

Institutionen för pedagogik, kommunikation och lärande

Training to become a master mariner in a simulator-based environment

The instructors' contributions to professional learning

av

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AKADEMISK AVHANDLING

som med tillstånd av utbildningsvetenskapliga fakulteten vid
Göteborgs universitet för vinnande av doktorsexamen i pedagogik
framläggs till offentlig granskning

Fredagen den 19 januari 2018, kl. 13:00

Pedagogen, Göteborgs universitet, hus B, lokal: BE 036

Fakultetsopponent: Docent Helen Melander, Uppsala universitet



UNIVERSITY OF GOTHENBURG
ACTA UNIVERSITATIS GOTHOBURGENSIS

Abstract

Title: Training to become a master mariner in a simulator-based environment:
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Language: English with a Swedish summary

ISBN: 978-91-7346-943-2 (tryckt)

ISBN: 978-91-7346-944-9 (pdf)

ISSN: 0436-1121

Keywords: Simulator-based training, Instruction and learning, Workplace studies,
Interaction analysis, Maritime education and training

In higher education programs that aim to prepare students for professional performance in safety-critical work activities, the introduction of simulators is seen as a fundamentally restructuring of the ways in which professional skills are developed and assessed. This, in turn, creates new challenges and possibilities for both teaching and learning a profession. This thesis examines maritime instructors' work in supporting students' collaborative training to become professional seafarers in simulator-based learning environments. The empirical material is based on ethnographic fieldwork and video data of simulator-based training sessions in a navigation course. The thesis consists of four studies. Study I is a literature review and synthesis of previous research on the use of simulators in master mariner training. Study II focuses on the overall organisation of simulator-based training (i.e. briefing–scenario–debriefing) and the instructor's work throughout the three training phases. Study III examines the organisation of instructions during the scenario phase, while exploring the practice of training to apply “the rules of the road at sea” in the simulator. Study IV connects to an on-going debate on the realism and knowledge transfer of simulator-based training with respect to the work practices on board seagoing vessels for which the students are training. While previous research on the use of simulators in maritime training argues that the current training system favours training towards simulator-based tests rather than to help students become competent professionals, the findings of this thesis point in a different direction. The results of the empirical studies reveal an instructional practice and training model founded on the need to account for the general principles of good seamanship and the anti-collision regulations in maritime operations. The meaning of good seamanship and the rules of the sea are difficult to teach in abstraction, since their application involves an infinite number of contingencies that must be considered in every specific case. Based on this premise, the thesis stresses the importance of both in-scenario instruction and post-simulation debriefing in order for the instructor to demonstrate how general rules for action apply to practical situations in ways that develop students' professional competences. Moreover, based on the findings, I argue that the relevance of simulator-based training to work contexts is a dialogical phenomenon of relating between practices. Such interactional accomplishments draw on both the students' access to work contexts and the instructor's ability to systematically address the similarities, differences and irregularities between practices during training in the simulator.