Experience with problem-based learning in ergonomics and safety education in Estonia

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Teaching is not filling of the vessel, but it is lighting of the flambeau

One old testimony

Abstract

In this paper it is argued that Problem Based Learning (PBL) can be used to avoid accidents at work and in everyday life. PBL is very useful to improve human relationships between university teachers and students in societies in transition. Some possibilities for increasing the involvement of students in the field of ergonomics and safety are proposed.

Introduction

In problem-based learning (PBL) the principle is all learning begins with a problem (University of British Columbia, 1997). PBL is an educational format that uses real-life problems as a starting point for acquiring knowledge and requires students’ active involvement in this process. It is a method that encourages independent learning and gives students practice in tackling complex or new situations and discovering their gaps in knowledge with respect to understanding a problem in its relevant context. It is a way of learning that encourages a deeper understanding of the material rather than a superficial coverage. PBL encourages students to become more involved in, and responsible for their own learning, and most students report that it is a highly enjoyable way to learn (Queen’s University, 2000). Each problem or case should encourage the student to develop an understanding for the interrelation of real life problems, as is the case with most problems in ergonomics and safety. By using this learning format, students will get experience in the process of problem analysis. Each problem is intended to provoke critical enquiry, and to encourage access to a variety of learning resource materials. The depth and scope of the discussion on any particular topic will vary of course, depending on where the students are in the programme. Problems are usually presented to a small group of students. During each group session, the student group will identify and prioritise a number of learning issues/objectives. Students will be expected to spend several hours each week on independent study outside the small group to search for relevant references and sources and to study these. As they return weekly to their small group, they will present in the group their findings, exchange information, and discuss the implications for the problem at hand.