



The simulator is **worth** gold

“You ran aground. We break off here. We’ll meet in the debriefing room in five minutes. Have a cup of coffee during the break.”

This is not an emergency situation at open sea, but it breaks an intense atmosphere very similar to the emergencies in real life. “The Drama” takes place in the simulator at DMI in Lyngby just outside Copenhagen. A group of navigators are on a Ship Handling Course, and everything has been done to make the setting of their training as realistic as possible. Over the past 10 years, the simulator technology has improved dramatically. Millions have

been invested in making the computer animated ship movements, weather simulations etc. so realistic that the participants at courses “forget” that they are in a simulator and not sailing the seven seas. Luckily for the participants, it is only simulation.

Simulation is a central part of much training and education. We know that quite often learning will only take place when theory and practice are linked – that people have to practise before it becomes “serious”. Overcoming the distinction between the reality of training and the reality the participant must be able to master after training is one of the challenges of teaching. We



First of all, we wanted the debriefing to allow each group to reflect and learn from the training in the simulator. So the function of the instructor was to be a facilitator rather than an expert. Also, we wanted the participants to take an active part in the debriefing, says Peter Sørensen, Head of Department, Training, Ports and Human Factors at DMI.

call it the transfer issue. Sometimes the link between the training and the participant's real life fails so much that no learning will take place at all. Most of the time we succeed in making the training very life-like to the participant – and the transfer to the participant's reality is very successful. All things considered, a training situation as life-like to the participant as possible is, therefore, to be preferred. But it is not always safe to let the participants practice in "real life". This could be owing to safety reasons, it might be preferable to practise in a less complex situation than real life, or financial considerations might be an issue etc.

From "expert" to "facilitator"

Formerly, DMI's instructors spent 75-80% of the course in a simulator. And the instructors often reported that when a crew "passed" the tasks in the simulator, there was not much to discuss in the following debriefing.

In 1996, DMI began focusing more on the learning aspects of the simulators and thereby also on the learning processes. This has had a strong effect on the way the simulators are used. Today, the actual simulator training is often only about 50 per cent of a course, and the following debriefing has become much more profitable.

"In 1996, we realised that it was not enough to employ the professionally best captains as instructors," says Peter Sørensen, Head of Department, Training, Ports and Human Factors at DMI. "As our simulator facilities are very costly, it is crucial to ensure efficient transfer of training, with the main focus on acquiring skills, but also on acquiring knowledge. The instructors have changed from being "experts" to being "facilitators".

Focus on the instructor rather than the simulator

The simulator does nothing by itself; it is entirely dependent on the people working it. Therefore, the selection and training of instructors has also been very important. On the basis of an instructor profile that emphasised certain personal competencies, the instructors were tested, interviewed and selected.

Peter Sørensen says that this process was very profitable for all the instructors as individual goals were defined and continuously followed up.

The training of instructors covered both an introduction to the ideas behind the learner centered debriefing/supervision and training in the use of the method, including the learning aspects of the simulators.

The instructor's part

In our concept, we developed an understanding and practice of debriefing, which was more like supervision than debriefing in its traditional sense. So this is another kind of debriefing than the one practised in e.g. military contexts (the so-called Critical Incidence Stress Debriefing, CISD). There were several reasons for this.

In the training of instructors, it was emphasised that the instructor became good at listening to each participant's experience and learning when sailing in the simulator, and that he could help the participants gain an overview of the complex sequence of the simulator run. The instructors should also learn to ask questions that enhanced the participants' ability to reflect and learn from the simulator training. Moreover, they learned to structure each debriefing session in a manner that created commitment to the conclusions and perspectives from the entire group.