Chapter IX
Chatting to Learn:
A Case Study on Student Experiences of Online Moderated Synchronous Discussions in Virtual Tutorials

Lim Hwee Ling
The Petroleum Institute, UAE

Fay Sudweeks
Murdoch University, Australia

ABSTRACT

As most research on educational computer-mediated communication (CMC) interaction has focused on the asynchronous mode, less is known about the impact of the synchronous CMC mode on online learning processes. This chapter presents a qualitative case study of a distant course exemplifying the innovative instructional application of online synchronous (chat) interaction in virtual tutorials. While chat interaction has primarily been researched for its effectiveness in supporting social-emotional aspects of learning, this chapter reports survey findings on its impact on facilitating participation in collaborative group learning processes and enhancing understanding of course content from a sociocultural constructivist perspective. The results reveal factors that affected both student perception and use of participation opportunities in chat tutorials, and understanding of course content. The findings present implications for the pedagogical design of online synchronous collaborative-constructivist learning activities that enhance understanding of course content through dialogic participation in the learning process.

INTRODUCTION

In distance education, online interaction between learning parties is largely facilitated by computer-mediated communication (CMC) technologies.

Most research on educational CMC interaction has focused on the asynchronous mode which is widely held to offer learners greater convenience as well as extended time for participation and reflection. However, less is known about the impact of the

synchronous CMC mode on the online learning process which stem largely from the underutilization of the real-time mode in the design of most distance courses. This chapter presents a qualitative case study of an online undergraduate course that exemplifies the innovative instructional application of online synchronous (chat) interaction in virtual tutorials. While chat interaction has primarily been researched for its effectiveness in supporting social-emotional aspects of learning, this chapter reports survey findings covering its impact on facilitating participation in collaborative group learning processes and enhancing understanding of course content from a sociocultural constructivist perspective. The implications of the findings are discussed and recommendations are made regarding the pedagogical design of online synchronous collaborative-constructivist learning activities. Finally, several possible areas for future research are suggested.

BACKGROUND

Interaction and the Online Learning Process

From a sociocultural constructivist perspective of learning (Vygotsky, 1962), dialogic interactions between members of a learning community are crucial for supporting meaning negotiation that leads to knowledge construction. In online educational contexts, as students and tutors share individual understandings of concepts, intellectual growth is supported by the availability of *scaffolding* or guidance from the learning parties with interaction mediated by language and various CMC technologies such as e-mail, discussion forums, and chat rooms.

Synchronous and asynchronous CMC technologies offer different capabilities for facilitating interaction in online learning environments (Ngwenya, Annand, & Wang, 2004). The *asynchronous* CMC mode supports delayed-time dialogue with

interactions largely manifested as text-based contributions which could be composed, sent, and accessed without time and proximity constraints. However, the *synchronous* CMC mode requires communicating parties to be "present" at the same time for the dialogue to occur through services and applications such as voice over IP, desktop video conferencing, and Internet relay chat. Online synchronous (chat) interactions are mainly manifested as textual messages, composed and sent by parties who are simultaneously logged in chat rooms. Rather than having the facility to order messages in topical or temporal order, as in the case of asynchronous discussion threads, chat messages appear chronologically on screen with preceding exchanges scrolling up and then off each party's computer screen at a speed corresponding to the pace of the overall conversation (Werry, 1996), offering a potentially permanent record of the proceedings, which is generally not retrievable unless deliberately saved by the user.

Research on Quality of Online Educational Interaction

In higher education, the quality of online asynchronous interaction has been extensively examined from a constructivist approach for indications of sustained reflection associated with knowledge building (Garrison, Anderson, & Archer, 2001). The asynchronous mode is assumed to support extended reflection (Harasim, Hiltz, Teles, & Turoff, 1995) and provide the time needed for learners to move beyond information sharing to reach higher level *integration* and *resolution* phases of the critical thinking process where shared information is synthesized and new knowledge created (Garrison, Anderson, & Archer, 2000). A number of studies have analyzed the quality of online asynchronous discussions for the presence of cognitive and/or social-emotional dimensions considered necessary to develop student critical thinking and collaborative skills (e.g., Booth & Hulten, 2004; De Laat & Lally, 2004; Garrison,

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