

# Chapter 12

## A Review of Literature and a Model for Scaffolding Asynchronous Student– Student Interaction in Online Discussion Forums

**Kristin L. K. Koskey**  
*The University of Akron, USA*

**Susan N. Kushner Benson**  
*The University of Akron, USA*

### **ABSTRACT**

*The purpose of this chapter is to overview types of asynchronous student-student interactions with a focus on designed interaction in an online discussion forum context, as well as to illustrate pedagogical approaches to scaffolding interactions. Student-student interaction in asynchronous online discussion is the emphasis of this chapter. The chapter focuses on a review of the literature on the roles of the instructor, student, and learning task in the online teaching and learning process. Ways in which these roles interact is then discussed including an overview of types of interactions. The chapter then focuses on contextual and designed interactions including conditions documented in research as to how to effectively use designed interaction to scaffold student-student interaction. Next, a guiding model is presented for how to plan for asynchronous interaction. Finally, challenges faced when designing or implementing synchronous discussions are discussed, as well as potential recommendations for overcoming these challenges.*

### **INTRODUCTION**

The purpose of this chapter is to overview types of asynchronous student-student interactions with a focus on designed interaction in online discussion forum contexts, as well as to illustrate a hierarchy of pedagogical approaches to scaffolding student-student interactions. Asynchronous online discussion

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is the focus of this chapter, as this remains a common form of interaction in the online environment as documented by Heejung, Sunghee, and Keol (2009). Asynchronous refers to when students “do not have to be online at the same time to communicate” compared to synchronous where student communication in real time (Ko & Rossen, 2010, p. 4). Asynchronous discussion can be facilitated using numerous platforms such as discussion forums offered by a learning system such as Blackboard or Desire2Learn, Wiki sites, and blog platforms such as provided by Yellowdig, to name a few. Although the pedagogy discussed and outlined in this chapter focus on asynchronous forms of discussion, some of the methods might transfer to synchronous forms of discussion.

The chapter is organized in five sections. In the first section of the chapter, a review of the literature on the roles instructors, students, and the learning tasks play in the teaching and learning process followed is presented. A discussion of the ways in which these roles interact is discussed in the second section. Next, the concepts of contextual and designed interaction are introduced as two ways to promote student-student interaction, with a focus on characteristics of implementing designed interaction. The documented advantages of designed-interaction in the literature are discussed, and the current research on the use and implementation of this model are briefly reviewed. In the fourth section, a guiding model for planning for asynchronous student-student interaction is outlined, followed by examples. Finally, the chapter concludes with a discussion of the challenges documented in the literature that might be faced by instructional design experts and instructors of adult learners who seek to implement designed interaction, as well as suggestions for addressing the pedagogical challenges.

## **THE ROLES OF THE INSTRUCTOR, STUDENT AND LEARNING TASK**

Nearly 25 years ago, Alison King (1993) published an article titled *From Sage on the Stage to Guide at the Side*. In this article King described outdated classrooms where professors were the central figure – transmitting knowledge to students who in turn memorized and then reproduced the knowledge on an exam. In her work, King suggested a new metaphor of professors as guides on the side. King suggested that professors are still responsible for presenting course content but that learning is fostered through less directive approaches. King described that the professor’s role “is to facilitate students’ interaction with the material and with each other in their knowledge-producing endeavor” (p. 30). Since its publication, King’s work has been cited nearly 800 times as scholars in the field of teaching and learning consider how the roles of instructors and students best maximize the process. In no other context is this discussion livelier than within the arena of the online classroom.

### **The Role of the Instructor in the Online Classroom**

Zane Berge (1995) was an early scholar in the field of online teaching and learning. He conceptualized learning as involving interaction with content and interaction with other people. Reflecting about the roles and functions of the online instructor in computer conferencing, Berge described the role of the online instructor as pedagogical, social, managerial, and technical. From a pedagogical perspective, Berge contended that one of the most important roles of an online instructor is that of an educational facilitator – using questions and probes to focus discussion on important concepts and skills. From a social perspective, Berge suggested that online instructors assume a social role in which they promote a friendly and social learning environment that builds relationships among students and develops class

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