

# PERSONALIZING AND EXTENDING DELIBERATION IN THE ONLINE CLASSROOM: FUTURE HORIZONS

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## ABSTRACT

*Research indicates that when instructors interact with students online their academic engagement increases, yet there is little research on student peer interactions and its effectiveness in terms of academic engagement. This study evaluates peer deliberations on a collaborative website for students enrolled in an American politics course at two institutions. Significant evidence reveals that student peer interactions produce academically reflective engagement, and their interactions personalize these online spaces and extend peer deliberations over every question asked of them during the semester. This article expands research on peer interactions online by utilizing an online collaborative site as an innovative means to engage students in academic deliberation.*

*Keywords: online collaboration, online teaching, online student learning*

## INTRODUCTION

As early as 1916, John Dewey noted the importance of community-based learning and that knowledge is developed through working together to solve problems. This process often entails self-reflection and changing one's own habits to meet the demands of living communally. Dewey's longstanding ideas of community-based learning are closely aligned with deliberation, the notion that students take time to reflect and reconsider their own views before responding to peers. This is the learning process that is the focus of this study.

Previous research has shown that deliberative engagement is beneficial on a number of levels. From a multicultural perspective, it promotes tolerance and understanding, especially in cases where cultural or experiential backgrounds differ (Andriessen Baker, & Suthers, 2013; Astin, 1993; Bender, 2012; Hurtado, 2003; Milem, 1994; Terenzini & Pascarella, 1991). It also contributes to more critical and reflective participation in terms of formulating opinions and listening to the opinions of others (Chadha, 2018a, 2018d; Chadha & Van Vechten, 2017; Englund, 2006; Grönlund, Bächtiger, & Setälä, 2014; Gronseth et al., 2018; Mandernach, 2018). In academic environments,

deliberation produces such positive and measurable outcomes as higher grades, increased knowledge, and greater participation (Bode, Vraga, Borah, & Shah, 2014; Kenski & Stroud, 2006; Light, 1992; Moy & Gastil, 2006; Strandberg & Berg, 2015).

In an online instructional environment, instructor-student deliberative interaction has been duly documented (Anderson, Liam, Garrison, & Archer, 2001; Mandernach, 2009, 2018; Richardson & Swan, 2003). However, there is little information regarding online student peer deliberative interactions, despite the fact that online spaces have a number of advantages for deliberating over face-to-face. One such advantage is that of asynchrony, which allows students to have (un)limited time to think, reflect, or continue discussions at a later time, such as after taking care of work/home priorities (Chadha, 2017c, 2018b; Hrastinski, 2008; Stegmann, Wecker, Weinberger, & Fischer, 2012). Online spaces also mask students' identity and personal characteristics, such as age, gender, race, or religion, and focus discussions on content rather than on the identity of the other person (Chung & Han, 2013; Herring, 1993). Masking such identifiers offers an equally shared asynchronous space for students to involve themselves in deliberation and

a safe space to relate to peers based on shared experiences, such as being deployed or being a single mom (Dunlap & Lowenthal, 2018; Evans Steele, Robertson, & Dyer, 2017; Fatkin & Lansdown, 2017; Grönlund & Himmelroos, 2009; Hakkinen, 2013). In connecting with peers, students promote discussions built by peer-interactions that positively impact their academic success (Kock & Villadsen, 2012; Stegmann et al., 2012; Xiao & Askin, 2015).

This study examines student peer interaction online and whether it is an effective means of personalizing and extending deliberations that respond to instructor-posed questions. The researchers analyzed one semester of online peer student discussions during the same course offered at two geographically separated institutions. Specifically, they examined whether students:

1. participated with peers from both their home and counterpart institutions;
2. personalized their discussions;
3. extended their participation beyond the course requirements; and
4. consistently engaged in academic deliberation regardless of the type of question posed (theoretical or controversial).

The online infrastructure involved a customized, subscription-based website that was accessible to only those students eligible for the study (i.e., those who signed human consent forms or obtained parental consent).

