Chapter XVI

Promotion of Self-Assessment for Learners in Online Discussion using the Visualization Software

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Abstract

This chapter describes a method of self-assessment for learners in a collaborative discussion. The authors propose this method of self-assessment in an online discussion and examine its effectiveness through the development and evaluation of a software program in order to visualize the discussion on a bulletin board system.
The software, referred to as the “Bulletin board Enrollee Envisioner” (i-Bee), can visually display the co-occurrence relation between keywords and learners. Thus, i-Bee can display content-wise contributions made by each learner to the discussion. In addition, i-Bee can display the recent level of participation of each learner and the frequency of the learner’s use of each keyword. Through the evaluation, the authors revealed that i-Bee enables students to assess and reflect upon their discussion, understand the condition, and reorganize their commitment in a discussion that reflects their learning activity.

Introduction

The study of computer-supported collaborative learning (CSCL) is a challenge with regard to producing an environment that is conducive to mutual learning among learners who use computers. Recent research in e-learning has highlighted the significance of building an online learning community, which plays a role in the sustenance of a fruitful online learning experience (Palloff & Pratt, 1999). At present, the importance of promoting communication among learners via computer-mediated communication (CMC) is rapidly increasing.

However, there are some difficulties faced by learners in mutually recognizing the status of a learning activity in the CSCL environment—this constitutes the most important research issue (Gutwin, Stark, & Greenberg, 1995; Kato, Mochizuki, Funaoi, & Suzuki, 2004). Japanese communication researchers Kimura and Tsuzuki (1998) pointed out that group communication in the CMC tends to be disorganized and lacks in cohesion due to decreased interpersonal pressure, given the nature of the CMC. Briefly, learners are sometimes confused about what they should and should not discuss. This raises the question of the way in which CSCL environments assist learners in recognizing their commitment and reorganizing their discussion in a content-wise manner; if not, it may lead to a failure in the organization of a fruitful discussion for the purpose of learning.

In order to address this issue, the authors propose a method to self-assess the online discussions in electronic forums or bulletin board systems (BBSs). Self-assessment is very effective for learners seeking to improve their knowledge and learning strategy (Shaklee, Barbour, Ambrose, & Hansford, 1997), particularly in a collaborative learning setting. By helping learners realize that their activities are contributing to the community, learners will be self-motivated to cooperate with each other much more during online learning (Chapter V, this volume). Learners are required to monitor the actual status of their discussion, the learning process, and their interpersonal relations. This is to improve their learning community and plan the course of their education, which will enable them to make learning a significant experience.
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