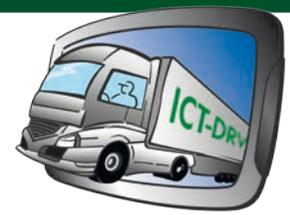


ICT-DRV project- newsletter



Issue 3 – February 2015

Preparing and keeping professional drivers qualification up-to-date for their changing job requirements with multimedia-based learning

Our topics for you

- Editorial: Does technology beat methods and didactics?
- The future of simulator-supported learning within professional driver qualification
- Designing first-class e-learning for professional drivers
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Editorial: Does technology beat methods and didactics?

Technology-based training in the qualification of professional lorry drivers as the motto for the final conference of project is every bit as bulky and unwieldy as the title of the project itself, ICT-DRV. So, is this a conference for ICT specialists? For simulator experts? Hardly. We're not dealing with some kind of Google truck or driverless vehicles. On the contrary, we're dealing with people.

Our focus is driver safety as well as the safety of the entire driving public. Our aim in this project is to reduce the number of traffic casualties by improving driver training through the use of technology.

There is no doubt that the current use of learning programmes and simulators is technology-driven. How, and whether, the driver actually learns anything that can change driving behaviour ends up taking a backseat to the technology itself. The ICT-DRV Project not only carefully analysed the use of learning programmes and simulators throughout Europe, but we also traveled into the area of pilot studies in order to find out how such training could be done not only differently, but also better and more effectively.

What does "better" mean in this context? Quite simply that it is not the technology, but rather the methods and didactics, that is, the learner, that must be the focus of our attention. The pilot studies showed clearly that learning can be made more individually tailored to and effective for the driver.

For enterprises, it turns out, this often means more cost-effective as well. What is more, it has become clear – at least to us – that there is no need to fear technology-enhanced training, rather it can be seen as a real opportunity.

It is worthwhile to take a closer look at our project results. It can be worthwhile for trainers, business owners, drivers and worthwhile for anyone working in driver-related areas in trade and industry chambers and governmental agencies as well. The real value of the project results, of course, increase most significantly when they find practical use across a broad-spectrum of sector stakeholders.

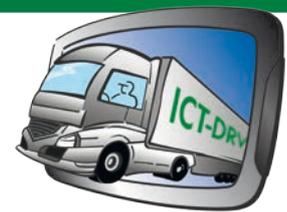
We cordially invite all of you to come to the conference not only to discuss our findings, but to help enhance driver training for the future.

Malte Stamer, Host ICT-DRV-Conference,
DEKRA Akademie GmbH (DE)

The future of simulator-supported learning within professional driver qualification

Driving simulators have been used for driver training for many decades. Their first large-scale deployment started as early as 1965 in the Czech republic. Currently,





many different driving simulators are available on the market, ranging from relatively simple 'desktop' systems and/or serious games, to high-end 'ultimate realism' moving base driving simulators. This raises the question how much simulator is needed for adequate driver training.



Desdemona simulator at TNO in Soesterberg (NL)

Cost effectiveness, pitfalls and opportunities are discussed in relation to the equation 'Simulation = (Reality-X) + Y'. Simulation will never be real (hence the -X). While in some areas reality can be approximated quite well, other aspects of the driving task can only be simulated poorly, even at high cost. Simulation does allow training that is difficult, dangerous or impossible to achieve in real-world (hence the +Y). Cost effective simulator training requires careful & deliberate concessions to reality, while maximizing the learning value (and profit) of the system.

An understanding of the role of the different simulator components and their relation to training also



Bart Kappé, SimBEAR (NL)

allows us to make some extrapolations to the future. Yes, technology is advancing. Sometimes progress is fast, but in driving simulation, some technological hurdles are very difficult if not impossible to take. Instead more widespread and smarter use of driving simulation may prove to be the main road for progress.

Designing first-class e-learning for professional drivers

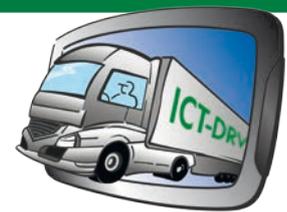
Although many big companies, organisations and universities successfully use e-learning since a long time, even today e-learning is sometimes in some organizations and companies poorly accepted and estimated as an inefficient instructional method. Such estimations are probably due to experiences with poorly designed e-learning products.

There are bad e-learning products – as there are bad offline trainings. E-learning is neither worse nor better than other formats of instructions. It depends on the quality of the respective product. Hence, the topic of this talk is the quality of e-learning: What makes a first-class e-learning setting? What are the criteria? What should be considered if you decide for the development or the acquisition of e-learning products for professional drivers?

To design high-quality instructional services and products more than 50 years ago instructional design (ID) emerged as a scientific discipline in the USA. As any instructional effort should – directly or indirectly – initiate learning processes ID is based on the results of the psychology of learning, cognition, and motivation as well as on educational technology. There is no such thing as "one size fits all" in instruction. Different learner characteristics and different attributes of the subject matter, different learning tasks need different forms of instruction. Therefore, any instructional designer has at first to analyze very carefully the particular conditions of learning and instruction: Who are the learners? What do they know already? What are their motivations, what are their aims? What kind of subject matter should be conveyed? What competencies should be the result of the learning processes? What characterizes the learning tasks from a psychological point of view?

Having answers on those questions the instructional design process consists of a cascade of ID decisions in different sectors: Which is the optimal format of instruction under the conditions given? Which kind of devices will learners use to learn? How to structure the content (e.g. how to define units, how to sequence them)? How to motivate the learners (how to grab their attention, hold it or regain it; how to ensure the individual confidence in the learning success? How to organize the presentation of texts, pictures, animations etc.? How much interactivity is adequate and which forms of interactions foster actually a skill or ability? What about the usability of the learning environment?





Rarely one of these questions can be answered without considering the answers on other questions. The process of systematic instructional design is highly interdependent. Instructional design as a discipline has



answers on all these questions. There are "design patterns" (not recipes), which are helpful in many cases, surely not in all. But the probability of success of the instruction will be significantly higher than in cases the development of a course does not follow scientific methods.

Dr. Helmut M. Niegemann,
Saarland University (DE)

Project partner put into the limelight: DEKRA Akademie

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