The idea for this customized website came from a faculty member who believed that interactive peer discussions with guided academic criteria about common comparable subjects, such as American politics or elections, would promote better deliberative discussions. Interested faculty were recruited from the national American political science education listserv and national political science conferences. Each instructor was responsible for performing work in a timely manner, including obtaining human subject forms and meeting FERPA requirements. The collaborators agreed upon the course type, level, objectives, and syllabus requirements and prepared alternative project arrangements for those students who did not consent. The online collaborative site was created through a NING (ning.com) service and personally paid for by the professors. Each semester a new website was created for those choosing to participate

that incorporated as many as six campuses or as few as two institutions. The online site would provide a virtual educational space for students enrolled in comparable subjects across geographic boundaries to practice critical thinking about political issues when interacting with each other. The site was created using a paid service through ning.com with the URL [americanpoliticsspring2012.ning.com](http://americanpoliticsspring2012.ning.com). The collaborative site was designed with student peer interactivity in mind, where participants responded to an initial post and to each other. On the site, instructors posed weekly questions on a rotating basis for all students to respond. An example of this interactivity is shown in Table 1 with student names erased to preserve the anonymity of the participants.

Given the benefits of peer deliberation as an effective mode of learning in general (Anderson, 2003; Chadha, 2017c, 2018c; Chadha & Van Vechten, 2017; Xiao & Askin, 2015), web spaces designed with deliberation in mind allow students to make personal connections across geographic areas, interact with students from diverse backgrounds of experience (Thakur, 2012), and extend their learning experiences beyond the classroom through in-depth discussions online.

## LITERATURE REVIEW

Englund (2006) defined deliberative communication as an interaction where each participant “takes a stand by listening, deliberating, seeking arguments, and evaluating . . . in a collective effort to find . . . (Dis) agreement” (p. 503). These interactions may involve peers asking honest, open-ended questions that extend a discussion on any issue or broaden the way to think about a problem (Dixson, 2012). Crucially, these back-and-forth exchanges are not considered deliberations if participants are simply asking for factual information (Guzdial & Turns, 2000). Rather, deliberative interactions (termed “effective discussion” by Guzdial & Turns [2000] and “productive discussion” by Hsi & Hoadley [1997]) are sustained through questioning each other, focusing on topics that extend learning goals, and actively generating comments that lead their peers to elaborate upon issues and propose new ones (Stromer-Galley, Bryant, & Bimber, 2015).

Theorists agree that the cornerstone of interactive deliberation involves considering differences of

opinion while responding with critical thought. This is not to say that each participant agrees, but that they are willing to discuss and reflect on any theoretical or controversial issues (Benhabib, 1996; Conover, Searing, & Crewe., 2002; Gronseth et al., 2018; Stephan & Vogt, 2004; Stromer-Galley et al., 2015). In addition, controversial and theoretical issues couched in a deliberative framework are viewed by participants as a conversation, not an end, when class is over (Bruffee, 1993; Chung & Han, 2013). In sum, deliberation is a process where students listen, reflect, and appreciate the various arguments and points of view of their peers on various current and controversial topics (Chung & Han, 2013; Collins, 2014).

The benefits of peer deliberative interaction are well documented (Andriessen et al., 2013; Bender, 2012; Bruffee, 1993; Chu, Chen, & Tsai, 2017; Grönlund, Bächtiger, & Setälä, 2014; Gronseth et al., 2018; Johnson & Johnson, 1989; Johnson, Johnson, & Smith, 1991; Kock & Villadsen, 2012; Light, 1992; Sherman, 1986; Stegmann et al., 2012). The research shows that students involved in a collaborative endeavor are more successful at formulating opinions, listening to opposing viewpoints, and appreciating multiple perspectives (Stephan & Vogt, 2004; Stitzlein & West, 2014). By challenging their own beliefs and experiences (Terenzini & Pascarella, 1991; Whitt, Edison, Pascarella, Terenzini, & Nora, 2001), deliberation can promote racial understanding (Astin, 1993; Milem, 1994), cultural knowledge (Antonio, 2001), tolerance of people with different beliefs (Hurtado, 2003), and multicultural competencies (Hu & Kuh, 2003). In addition, interacting with peers from diverse backgrounds and experiences has a positive effect on citizenship engagement, racial engagement (Gurin, Nagda, & Lopez, 2004; Thakur, 2012), and social actions engagement (Hurtado, 2003; Xiao & Askin, 2015).

