

# Chapter 7

## The Varied Dimensions of Interactivity Exploring Student Depth of Learning

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### ABSTRACT

*The research here evaluates student interactions in an undergraduate American politics course at two institutions. Significant evidence reveals that student interactions lead to deeper reflective learning when correcting, clarifying, arguing, and disagreeing with each other. These findings add to the growing research on online spaces as well as providing educators with a stronger understanding in how to tailor their instructional strategies and tasks to better meet academically reflective outcomes.*

### INTRODUCTION

With the popularity and advancement in this virtual age, educators seek to create instruction that is rigorous in order to prepare students for college, a career, and life success through deeper learning experiences. One such means is with the use of a carefully designed web project, an e-collaboration, offered through a thoughtfully constructed asynchronous online platform, where student interact and learn together through peer student and student content interactions online. An e-collaboration using interactive forums where peers deliberate with each other allowing them the time to read, reflect and post in time and space of their choosing, have the potential to transform the landscape of higher education by expanding thoughtfully constructed student discussions across the globe. Peer student instruction as an instructional method has been recognized as having a positive impact on learning as early as 1916 when John Dewey referred to interaction as the defining component of the educational process occurring when the student transforms the information passed to them from another and constructs it into knowledge with personal application and belief (Dewey, 1916).

Peer interaction as a pedagogical ideal is pivotal in online settings as the back-and-forth dialogue among peers facilitates learning through interaction. Researchers have observed that in online environ-

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ments much like face-to-face classes, learning occurs through an egalitarian process in which participants generate, challenge, reflect upon, and defend ideas, thereby constructing deeper meaning through these exchanges (Rountree, 1995). In other words, the peer teaching process derived as a product of multiple students' interaction (Chadha, 2019a; Chadha, 2019b; Dehler & Parras-Hernandez, 1998) is an opportunity for educators to reinforce student knowledge and critical thinking deepening their depth of learning online (Evans & Cuffe, 2009).

Various studies over the years have demonstrated that student-centered peer interaction processes in online education foster a deeper reflective learning dynamic that favorably impacts student achievement (Bernard et al., 2009; Botsch & Botsch, 2012; Chadha, 2019a; Lee & McLoughlin, 2007). The concept of deeper learning has been well documented in the literature (Evans & Cuffe, 2009; Papert, 1994; Wood, 1998; Yu et al. 2010), where a participant is active in the learning process as "creators rather than consumers of knowledge" (Papert, 1994, p. 12). By fostering interaction online, it provides opportunities for more experienced students to further develop their knowledge and to advance their teaching skills as students are actively involved in thinking critically leading to a deeper learning of the content (Bernard et al., 2009; Chu et al., 2017; Lou et al., 2006; Robson et al., 2003).

And peer leaning online is supported with several studies confirming that retention rates are on par between online and face-to-face courses, with no significant differences in their course outcomes (Wladis et al., 2015; Bolsen, 2016; Farinella et al., 2000; Kim & Bonk, 2006; Pape, 2010). Peer student interactive learning through online e-collaborations have the potential to improve student learning processes inconsequential of time zones. Researchers issue a call for more research with statistically significant results and methods employed for digital learning platforms that improve students' learning performances. With proof of academically robust peer student interactive deliberations, the arena of online education expands globally and provides a means for higher student performance (Jankowski et al., 2004; Karlsson, 2010; Kies et al., 2010; Stanley et al., 2004; Wright, 2007).

This research answers that call. An e-collaboration that is used in this study was first designed in 2008 with the pedagogical intent to complement traditional discussions in political science classes, on similar issues across regions through the use of a virtual space for undergraduates enrolled in Introduction to American Politics courses on different campuses.

Each semester, different professors were involved in the ongoing project, sometimes as many as six, participating in the semester-long project that centered on discussion forums. Each semester of participation a new website was created for each set of participating classes. The URL has been from a ning.com site. For this study, one semester of online peer-student interactions and peer-academic interactions in discussion forums are investigated in a project complementing a face-to-face American Politics course from two campuses across two time zones. This web space was accessible only to those students who had signed human subject consent forms. On this collaborative web site, students would post and respond asynchronously, to a weekly asked instructor question. The pedagogical goals in using peer interaction were to increase student interaction and participation, reinforce lessons, hold students accountable for their views, develop better understanding of points of view, improve communication and analytical skills, articulate points, openness to all, build civility, tolerance, critical thinking, deepen a sense of identity and expand a sense of online community. Findings reveal that in this specifically designed e-collaborative web space students learn from each other through various forms of interactions that invigorate the peer deliberative education processes among students across geographic regions of the country<sup>1</sup>. The pedagogical impact of these significant findings abounds in that an e-collaboration

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