios to be developed, based on their particular needs. A first attempt in this direction, based the GDE matrix, was done within the AGILE project.

Curriculum Vitae

Name Torbjörn Falkmer

Born 1958

Position Senior Researcher at Swedish Road and Transport Research Institute (VTI), Linköping, Sweden, 1996, Senior Lecturer in Occupational Therapy, Linköping University 2003, in Disability Science, in Rehabilitation Medicine department, Linköping University 2004.



Qualification Doctoral degree (PhD) in Medicine at Linköping Medical Faculty, Faculty of Health Sciences Linköping University, Sweden, 2001. Thesis title: *Transport Mobility for Children and Adolescents with Cerebral Palsy (CP)*.

Background Occupational therapist at the Paediatric clinic, Halmstad, 1984-1994, Teacher in health care science 1992, Head of Paediatric clinic in Halland 1995, Researcher at VTI 1996, Senior researcher at VTI, 2000, Senior Lecturer 2003.

Research Research concerning driver education of people with disabilities. Research concerning transport mobility of children and elderly as drivers and passengers. Applied research concerning professional drivers' education, work load and work place design. Applied research on drivers' eye movements. Applied research concerning design and evaluation of driver support systems (ITS).

Publications **In total 91 publications:**
39 original manuscripts published in or submitted to international and national peer-reviewed journals and reports
27 Conference proceedings,
6 pedagogical reports,
19 other publications.

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