ABSTRACT

In this chapter it is argued that blended learning with web-based support by the Moodle e-learning environment based on social constructivist learning theory is an effective tool for teaching and learning ergonomics and human factor issues for future managers. The author has eight years experience of computer based teaching and learning. The author’s own teaching experience of the Moodle e-learning environment for creating and providing courses in Tallinn University of Technology (TUT), in Tallinn School of Economics and Business Administration at TUT, will be presented. According to the questionnaires given to students at the end of each course, the teaching and learning in the Moodle e-learning environment as blended learning is very useful for development of a learning culture and efficiency. The efficiency and motivation for learning are higher than providing traditional methods of learning. New possibilities and dimensions for teaching and learning are opening.

INTRODUCTION

At 2006 the strategy of e-learning in Tallinn University of Technology (TUT) was approved. According to this strategy for year 2010, 90% of courses have to be provided by support of e-learning environment and the credits obtained by e-learning have to be 50%. Since 2003-558 courses by support of e-learning environment (BlackBoard or Moodle) have been created. Of them 188 are created in the Tallinn School of Economics and Business Administration at TUT (TSEBA), using the web support by the Moodle e-learning environment. Since autumn 2006 the courses of Working Environment and Ergonomics by the support of the Moodle e-learning environment have been created by the author.

Before using Moodle software since the year 2001 the computer based learning was used providing this course – materials were available on
the website. The experience before the Moodle using and after the Moodle using is compared and the advantages of learning by web support of the Moodle e-learning environment are described.

E-LEARNING AS A SOLUTION FOR NEW CHALLENGES

New Challenges for Higher Education

We are living in time of deep global changes. Technology, economy, norms/values and labor market are changing on a global level. New competence requirements in the ICT (information and communication technology) sector and in information and knowledge work mean new challenges for national educational systems. Understanding of human and organizational behaviour, cultural understanding, communication and language skills, and the capacity for conceptual thinking are important competencies needed in the future.

The impact of rapid development of Infocommunication Technology (ICT) to all aspects of the society is described by Bradley 2001, 2003, 2006.

The process of social and psychosocial change and ICT from a global perspective is described in the Convergence Model on ICT and psychosocial life environment. Effects on humans are becoming more multifaceted and complex. Increasing access to more and better information is available by rapidly development of technology. The impact of rapid development of Infocommunication Technology (ICT) to all aspects of the society is described by Bradley by the Convergence Model on ICT and Psychosocial Life Environment (Bradley, 2001, 2006). According to this model it is now very actual to help students turn information into knowledge, teachers need to know and obtain new teaching strategies.

In this situation, new challenges for the higher education are continued. The growing interest of blended learning (combination of traditional teaching methods of face to face and online media) in higher education is indicated by the increasing number of studies in this area (Poole 2006, Irons et al. 2002; O’Toole et al. 2003; Stubbs et al., 2003). In University of Central England in Birmingham (UCE), academic staff are encouraged to incorporate both traditional and web-based ICT (information and communication technology) modes of teaching and learning in the courses they deliver, using Moodle software. Preliminary quantitative evaluations at UCE have revealed that over 70 percent of the 388 students in the sample from across all faculties claimed to have enjoyed using the web-based aspects of blended courses. Over 75 percent of a sample of 329 students felt that Moodle had helped them learn the subject and nearly 80 percent of the sample reported that they would like future modules be blended in this way (Poole, 2006; Staley 2005).

E-Learning in Estonia

The Estonian e-Learning Development Centre was created as a separate structural unit of the Estonian Information Technology Foundation (EITF) on 2 May 2006. Before the creation of the Estonian e-Learning Development Centre, e-learning in Estonian higher and vocational education was coordinated by two consortia: the Estonian e-University consortium (founded on 21 February 2003) and the Estonian e-Vocational Schoolconsortium (founded on 16 February 2005). EITF is the legal person of the consortium and the managing bodies are the Council of the Estonian e-University and the Council and General Assembly of the Estonian e-Vocational School, respectively. Now all Estonian universities are networking.

E-Learning in Tallinn University of Technology

At 2006 the strategy of e-learning of Tallinn University of Technology was approved. According to
Related Content

Use of Facebook for Corporate Reporting: The Case of Indian Companies
[www.igi-global.com/article/use-of-facebook-for-corporate-reporting/155145?camid=4v1a](www.igi-global.com/article/use-of-facebook-for-corporate-reporting/155145?camid=4v1a)

Enlivening the Promise of Education: Building Collaborative Learning Communities Through Online Discussion
[www.igi-global.com/chapter/enlivening-promise-education/18339?camid=4v1a](www.igi-global.com/chapter/enlivening-promise-education/18339?camid=4v1a)

Learners and Mobile: A Reflexivity
[www.igi-global.com/chapter/learners-and-mobile/156989?camid=4v1a](www.igi-global.com/chapter/learners-and-mobile/156989?camid=4v1a)

Learning in Video-Mediated Classes
[www.igi-global.com/chapter/learning-in-video-mediated-classes/120816?camid=4v1a](www.igi-global.com/chapter/learning-in-video-mediated-classes/120816?camid=4v1a)