

Blended learning: Combination of problem-based learning and electronic learning

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Problem-based learning (PBL) and electronic learning (eLearning) play an important role in medical training. The combination of the two methods, described as blended learning (BL), is mostly known in cases where PBL is offered in an online educational programme.

This study assessed the usefulness of the combination of analogue (offline) PBL and online eLearning tutorials from the students' perspective. The study was conducted at the Dental School of the University of Frankfurt, during the academic year 2012/13. A total of 24 dental students in their first clinical year and 3 peer-tutors participated in this study within a hybrid curriculum. In a specialised course, the peer-tutors were trained in conducting BL tutorials. In addition, they were mentored by relevant experts during their activity with the student groups. Data were obtained from written student responses to a questionnaire consisting of general information (Part 1), concept of BL (Part 2), and effectiveness of their tutor(s) (Part 3). Possible responses ranged from 1 (= strongly disagree) to 5 (= strongly agree) for Part 1, and from 1 (= unsatisfactory) to 10 (= excellent) for Parts 2 and 3.

From a total of 24 questionnaires, 23 were returned (response rate 95.8%). The mean grade obtained for the usefulness of the combination of analogue PBL and online eLearning amounted to 3.43 (SD = 1.07). A mean score of 3.39 (SD = 0.89) was awarded for the question whether BL was more effective than a lecture. Overall, the concept of BL scored a mean grade of 7.65 (SD = 1.79), and the tutors reached a mean grade of 6.96 (SD = 1.99).

BL beginners in a hybrid curriculum appreciated this novel educational approach. Peer-tutors were effective in their roles, but previous training and mentoring by experienced tutors was necessary to ensure a learning benefit for the students.

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