MOODLE discussion for collaborative knowledge building: Students’ discourse and teachers’ practice

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Technological breakthroughs and the influx of global information have carved out more opportunities for building knowledge societies. As we are witnessing the progress of knowledge, a knowledge society requires knowledge sharing. Thus, ensuring knowledge building and maintaining knowledge sharing opportunities has become critical in education, and “the contribution of Information and Communication Technologies [ICT] to the construction of a knowledge society” has been recognised. (UNESCO, 2002, p. 57). Being an ICT tool, asynchronous communication supports web-based dialogues, and the asynchronous nature of discussion forums can encourage more in-depth and meaningful dialogues to construct knowledge (Collot & Belmore, 1996; DeBard & Guidera, 1999; Hodgson, 2000).

Discourse, thus, has been identified as crucial in collaborative knowledge building, which has been defined as a social product (Bereiter, 2002; Scardamalia & Bereiter, 2006), and a collective state of knowledge through discourse (Scardamalia & Bereiter, 1993). Even though Popper (1962) argues that discourse may not be the only way to construct knowledge as there are other ways such as research, experiments and reflection, he does not deny that discourse is the medium through which knowledge is formed, criticised, and amended. While many have acknowledged the role of discourse in the building of knowledge, there is little empirical evidence to suggest that collaborative knowledge building can be investigated independently of the discourse. Thus, how corpus-based methods are able to deal with the knowledge-construction process in discourse remains a worthwhile question to be answered.

This study aims to examine an entire corpus of a dedicated asynchronous communication discourse on the MOODLE platform. This examination allows for a fine-grained coding of word meaning that can assess the extent to which the students negotiated the meaning of new expressions (and the knowledge of the discourse objects denoted) to exercise knowledge construction in discourse. Findings came from a case study that involves 49 health-care undergraduates participating in discussions over a semester at the University of Hong Kong. Students were invited to exchange opinions about the concepts extracted from the literature they read. The MOODLE learning environment supports learners to start with what they know from the reading input and to collaborate in the construction of meaning of the lexical items (representing discourse objects). This collaboration makes use of paraphrases. Each new paraphrase adds something to the meaning of the lexical item (or the knowledge of the discourse object). Paraphrases were extracted and examined from an English corpus of four sub-corpora in 394,778 running words: Reading Assignments, Teacher’s Guiding Questions, Online Discussion Texts, and Post-test. The various diachronic patterns of paraphrase observed include: Modification (Expansion, Reduction, Relating), Exemplification, Metaphor/Simile, and Arguing (Description, Explication).

On the other hand, collaborative knowledge building has been a crucial notion in classrooms. Although it “could be practiced in ordinary classroom without special computer assistance, it is best supported by networked computer software” (Wan, 2002, p.13). Classroom environments can be designed to involve a large community of students for advancement of the community’ knowledge (Lamon, Reeve, and Caswell, 1999). Such technological integration may, however, bring complicated challenges to teachers or involve complexities in establishing knowledge building communities. The educational challenges involved may include inadequate computer literacy or even fear of technology, lack of training opportunities, and insufficient technical support from the institution, with some of them being identified from the literature (see for example Lim, 2004). This paper will explore the challenges and implications for teachers’ practice to adopt MOODLE discussion for collaborative knowledge building. The experience of engagement, social presence and learning value leads to further implications for realizing the educational goals of MOODLE application in collaborative knowledge building, which include enhancing quality in networked knowledge construction dialogues, facilitating student motivation and engagement, and building more structured instructional design.

Keywords ICT; MOODLE; collaborative knowledge building; discourse; paraphrase