25 Years Experiences with computer-, web- and cloud-based Training for the maritime Industry

April 13 2021 Virtual Delegation Trip
Norwegian Higher Vocational School Hordaland at Flensburg Centre for Maritime Studies

Prof. Dr.-Ing. Holger Watter
Flensburg University of Applied Sciences

Table of Content

1. BASE: Activity and Competence Profile
2. REVIEW: 25 years Experiences and Projects with web-based and e-learning concepts
3. OUTLOOK: Conclusions and Recommendations
1995 – 1998 – Computer Based Training - CBT

Development of learning programs (Computer Based Training = CBT) for ship operation in cooperation with the Institute for Didactics of Technology at the Vocational College, University of Siegen:

Hypertext and decision simulation by CBT “Implementation of learning software for computer-aided training using the example of the complex of topics

• “Steam operation” (1996)
• "Fuel systems and fuel processing" (1997)
1/3 Book projects as classic distance learning concepts

- 2006 Handbuch Schiffsbetriebstechnik
- 2009 Compendium Marine Engineering
- 2011 *korean translation*

2/3 Book projects as classic distance learning concepts

- since 2007 in the 5th edition
- *Hydraulics and Pneumatics*
- available online as an e-book!
3/3 Book projects as classic distance learning concepts

- since 2008 in the 5th edition
- Renewable energy systems - basics, system technology and analyzes of executed examples of sustainable energy systems
- available online as an e-book!

2009 – 2011 MOODLE course

- 2009 - 2011 MOODLE learning module “Solar thermal systems”
- for the Academy for Renewable Energies
- in cooperation with the Center for Technology-Based Education (ZTB) at the Helmut Schmidt University
Hybrid Learning Concepts

- Since 2010 creating and testing of courses for ship operation technology
- with the learning portal StudIP ("Internet support for classroom teaching during the course of studies").
Meetingformat BigBlueButton on the Learning Platform

Hochschule Flensburg

Meetings

sonstige: Abschlussarbeiten & Projektarbeiten - Meetings

Meeting

Meetingsraum WATTER
WELCOME TO THE VIDEO CONFERENCE

To save data volume and thus your connection ...

• Please switch off the video image and the microphone in the lower area,
• Headphones with microphone avoid feedback and improve the acoustic quality.

If necessary for questions

• switch the microphone on OR
• ask a question using the chat function at the bottom left,
• You will also find a reporting function at the bottom left.

If there are display or connection problems

• change the browser OR
• use the app from your app store

Open Science & Open Access

• Since 2017 "Open Science" and "Open Access" are newer science strategies. At FLENSBURG UNIVERSITY OF APPLIED SCIENCES initial experiences have been made over the past few years, which are presented and evaluated below. An interim conclusion is drawn.

• https://holgerwatter.wordpress.com/2020/09/06/open-science-open-access/
Digital Acceleration through Corona Virus Pandemie

Since 03/2021
- new digital tools
- new laboratory experiences
- new work flows

Electronic Exams on the Learning Platform

VIPS = Virtuelles PrüfungsSystem = virtual exam system
Table of Content

1. BASE: Activity and Competence Profile
2. REVIEW: 25 years Experiences and Projects with web-based and e-learning concepts
3. OUTLOOK: Conclusions and Recommendations

Quality circles for the learning and management process
Control loops

- Professor
- method and tool selection
- learning platform study rooms tools
- Students

Exercises test conversation Success control

occupational field expectation expertise skills

Disturbing factor
- Students motivation

Challenge: Source research and source quality

- Quality of the sources
- Quantity of sources

Year

Conclusions- and Recommendations

1. Digital media expand the methodological-didactic method mix of traditional distance learning methods (books). Here new learning channels and new learning concepts can be tried out and used.

2. The preparation and provision of digital media, as well as the support of the learners in the digital dialogue, requires additional resources. Savings effects are not to be expected.

3. Digital media are subject to rapid change. CBTs (Computer Based Trainings) from the 1990s can no longer be used for reasons of compatibility, web tools quickly become obsolete (elimination of platforms, software support, update policy, license fees, IT support ...). In contrast to books, the digital tools are therefore currently not sustainable in their effects.

Conclusions- and Recommendations

4. The “memory bottleneck 'human brain'” cannot be circumvented. LEARNING REMAINS A FUNCTION OF TIME, competence requires the ability to reflect and classify, factual knowledge (“Google knowledge”) is not enough....

5. Current generations of students have mastered and expect the integration of digital media, intrinsic motivation in its entirety cannot be expected. Flensburg University of Applied Sciences complains about a strong focus on examinations (“What do I have to learn for the exam”) and criticizes a lack of willingness to study (“Think outside the box”, “.... Question....”, Analyze and evaluate....). Distance and the “fear of the threshold” hinder dialogue and intellectual exchange ... Communication as a one-way street is not goal-oriented and quality-reducing ....
6. Quality arises in personal dialogue and in the discourse between teachers and learners. Digital media open up new learning channels, but do not replace scientific discourse. Here, as a university of applied sciences, we correspond to HUMBOLDT’s ideal of education: the university as a community of teachers and learners, in which the teachers contribute their experience and methods and the learners bring in creativity and curiosity. This creative symbiosis creates dynamism and development potential that is difficult to recognize from the outside, but arises in the daily dialogue between teachers and learning and which requires presence and daily commitment on both sides. The students also miss personal contact with one another.

7. In addition, of course, the question arises whether secondary virtues and academic goals can be achieved at all if basic elements such as “reading and understanding” and “reliability and punctuality” are dispensed with.
Read More