Interactive Teaching in Interpersonal Skills as Innovation in Engineering Education

Nowadays the typical engineer has working conditions different from before. They require many competences other than just the hard-core technical ones: personal and professional skills, multidisciplinary teamwork, communication, communication in foreign languages and leadership skills; thus, the personal competences are becoming more important. It is vital that the modern education for engineering students meets the demands of the business life of today, where the engineer has to solve both technical and interpersonal problems. For this reason, it is important to implement practices of interpersonal skills in the engineering education. International communication is one of the issues becoming more important in the globalised world of today. The CDIO Syllabus narrates the needed skills and one way of improving the quality and ideas in the CDIO implementation is through international co-operation. In this case the co-operation was begun through the invitation of Associate Professor Christensen to give an International Communication Course, in February 2010, at Helsinki Metropolia University of Applied Sciences. This invitation has been repeated twice a year since then. The International Communication Course is an innovation in engineering education based on the development of teaching methods for learning interpersonal skills in interactive classes – enabling the students to gather their own experiences through active involvement in exercises in groups of two to six persons. In order to improve the course a couple of initiatives were implemented. One is a course booklet, which contains all issues to be approached during the course. The students read the booklet beforehand and thus the course just consists of interactive exercises with interventions of explaining, sharing comments and discussion. Sharing comments and discussions are very important as they both tell the students that others have similar problems and issues as they do; but they also show the differences between young people from different cultures. In a class there are usually participants from 15 different countries and students from 55 countries have taken the course so far. Another initiative is that the students have to do three assignments. One reason for this is to see if they are able to apply what they have learned; but also to avoid students that will not deliver the efforts required. This has elevated the level of learning significantly. Based on students’ assignments written during the courses and the course booklet, the content of the course was crystallized, a book was written and published in 2017 by Metropolia. This paper discusses our experiences of the international CDIO co-operation, implementing an International Communication Course at Metropolia.

General information
Publication status: Published
Organisations: Department of Civil Engineering, Energy and Services, Helsinki Metropolia University of Applied Sciences
Contributors: Christensen, J. E., Karhu, M., Christensen, C., Martelius, J.
Number of pages: 10
Publication date: 2018

Host publication information
Title of host publication: Proceedings of the 14th International CDIO Conference
Publisher: CDIO
Keywords: Communication, Interactive teaching, Integration of international students, Interpersonal skills, Teamwork
Electronic versions: CDIO_2018_INTERACTIVE_TEACHING_IN_INTERPERSONAL_SKILLS_AS_INNOVATION_IN_ENGINEERING_EDUCATION_Submission_34.pdf
Source: PublicationPreSubmission
Source ID: 163007771
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2018 › Research › peer-review