

# Enhancing Collaborative Learning through Online Discussion and Peer Assessment

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## Abstract

*Collaborative learning is one of the many student-centered approaches that matches with the philosophy of contemporary perspectives on learning and teaching aiming to promote higher achievement, more positive interpersonal relationships and greater psychological health. The author attempts to examine if the Web can promote collaborative learning. Thirty-four pre-service student teachers participated in this study. Learners are required to do: 1) group projects, 2) presentation, and 3) assess their peer groups. Their opinions about this learning approach were gathered from a questionnaire. It is found that learners were very enthusiastic of using the Web for discussions and they acknowledged that collaborative learning strategy can enhance their understanding of the subject knowledge.*

## Introduction

The concept of collaborative learning has been around for a long time. Collaborative learning stresses the importance of shared dialogue and inquiry [1]. As active participants in the learning process, learners develop a sense of community “that marshals the powers of interdependence” [2] and shapes the perspectives of the group. Collaborative learning means students working together to accomplish shared learning goals and to maximize their own and their group members’ achievements [5]. Research results indicated that collaborative learning fostered creative thinking as members in a group generated new ideas, strategies, and solutions more frequently than working individually [4].

Much of the information on the World Wide Web (hereafter, the Web) can be accessed easily, speedily and freely. Indeed, the effectiveness of collaborative learning over the Internet has been confirmed by various studies. It is found that students’ levels of involvement and incentive to learn have increased significantly with a wider and more complete understanding of the subject knowledge [6, 7, 9]. Interaction among learners is fostered as communication via the web is simple and convenient

when addressing to a single user or multiple users. Learners especially appreciated having a discussion forum as an avenue for communication when they were having their teaching practices at schools [8]. Besides, learning efficiency (capabilities of integration and deduction) of Internet-based collaborative learning was found to be superior to Internet-based traditional learning [10, 3] when students were required to demonstrate and explain the contents and knowledge that they had learnt.

## The Research Study

This research study aims to examine if the Web can foster collaborative learning which will result in better understanding of the subject knowledge. There were thirty four participants who were pre-service student teachers studying at the Hong Kong Institute of Education (HKIEd) taking Information Technology (IT) as one of their minor studies. Participants have taken three modules related to IT prior to taking this module, computer-supported learning environment, which was taught by the author. The author perceived the concept of computer-supported learning environment (CSLE) would be best learnt by modeling the concept. All the learners were divided into groups of two to three and to select an appropriate CSLE for a primary curriculum and take turn to present throughout the semester. They also have to host a discussion forum to stimulate other learners to discuss issues related to their presentation as well as to assess other groups. A questionnaire was also given to participants in class two weeks before the semester ended to solicit their opinions on the merits of using collaborative approach to learn. They were asked to rate using a 4 Likert scale having 4 as strongly agree and 1 as strongly disagree.

## Findings and Discussions

A total of twenty four responses were collected from learners. A response rate of seventy percent is deemed acceptable. They were very positive on all the items asked as the means are over 3. In particular, willing to adopt cooperative learning strategy when teaching (mean=3.21,

standard deviation = 0.419) has the highest mean and which is followed by the group presentation can deepen their understanding of the subject they learnt (mean = 3.19, standard deviation = 0.402). It is very encouraging that both preparing and listening to group presentation (mean = 3.17, standard deviation = 0.388) are also good learning technique though there is a great need for more discussion presentation group and assessing groups (mean = 3.00, standard deviation = 0.485).

Apart from rating different items of the questionnaire, some learners also made some written comments on co-operative learning. Most of them regarded that collaborative learning was good as each individual could contribute differently based on their best ability and interest. They could learn more through discussion with group members and learning was active and meaningful. However, it was rather time consuming and difficult to arrange time to meet and discuss among group members. They also enjoyed having the opportunity to have peer assessment as it was more objective and they were able to get more opinions. They paid more attention whilst others were presenting, as they have to assess them and the learning atmosphere was conducive. However, they would like the author to give more comments during class. The educator intentionally gave them comments after classes via e-mail to avoid affecting other learners' opinions but they did not seem to appreciate this practice. Perhaps they would still like to have human interaction rather than relying on the electronic medium. Another negative comment was that not all learners spent the same amount of effort in group work but they were awarded a group mark. Nevertheless, the group presentation and assessment constituted 30% of the total mark whilst the rest of the mark was on individual report.

## Conclusion and Future Research

Numerous research literatures have indicated the merits of collaborative learning. We have drawn the elements of collaborative learning from research findings and have tried it out during this semester with our learners. The positive responses gathered from the questionnaire confirmed that collaborative learning has been embraced which resulted in better understanding of the subject matter. Although most findings confirmed many earlier research results, there were some unfavorable feedback on using collaborative learning. More research indeed is needed to examine if the Web is a good medium to foster collaborative learning in greater depth. For example, some learners suggested the author to lead some discussions after their presentations which prompted the author to examine if the Web is a good complementary medium to foster collaborative learning. It would also be interesting to compare the grades given by the groups and author to see if there is any significant difference and the reasons

for the differences if any. To conclude, collaborative learning is best learnt through experiential learning and the Web provides a convenient and flexible avenue for discussions and peer assessments. We certainly hope the future teachers are equipped with critical thinking and collaborative skills so as to contribute successfully in an information age.

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