ABSTRACT

The advancement in information and communication technology presents an opportunity to emphasize the use of collaborative learning in classrooms. Researchers and companies have realized this potential and have developed numerous related applications. The abundant availability of these applications presents the need to find ways to review the applications and make comparisons among the applications.

This thesis describes the approaches taken in developing a web-based tool for reviewing collaborative learning applications called WeRCLeA. First, literatures on collaborative learning, computer-supported collaborative learning and different collaborative learning (CL) applications are reviewed. The applications which are suitable for collaborative learning in secondary education are categorized into five groups, based on the analysis of the applications’ characteristics and purposes. Next, existing reviewing tools are reviewed. An interactive reviewing tool named Edutools is explored in detail, to look at its good characteristics and its limitations in relation to WeRCLeA. Then, the review of the available classifications for tools and features of CL applications together with the literature review gathered in Chapter 2 leads to the formulation of a proposed model. The proposed model gives an overview of the tools and features of a CL application suitable for supporting learners’ and teachers’ collaborative activities. The model also relates the conditions for successful collaborative learning to these tools.

The importance of these tools and features is determined from a survey conducted on teachers. The proposed model, the survey results and the good characteristics of Edutools serve as a basis for the design and development of WeRCLeA. WeRCLeA has been evaluated by teachers and the results are reported to be satisfactory. Finally, the research contributions and future enhancements are elaborated.
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