Chapter 5
Multimodal Interactive Tools for Online Discussions and Assessment

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ABSTRACT

The purpose of this chapter is to discuss the enhancement of asynchronous online discussions and assessment using multimodal interactive tools that allow text, video, and audio posts. The integration of these multimodal interactive tools as well as their affordances could lead to powerful changes in the learning experience of students interacting in asynchronous online environments. Along with providing an overview on asynchronous online discussions, the chapter will include a review of how multimodal interactive tools are used to engage learners in online discussions using text, audio, and video. Additionally, the chapter will describe both the benefits and challenges of asynchronous online discussions with text, audio, and video posting. Furthermore, the chapter will describe how the same multimodal interactive tools can also serve as an assessment method in asynchronous online learning of specialized subject areas.

INTRODUCTION

When collaborating in online environments, interaction among users is a key element for positive attitudes towards learning, as well as the success of a course (Ching & Hsu, 2013; Durrington, Berryhill, & Swafford, 2006; Gikandi, Morrow, & Davis, 2011; Smith & Winking-Diaz, 2004). As the popularity of online courses continues to grow in higher education, the asynchronous online discussion forum has become a basic and important part of these courses (De Oliveira & Olesova, 2013; Gao, 2014; Hung & Chou, 2014). An asynchronous online discussion environment may be defined as a human-to-human interaction using text within a learning platform via computer networks, for participants to interact with one another to exchange ideas, insights, and/or personal experiences (Hung & Chou, 2014).

Unfortunately, asynchronous online discussions are not always able to properly live up to their expectations (Andresen, 2009; Clark, Strudler, & Grove, 2015; Darabi, Arrastia, Nelson, Cornille, & Liang, 2011; Gao, 2014; Gao, Zhang, & Franklin, 2013). Learners in online courses dread having to comply with a certain number of posts per week and comment on their classmates' posts (Clark et al., 2015). Also, time constraints such as family and work obligations are the main limitations on the amount of time online students can devote to their coursework. Additionally, most students encounter feelings of isolation and lack of engagement when participating in asynchronous online discussion (Clark et al., 2015; Darabi et al., 2011). Therefore, it is important that online instructors employ methods that will help students engage in the online learning experience and discussions.

In order to help create social presence and engaging asynchronous learning experiences in computer supported learning environments, it is important to leverage and integrate interactive technology that enhances communication between the learners (Ozyurt & Ozyurt, 2011). This chapter aims to discuss the enhancement of asynchronous online discussions and assessment using multimodal interactive tools that allow text, video, and audio posts. The integration of these multimodal interactive tools as well as their affordances could lead to powerful changes in the learning experience of students interacting in asynchronous online environments. Along with providing an overview on asynchronous online discussions, the chapter will include a review of how multimodal interactive tools are used to engage learners in online discussions using text, audio, and video. Additionally, the chapter will describe both the benefits and challenges of asynchronous online discussions with text, audio, and video posting. Furthermore, the chapter will describe how the same multimodal interactive tools can also serve as an assessment method in asynchronous online learning of specialized subject areas.

ASYNCHRONOUS ONLINE DISCUSSIONS: OVERVIEW

Asynchronous online discussion boards both enable students to explicitly express their thoughts in writing and promote communication among teachers and students. In addition, researchers agree that asynchronous online discussion settings support collaborative knowledge construction, critical thinking, and greater realism and motivation to learn (Bassett, 2011; De Oliveira & Olesova, 2013; deNoyelles, Mannheimer Zydney, & Baiyun, 2014; Gao et al., 2013). Participation in asynchronous online discussions is based on willingness; therefore, contributors may be expected to be individuals who are self-motivating and goal-oriented, who acquire from experiences, read, and evaluate other messages in relation to the discussed topic, and who think about the topic (Ozyurt & Ozyurt, 2011). However, limited participation and interaction in asynchronous online discussions appears to be a persistent and widespread problem. To solve this issue, peer facilitation has been proposed as a means to encourage a greater degree of interaction, as well as a model for productive online discussion (Ng, Cheung, & Hew, 2012). Other factors identified for a successful asynchronous discussion are: presence, threaded posts, quality posts, discussion style, conversational style, feedback, and the use of questions (Fear & Erikson-Brown, 2014).

Based on the assumption that active participation in asynchronous online discussions is important for learning, Gao et al. (2013) proposed the Productive Online Discussion Model. In this model Gao et al. (2013) suggest that it is essential for participants to embrace the following four dispositions:

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