Researchers also find that deliberative interaction at colleges and universities has positive outcomes on student learning and social-psychological well-being (Grönlund, Bächtiger, & Setälä, 2014; Johnson et al., 1991; Meyers & Jones, 1993). This may involve growth in knowledge, efficacy, and participation (Astin, 1993; Bender, 2012; Bode et al., 2014; Eveland Jr., Shah, & Kwak, 2003; Kenski & Stroud, 2006; Light, 1992; Moy & Gastil, 2006). It also results in such positive

outcomes as critical thinking, diversity of opinions, and higher academic grades (Carini, Kuh, & Klein, 2006; Caulfield & Caroline, 2006; George, 1994; Gurin et al., 2004; McKinney & Graham-Buxton, 1993; Strandberg & Berg, 2015). These positive outcomes may span a range of subjects, including statistical reasoning, sociology, and political science, even in large college classrooms where it would not seem particularly amenable (Caulfield & Caroline, 2006; George, 1994; McKinney & Graham-Buxton, 1993; Occhipinti, 2003; Rau & Heyl, 1990; Rinehart, 1999; Thakur, 2012). Overall, these findings suggest that deliberative interactions not only engage students in the learning process but also are key to fostering academically charged outcomes.

While the effectiveness of deliberation in general is well documented, there are a number of factors that can positively affect the quality of peer deliberation. First is the use of personal characteristics in discussions, which present the participants as real people (Drouin & Vartanian, 2010; Dunlap & Lowenthal, 2018; Evans et al., 2017; Fatkin & Lansdown, 2017; Leibold & Schwarz, 2015; Stitzlein & West, 2014). Students may do this by offering personal identifiers or by citing personal similarities when engaging with peers, such as being deployed or a single parent, while appreciating peer perspectives when responding (Stitzlein & West, 2014). The use of personal experiences in deliberation also strengthens interpersonal bonds and allows students to form communities that they are drawn to and revisit.

Second, deliberations that occur asynchronously may also increase the quality of those interactions taking place. These learning formats occur outside of the constraints of time and space and provide the discretionary time to think, reflect on their personal experiences, and respond to others when time and desire permit (Anderson, 2003). In the context of education, these asynchronous designs typically appear in an online interactional format. This is the teaching method/format adopted for the study presented here.

With regard to online teaching methods specifically, previous research tends to focus on the benefits of online discussion deliberations used alongside face-to-face classes (Andriessen et al., 2013; Baek, Wojcieszak, & Delli Carpini, 2012; Delborne, Anderson, Kleinman, Colin, & Powell,

2011; Graham, 2015; Grönlund & Himmelroos, 2009; Hakkinen, 2013; Hamann et al., 2009; Min, 2007; Muhlberger, 2005; Muhlberger & Weber, 2006; Roscoe, 2012; Stromer-Galley, 2002, 2007; Talpin & Wojcik, 2010; Wilson, Pollock, & Hamann, 2007; Wolfe, 2012) and online discussions in fully online classes (Pollock, Hamann, & Wilson, 2011). In addition, there is evidence that online discussions are a highly effective means of engagement on any topic, current and controversial, in political science courses specifically (Clawson, Deen, & Oxley, 2002; Hamann et al., 2009; Wilson et al., 2007). Various studies confirm that online course retention rates are on par with face-to-face courses with no significant differences in their course outcomes (Bernard et al., 2004; Bolsen, Evans, & Fleming, 2016; Jahng, Krug, & Zhang, 2007; Sitzmann, Kraiger, Stewart, & Wisher, 2006; Strandberg & Berg, 2015; Thakur, 2012; Wladis, Conway, & Hachey, 2017). In addition, websites designed for the specific purpose of interacting enhance student learning when used in conjunction with any course type (face-to-face, hybrid, or fully online courses) (Bernard et al., 2004; Grönlund & Himmelroos, 2009; Lou, Abrami, & d'Apollonia, 2001; Nipper, 1989; Norris, Mason, & Lefrere, 2003; Xiao & Askin, 2015). Also, websites purposed for deliberation can create a sense of community and virtual connectedness. Students may revisit and respond multiple times in these spaces and extend discussions with each other and personalize the virtual classroom (Drouin & Vartanian, 2010). Thus, the choice to use a customized web space for online student peer deliberations seemed appropriate for the study presented here. Yet, even with the obvious benefits of online deliberative methods, there are limits.

