

Problem-Based Learning: A Study of the Web-Based Synchronous Collaboration.

Abstract

This article reports the study of student-facilitator and student-student synchronous collaboration in the Web-based learning environment designed using the constructivist Problem-Based Learning (PBL) approach. The treatment sample was exposed to the constructivist PBL Web-based learning environment and involved in the synchronous collaboration as required by the constructivist PBL principle. A pre and post-treatment tests and questionnaire were administered to the students before and after the exposure respectively. The analysis of the data revealed that the student-facilitator collaboration yielded positive educational output and highlighted the importance of the scaffolding by the facilitator in the learning processes that supported both interaction and self-reflection. It reduced task complexity, provided motivation and awareness as well as structure in the learning mechanism. The student-peer collaboration resulted in the enhancement of task performances through the mutual exploration of learning issues, argumentation and weaving of ideas. Highly positive responses were recorded from the respondents in their evaluation of learning outcomes, an indication of the strength of the PBL approach in the enhancement of learning effectiveness and enjoyment and satisfaction in the process.