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From the Classical Lecture to the Bologna-compatible Course – Redesign of a Course

Abstract

The present paper describes the redesign into a Bologna-compatible course of a hitherto classical frontal lecture in the field of biology and environmental sciences. The new design allowed the students to spend part of the semester abroad nevertheless actively participating at the course. Contact hours were reduced for the sake of self responsible study. Active learning was stimulated by the use of very simple e-learning applications that were borrowed from the e-learning toolbox available at ETH Zurich. To receive the necessary credits, groups of students had to perform a short teaching sequence (including a scriptum with learning objectives). In addition each student had to design multiple-choice tests to independent subjects of the lecture. These tests were later used to build a collection of online-tests that are freely available to the public. Horizontal mobillity of the students was supported by video tapes from a previous lecture series that were accessible as video stream via the web. In order to probe the preexisting knowledge of the students and to activate this knowledge, a simple survey tool as well as a wiki-website was applied. Moreover, student questions were discussed in a simple online forum. A presence phase comprised problem-based-learning and was included to train the analytical skills of the students. Although the reduction in face-to-face teaching saved time for the teacher, this was more than compensated by intensive online communication between him and the students. Despite of that, this kind of course was considered clearly superior over the previous lecturing, since it allowed to train student skills on a higher cognitive level.

Keywords

Bologna reform, horizontal mobility, survey tool, hot potatoes, wik, thought experiment, Phorum, e-learning toolbox, most simple e-learning tools, active learning, video streaming

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