### *Limitations*

A key debate in online courses involves the various ways these virtual courses may be implemented. Synchronous approaches have its challenges, especially as students need to meet online at the same time, which is why asynchronous approaches have been favored. Asynchronous approaches have their own limits, especially when it comes to students feeling isolated. To fix the issue of learner isolation, researchers suggest creating discussion forums where students engage in peer interactions that foster learning and build a sense of community to minimize a sense of isolation

(Conrad & Donaldson, 2010). Another suggested remedy for learner isolation involves consciously creating online activities that translate virtually into an impression of a “real” person, such as the personalizing of these peer discussions (Dixson, 2012; Kehrwald, 2008).

Another limit of meeting virtually involves the need to provide motivation for student retention in these types of collaborations (Slusser & Erickson, 2006). Understanding student perspectives helps both administrators and educators make more informed decisions when it comes to course offerings and course design with student retention in mind, and postsemester surveys aid in this as well. Virtual courses also require access to technological support for both instructors and students 24 hours a day, seven days a week. Universities need to provide instructors with training in how to create academically challenging online courses and provide sufficient support to both instructors and students.

Despite the limits of online formats, substantial evidence suggests that online asynchronous learning is at least as effective as traditional face-to-face instruction. Asynchronous spaces, as opposed to synchronous spaces and the personalization of spaces, provide for exchanges that motivate students with a sense of presence and interest in the topic. Students reach out to others across classes or the political spectrum and across a range of topics extending their discussions with their peers.

Moving forward, researchers suggest that there is a need for more studies with statistically significant results (Anderson, 2003; Hamann et al., 2009; Lou et al., 2001) as the arena of online education and teaching expands and as these methods can be genuinely offered across a multidisciplinary field. In doing so, online learning will be able to provide viable education to anyone, anywhere, and anytime as long as they have access to the internet.

### **METHOD**

The purpose behind the collaborative website created for this study was to provide an interactive means of discussion among students across two courses. Thus, the website was designed with student peer interactivity in mind. In particular, this research studied the reflective peer interactions of the students on the collaborative web space and used a mixed-methods approach. First, it employed

content analysis of student posts and responses across the variables. ANOVAs then confirmed the significance of the content analysis for this one-semester of study. As two instructors coded the content analysis, Cohen's  $\kappa$  inter coder reliability checks were performed with resultant moderate agreement,  $\kappa = .081$ , 95% CI [.124, .037],  $p < .001$ . Pre- and posttest surveys about the nature of student online interactions from the semester added the student perspective. Prior to the start of the semester, the instructors agreed to commonalities and similarities in their courses and in the online collaboration for the entire semester.

#### *Similarity/Comparability across Collaboration*

The collaboration used in this study is part of an ongoing, nine-year project with various universities participating each time. For instance, five years ago the collaboration included a six-campus collaboration with students from Texas, California, Wisconsin, Maryland, New York, and New Jersey participating in a semester-long project. Other collaborations had two or three universities participating in the collaboration. For each set of participating classes, the collaboration was hosted on a ning.com site, typically called americanpoliticsspring2017.ning.com. On this site, professors took turns in posting the question of the week. Students for the semester-long project were virtually linked through this subscription-based website. The website was only accessible to those students across the participating universities who had signed human subject consent forms or those who obtained parental consent. The effort represents a pedagogical means to provide an online complement to traditional political science classes by providing a virtual meeting space for undergraduates enrolled in Introduction to American Politics and American Government courses on different campuses nationwide. The professors were mindful of various pedagogical goals in the collaboration. Specifically, by encouraging and increasing student interaction and participation, the students would develop an understanding of opposing views, improve critical thinking, develop a deeper sense of community, and provide peer presence so that learner isolation did not occur.

For this research study, two universities participated. Prior to the start of the semester, two professors agreed to offer a collaboration across their courses. To minimize differences in

the collaboration, the professors discussed the similarities/comparability of their universities, the course and the collaboration.

#### **Similarity/Comparability across universities.**

Both universities had a similar student-to-faculty ratio in the classroom and comparable student bodies comprised of equivalent percentages of American Indian, Asian, African American, a growing Hispanic population, white, and international students. In addition, at both universities the number of female students was greater than males, and both universities projected growth in their Hispanic populations and older first-generation students.

#### **Similarity/Comparability across the course.**

To minimize differences in the collaboration, the professors agreed to offer concurrently an Introduction to American Politics course, which was a university requirement at both liberal arts institutions. Their students were therefore be enrolled in the same class type (American politics) at the same level using the same mode of instruction. The course's subject material and goals were identical in its objectives across the institutions. The course itself would cover the same content, which is typical for an introductory class: the U.S. Constitution, civil liberties and civil rights, federalism, voting and elections, Congress, the Presidency, and the Judiciary. Both professors applied for and obtained human subjects consent prior to the semester.

