Scaffolding Argumentation in Asynchronous Online Discussion: Using Students’ Perceptions to Refine a Design Framework

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ABSTRACT

Despite its wide usage and pedagogical benefits, asynchronous online discussion in higher education courses does not necessarily lead to students’ knowledge-constructing discourse and reflective learning. Integrating argumentation into online discussion can facilitate meaningful learning. In this article, the authors present a framework of Scaffolded Online Dialogic Argumentation (SODA) that they created for designing an asynchronous online discussion. Based on the design framework, the authors developed and implemented an argumentation activity in a graduate-level online course. They then examined participants’ perceptions of the pedagogical components of SODA using a qualitative inquiry approach. Findings indicate that students perceive a positive influence of the scaffolded argumentation activity on their learning engagement in online discussion. Implications include suggestions for researchers and practitioners in refining and using SODA for future research and discussion activity design.

KEYWORDS

Argumentation, Asynchronous Online Discussion, Computer-Based Scaffolds, Conceptual Framework, Critical Thinking, Scaffolding

INTRODUCTION

Online instructors commonly use asynchronous online discussion due to its various known pedagogical benefits. However, many researchers conclude that asynchronous online discussion itself does not ensure meaningful learning and discourse (Hew, Cheung, and Ng, 2010; Zhu, 2006). Prior studies report that students often present only the minimum amount of effort to fulfill quantitative requirements for online discussion. Moreover, much of the conversation in asynchronous online discussions exhibits surface-level thinking (Garrison and Arbaugh, 2007). Thus, while some students participate more often in online discussions than required, a high frequency of participation lacking in-depth thinking does not result in productive interaction (Garrison and Cleveland-Innes, 2005). For example, students often share a summary of what they read without adding their own thoughts, display simple agreement with their peers’ opinions, or repeat ideas shared by peers. Also, students sometimes hesitate to express perspectives different from those of their peers. Thus, to promote the type of interaction that is conducive to meaningful learning, asynchronous online discussion activities should be carefully designed and facilitated (Dennen and Wieland, 2007).

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Argumentation, if well designed, can facilitate reflective learning and co-constructing knowledge in asynchronous online discussions (Oh and Kim, 2016). During argumentation, learners construct their own arguments, evaluate those of others, and defend their standpoints until they reach a justified conclusion (Clark and Sampson, 2008). Learners tend to use higher levels of thinking skills while participating in argumentation (Oh and Kim, 2016; Lin and Jeong, 2013). Accordingly, students can gain reasoning skills and a deeper conceptual understanding of the material through argumentation (Andriessen, Baker, and Suthers, 2003; Heras, Jordan, Botti and Julian, 2013).

This paper reports part of a multi-year project, the goal of which is to address the need for more research on how to design online argumentation that facilitates meaningful interaction and learning in asynchronous online discussion in higher education contexts. Based on a thorough literature review on online argumentation, scaffolding, and asynchronous online discussion, a design framework for Scaffolded Online Dialogic Argumentation (SODA) was created (Kim and Oh, 2014). Then, they developed and implemented an argumentation activity grounded in the framework in a graduate online course. The first iteration of the study grounded in the SODA framework investigated students’ cognitive engagement in online argumentation. Findings revealed adult online learners’ achievement in higher level thinking skills, increased cognitive efforts during online discussion, and satisfaction with their learning experience (Oh and Kim, 2016). This paper focuses on the second iteration of the project aiming to introduce the SODA design framework in detail and refine the framework by discovering what pedagogical aspects of it work or need further improvement based on students’ own reflections. The research questions were the following: 1) How do participants perceive the pedagogical components of SODA? and 2) What aspects of SODA should be refined or retained? In the end of this paper, the authors provide suggestions on how SODA can be used for future research and educational practices.

LITERATURE REVIEW

This section presents findings drawn from the authors’ literature review on scaffolding argumentation in asynchronous online discussions in higher education contexts.

Dialogic Argumentation to Support Student Interaction in Online Discussion

In online courses, asynchronous online discussion is employed to encourage the co-construction of knowledge. According to Harasim (2012), during online group discussion or debate, students are expected to generate ideas, compare and analyze multiple ideas, and then synthesize their ideas. Students can achieve knowledge and skills in online discussion only when they exert cognitive effort through reasoning, reflecting, and synthesizing multiple ideas (Ioannou, Demetriou, and Mama, 2014). Thus, instructional strategies that support students’ interactions in online discussion are required for increasing students’ high-level cognitive efforts (Akyol, Garrison, and Ozden, 2009; Darabi et al., 2013).

Dialogic argumentation can be used as an instructional strategy to lead to more task-oriented and in-depth discourse in online discussion. Argumentation refers to a socio-cognitive activity characterized as a conceptually deep level of interaction (Baker, 1999). Argumentation requires a series of cognitive processes that general online discussion does not: building a conceptual understanding of the topic, collecting and analyzing evidence for building arguments; justifying, sharing, and defending arguments; attempting to persuade peers; and finding agreement by the end of the argumentation (Voss and Means, 1991). Through engaging in these cognitive processes, students can improve reasoning skills. They can also correct misconceptions and build broader understandings through negotiating meaning during argumentation. Overall, dialogic argumentation facilitates collaborative knowledge exploration and construction (Stegmann et al., 2012).

However, not all learners are good arguers. For example, learners often construct arguments without conclusive evidence and confront opposing standpoints without grounds (Walton, 1996).
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