



# LUND UNIVERSITY

## Visualization of Maritime Safety Culture - Development and Evaluation of an Interactive Learning Tool

Blomé, Mikael; Ek, Åsa

*Published in:*  
Arbete och hälsa

2011

[Link to publication](#)

*Citation for published version (APA):*

Blomé, M., & Ek, Å. (2011). Visualization of Maritime Safety Culture - Development and Evaluation of an Interactive Learning Tool. *Arbete och hälsa*, 45(5), 12.

*Total number of authors:*  
2

### General rights

Unless other specific re-use rights are stated the following general rights apply:

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

Read more about Creative commons licenses: <https://creativecommons.org/licenses/>

### Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

LUND UNIVERSITY

PO Box 117  
221 00 Lund  
+46 46-222 00 00

## **12) Visualization of maritime safety culture – development and evaluation of an interactive learning tool.**

*M. Blomé, Å. Ek*

*Ergonomics and Aerosol Technology, Department of Design Sciences, Faculty of Engineering, Lund University, Sölvegatan 26, 221 00 Lund, Sweden*

A Swedish maritime safety project focusing on building up competence in the area of human and organizational factors and safety culture, yielded new knowledge for increased safety at sea. Safety culture in an organization concerns having an awareness of risks and the knowledge, ability, and willingness to prevent them. The Swedish shipping industry realize that positive attitudes to safety and a good safety culture are needed in all activities in the sector, and that understanding about these issues needs to be rooted early in a seaman's education. It was therefore considered that the experiences and the knowledge gained in the research project should be disseminated on different levels in the maritime sector to gain a long term positive effect on safety. Therefore, an educational material was decided to be developed with the purpose of educating students at upper secondary maritime schools in the area of safety culture and safety management.

The aim of the current study was to design an interactive prototype to visualize knowledge about maritime safety culture based on cognitive theories and practical examples.

A preliminary prototype was developed using a participatory design process involving researchers and the potential users from a maritime school in Sweden. A pilot study was performed where the prototype was tested in an educational setting.

The usage of the prototype supported education, communication and learnability among students. The results also showed very positive responses from students, as well as teachers, in using the prototype. The approach to visualize the concept of maritime safety culture with interactive illustrations and animations resulted in clear presentations of important situations and scenarios, fruitful discussions and positive attitudes among the users of the prototype.

It is very likely that the current approach to design and visualize dilemmas and safety situations could function also in other sectors such as transport, medical, and manufacturing industry.

**Keywords:** education, maritime safety, visualization.

NR 2011;45(5)

55th Nordic Work Environment Meeting  
(Nordiska Arbetsmiljömötet)

# The Work Environment – Impact of Technological, Social and Climate Change

*Editors: Maria Albin, Johanna Alkan-Olsson, Mats Bohgard,  
Kristina Jakobsson, Björn Karlson, Peter Lundqvist,  
Mikael Ottosson, Fredrik Rassner, Måns Svensson, and  
Håkan Tinnerberg.*

VETENSKAPLIG SKRIFTSERIE

ARBETE OCH HÄLSA

NR 2011;45(5)

55th Nordic Work Environment Meeting  
(Nordiska Arbetsmiljömötet)

## The Work Environment – Impact of Technological, Social and Climate Change

*Editors: Maria Albin, Johanna Alkan-Olsson, Mats Bohgard,  
Kristina Jakobsson, Björn Karlson, Peter Lundqvist,  
Mikael Ottosson, Fredrik Rassner, Måns Svensson, and  
Håkan Tinnerberg.*

ARBETE OCH HÄLSA

|

VETENSKAPLIG SKRIFTSERIE

ISBN 978-91-85971-32-9

ISSN 0346-7821