**Similarity/Comparability across the collaboration.** The professors agreed to and distributed a common set of assignments for the collaboration, which included common instructions, a course grade, and the same minimum number of words and postresponse requirements in their common standardized instructions and syllabi. These requirements were three-fold. First, students had to post eight and respond to eight questions posted on a rotating basis by each professor, totaling a minimum of 16 posts for each student over the course of the semester. The questions were not tied to the lecture and did not follow any order of rotation. Students on each campus were asked the same questions and were required to take part in the weekly discussions. The instructors did not offer examples of posts or responses nor did they discuss the questions in class, but they did emphasize that students should take part consistently and reminded them of these ground rules when necessary. The

instructor question was typically posted to the site on a Monday with student responses expected by Sunday. However, students were free to post past Sunday. The weekly post and response to discussion questions would build and maintain a discussion-oriented online community.

Second, students were required to post and respond using a minimum of 75 words. Other than the minimum word guidance and the requirement to respond and reply to the same minimum number of discussion questions, no other guidance was provided to the students in terms of constructing a post or response. Without this guidance on constructing posts, the student determined for themselves how to post and respond. This exchange between instructor-student and student-student furthered personal interaction, investment in the site, and a sense of an online community. While the students knew that their classes would be linked across the states and that they were enrolled in the same introductory American politics course, they did not know the race, religion, course level, or modes of instruction of the other students. Professors did remind students to participate and they monitored conversations for signs that students were abiding by general rules of respect, decency, and civility, but they generally refrained from participating in the discussion forums with the exception of laying the ground rules for civil discourse, which were distributed by each professor at the start of the semester.

Third, each professor assigned a grade for the collaboration. One instructor assigned a 10% grade while the other assigned 15% of the course grade in their syllabus. These three commonalities are indicated in the Similarity/Comparability of course and the e-collaboration in Table 2. Throughout the semester, the instructors talked to each other about any issues or concerns having to do with the e-collaborative activities.

All students had to sign a consent form for the collaboration and were given a choice of an alternative project if they chose not to consent. Students then had to request permission to join the site, and after the instructor verified their signed consent, they were allowed to join the site. Any student 18 years or under had to have parental consent to join. Student names are never used in this research and are changed if quoted. Students were asked to take a pre- and postsemester survey.

### *Variables Coded*

The dependent variable was called academic deliberation, the same as in previous work (Chadha, 2017b, 2018b; Chadha & Van Vechten, 2017). Academic deliberation meant that the students had reflected, pondered, or reconsidered theirs and others' views when they responded to questions or when they commented on peer posts. As past research by Englund (2006) shows, the deliberation process entails self-reflection where each student read, thought about, deliberated, and evaluated his/her own beliefs before responding. The act of academic deliberation means that while deliberating they used classroom ideas, class texts, or web materials. They could do this in a number of ways, such as referencing ideas they had been exposed to in class, referencing discussions in class, or referencing outside links or external sites like media or court cases. Comments such as, "I learned this in class . . .," or "The text says . . .," could point to this variable. In doing so, they were furthering academic deliberations when posting and responding. An example of academic deliberation taken directly from a student is provided in Appendix A.

The other variables measured in this study were students personalizing and identifying with each other. The variable for *personalization and identification* was measured through language of agreement or other connections, such as "I know what you mean . . .," or "Like you, I . . .," or "I feel the same way," or "I am a single parent, deployed as well," and the students then proceeded to explain or discuss their commonalities and deliberate with each other.

A third variable measured was extension of deliberations. Extensions involved students asking each other honest open-ended questions, not anecdotal, that would further the deliberative process. These were found when students interacted in response to peer responses or when they revisited the prompt question or other students' questions asking for thoughtful clarification. Questions the instructor asked were considered either controversial or theoretical questions. For example, a question on gay marriage would be considered a controversial question while a question about free speech versus the right to privacy would be considered a theoretical question.

### *The Hypotheses*

Using academic deliberation as the dependent variable, the first hypotheses (H1) followed that students would respond with academic deliberation to other students across the classes. While students knew they were involved in a cross-state collaboration, they did not know to whom they were responding as online spaces suppress or eliminate status cues (Collins, 2014).

