Chapter 27

Collaborative Learning:
A Way to Transform Learning and Instruction in Online Courses

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ABSTRACT

This chapter describes a study of collaborative learning in undergraduate online courses. Three classes containing a different degree of collaboration (no-collaboration, low-collaboration, and high-collaboration) were comparatively investigated by observing scores in online tests, paper assignments, and online discussion. The study found that classes with collaborative activities achieved higher scores in learning. Based on this result and the perspectives obtained from interviews with the instructor and students on collaborative learning, this chapter suggests that in online learning environments, collaborative learning tasks must be optimized; meanwhile, flexibility in online learning must be fully considered.

INTRODUCTION

With the proliferation of online education since the 1990s, online educators have developed various instructional models, principles, and strategies to increase the quality of online education. Each of these developed models is supported by learning theories or pedagogical approaches. For instance, Taxonomy of Education Objectives (Bloom, 1956) has been widely adopted in online course design and instruction. With the paradigm shift from teaching to learning, online educators have advocated that collaborative learning is "one of the most promising pedagogical approaches for distance learning" (Bernard, Rubalcava, & St-Pierre, 2000) because collaboration among learners encourages active, constructive, reflective, and transformative learning.

In virtual learning environments, the positive effect of collaborative learning is also evident in promoting critical thinking skills, co-creation of knowledge, and reflection and transformative learning in which students take more responsibility for their own learning (Gilbert & Driscoll, 2002; Palloff & Pratt, 2005; Uribe, Klein, & Sullivan, 2003). Because of these advantages, collaborative learning "is now an accepted, and often the preferred, instructional procedures at all levels of education" (Johnson, Johnson, & Smith, 2007).

However, current online instructional practice with collaborative approaches has not been thoroughly investigated in comparison with a non-collaborative approach concurrently implemented in the same educational setting. Without simultaneous observation of learning process and outcomes in individual conditions where different degree of collaboration takes place, the studies may not be fully demonstrate that collaborative learning could lead to higher learning outcomes.

The experimental study presented in this chapter attempts to bridge the gap in current research by looking into online learning outcomes when the collaboration is implemented in different conditions: no-collaboration, low-collaboration and a high-collaboration.

BACKGROUND

Definition of Online Collaborative Learning

In this study, online collaborative learning (OCOL) is defined as an educational approach that emphasizes active and collective efforts of participation and interaction on the part of both students and the instructor primarily by communication via the Internet. This definition is derived from other existing definitions regarding online collaborative learning.

A few terms related to learning together online have been used interchangeably in the literature. For instance, computer-supported collaborative learning (CSCL), collaborative learning (COLL), and cooperative learning (COOL) are common terms found in research investigating online teaching and learning focusing on interactive and student-centered learning.

CSCL distinguishes from CSCL and COOL in its focus on the use of computer technologies (Graham & Misanchuk, 2004). Nevertheless, there has long been an argument on collaborative learning and cooperative learning. Some researchers (Bruffee, 1999; Dillenbourg, 1999) perceive these two terms as "two versions of the same thing" (Bruffee, 1999, p. 83) because cooperative learning and collaborative learning overlap in their typical characteristics (i.e., shared knowledge and authority, socially co-constructed knowledge through peer interactions) and long-term goals which help students learn by working together on substantive issues. However, some researchers (Bruffee, 1999; Dillenbourg, 1999; McInnerney & Roberts, 2004; Panitz, 1996) have tried to clarify distinguishing characteristics of the two terms to help people better understand the nature of interactive learning in research and practice.

For instance, Bruffee (1999) addressed the differences between the cooperative learning and collaborative learning by examining their primary goals and educational levels. For him, cooperative learning aims to help students to build accountability for learning collectively rather than competing with one another; whereas, collaborative learning aims to shift class authority from the teacher to student groups. Cooperative learning is used more in elementary schools, tapering off during junior and high school. Collaborative learning is more appropriate at a college and university level when students are more arable to control learning process by themselves.

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