The second hypothesis (H2) followed that students would personalize their discussions with other students across the institutions. This hypothesis is grounded on increasing research about students personalizing their perspectives and experiences, such as their commonality of serving in the military or appreciating single parent homes, and that deliberation creating this connection with students leads to more engagement in the classroom (Collins, 2014; Drouin & Vartanian, 2010; Johnson et al., 1991) than mere enrollment in courses (Gurin et al., 2004).

The third hypothesis (H3) followed that students would extend academic reflective discussions beyond syllabi requirements. As past literature documents, when students are engaged in a deliberative process, they ask and pose honest questions to each other that would forward consideration of or clarify the topic (Dixson, 2012; Guzdial & Turns, 2000; Hsi & Hoadley, 1997). These would not be questions for the sake of questions, but rather questions that promote the deliberative process. This was measured by the number of visits and revisits to these online discussions and the extent to which the responses furthered academically reflective deliberations. It is important to note that while the requirements outlined in the syllabus were to post and respond to eight questions during the semester, there were no requirements for students to follow up on their posts or responses. Yet, this hypothesis measured those questions that cultivated and lengthened discussions.

The fourth hypothesis (H4) followed that students would post with consistent academic deliberation across either theoretical or controversial questions asked by the instructors. As past researchers have found, discussion of alternative perspectives on theoretical and controversial topics online (Clawson et al., 2002; Guttman, 2000; Hamann et al., 2009; Herring, 1993; Wilson et al., 2007) provides an arena to consider and appreciate varied perspectives, and

it was anticipated that students would post with academic deliberation across each question type.

These four hypotheses about student peer reflective interactions in an online asynchronous space are measured in this study. The asynchronous design allowed students to visit and revisit the site multiple times. This offered the students the time and space needed to hone careful listening skills and offer respectful follow-up responses while continuously building diversity of thought and tolerance toward others' (differing) opinions.

### **FINDINGS AND DISCUSSION**

Based on the hypotheses, ANOVAs were conducted to compare the two courses' reflectivity scores. Table 3 displays the mean and standard deviation scores by academic deliberation across the two universities.

The mean and standard deviation scores for academic deliberation were equivalent across the two universities. ANOVAs revealed a statistical significance for academic deliberation scores across both classes and the four hypotheses as shown in Table 4. Students responded with academic deliberation across the universities ( $p < .004$ ), they personalized and identified with each other ( $p < .007$ ), they extended questions furthering reflective discussions ( $p < .000$ ), and this occurred across any question, theoretical or controversial, asked of them ( $p < .000$ ) providing evidence for the four hypotheses.

These significant ANOVA findings of peer interactions are illustrated in a student exchange on a controversial question about gay marriage as provided in Appendix B. Similarly, an example of an exchange between students on a theoretical question about free speech versus the right to privacy with use of academic references is provided in Appendix C.

Students themselves support these collaborative endeavors as noted in their responses to an open-ended question in semester-end surveys that asked them what they learned in the collaboration (Table 7). The dynamic viability of an online asynchronous collaboration is unveiled as student after student note the benefits of learning from differing student perspectives.

As shown in Table 7, students said that they felt these spaces provided them with time and space to think critically about laws and society, they were

more informed, their “voice” (discussions) was heard, they did not feel alone, they were part of a larger community, they could visit anytime to see what others were discussing, and they would recommend this online collaborative experience to others. Remember that although a total of 16 visits to the site were required for a grade, over half of students (58.11%) visited and revisited the sites beyond their grade requirements noting that the online interactions made them feel part of a larger political community. They formed connections with those outside of their geographical area, which provided for greater veracity of thought and self-reflection of issues. One student’s comment from the semester-end survey highlights the potential this online discussion site has for collaboration:

*I learned how to have civil discussion with people over generally touchy subjects. Basically, I learned how to disagree, but still make my points in a respectful and kind way. ... I was able to see the other side of certain arguments, and I enjoyed debating those views.*

With significant support of the four hypotheses and post hoc tests, this study demonstrates that when students personalize their discussions they extend and create an online community of academically reflective learning across any (theoretical or controversial) question asked of them.

## **CONCLUSIONS AND FUTURE RESEARCH**

The future for online collaborations is bright. Significant results in this study provide evidence that student peer interactions do engage students with academic content and that these personalized interactions extend honest deliberative discussions among peers regardless of their institution. Through these deliberations, students develop a sense of belonging to the community of online learning as they personalize discussions and articulate ideas and positions when expressing themselves. They question their peers, asking them to account for their views and reconsider these deliberations in light of others’ arguments. By doing so, they extend their own deliberations with each other visiting and revisiting these discussions with careful consideration, respectful follow up, diversity of thought, and tolerance toward (differing) opinions (Chung & Han, 2013; Collins, 2014; Davis, 2013).

Based on the results of this study, online deliberation appears to have a democratizing effect that benefits both educators and students. Students benefit from these online exchanges by having a space for discussion and deliberation even if one student’s position may be in disagreement with another’s. Educators benefit in that a community of engaged, academic learning grows outside of the classroom walls. This supports past research that deliberations encourage exchanging multiple viewpoints and personal experiences, seeking out alternative perspectives (Collins, 2014; Pamental, 1998), and extending difficult conversations about gray areas between perspectives (Kiesa et al., 2007).

While more research is needed to continuously examine the potential of student interactions that personalize deliberations in online collaborations, the current findings provide impetus for further research that when students personalize online collaborative discussions, rigorous academic deliberation results. As students respond to each other online, the limitless potential of online collaborations is unveiled. Regardless of not knowing their peers, the students provide personal examples in order to extend discussions, build upon each other’s posts, reduce the sense of isolation that is common in online learning settings, and ultimately build an online community across geographic areas. In addition, the significant results in this study are confirmed by LSD post hoc tests that provide evidence that the relationship between the two universities, which would otherwise remain undetected and undiscovered, was significant across the universities.

### *Applicability of Best Practices for Other Disciplines*

With evidentiary support for academic learning through an online collaboration, the practical implications of applying this collaboration across any discipline are immense. First, this form of collaboration is replicable across a variety of class types, from face-to-face to hybrid to fully online courses. This holds true for a collaboration conducted across geographic boundaries (as in this study) or across a range of comparable subjects such as math, English, sociology, or engineering that includes both traditional and nontraditional students. Creating interactive designs across any discipline leads to reflective thinking about the question and the subject (Hakkinen, 2013). For instance, in studying history, students learn

to focus on historical processes and questions. When studying math, they clarify and analyze mathematical goals and problems (Chu et al., 2017). When studying literature, they reflect upon literary methods and questions. Abilities like these play a central role in developing critical thinking skills that are necessary when approaching real-world issues, problems, and situations. With practices learned through deliberation, students make the shift from the theoretical to practical applications they may encounter.

Second, although educators may use a variety of media for delivery of online interaction, such as audio, music, video, photographs, or high-resolution graphics (Maddux, Johnson, & Willis, 2001) and though research supports the relationship between student engagement and student achievement in the face-to-face classroom (Guthrie & Anderson, 1999; Handelsman, Briggs, Sullivan, & Towler, 2005; Skinner, Wellborn, & Connell, 1990), the existing literature is limited in its examination of the unique considerations of student peer engagement as applied to online environments. This article presents evidence that student peer interactions are practical strategies to use in the online environment, but more research is needed. Suggestions for future research include comparing students across both online and face-to-face environments for the degree to which each cohort writes their own questions yet engages with the same degree of academic deliberation as the instructor-initiated questions. Another collaborative study could use technology to combine synchronous and asynchronous methods to extend deliberation and communication among students, such as adding virtual town hall meetings to the collaboration to see if greater means of online personalization lead to greater degrees of reflectivity. Still other studies could track students by semester from start to end analyzing their posts and responses for greater personalization in deliberations.

This study finds that student peer interaction in a purposefully designed online academic space is a creative and novel solution toward offering academically challenging classrooms in this digital age. The potential of online collaborations is boundless, and we know that students are civilly energized in their discussions with each other to engage, prod each other, and learn from opposing views. Global online collaborations with

students making these interactions “their own” are on the horizon, and the future of these potential collaborations in this digital age are indeed limitless.

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## Appendix A

**Instructor Question:** One of the fundamental questions that is not directly asked is: What exactly is government's responsibility? What is the community's responsibility? What happens if someone can't meet his or her own personal responsibilities, should government, the community, somebody step in? What do you think? What **evidence** can you find to support your opinion? A good argument is bolstered by evidence. Make a case and challenge each other!

**Student response:** An Example of Academic Deliberation

The Government's responsibility in the U.S stems from the early colonizers feeling helpless and taken advantage of by their mother country (specifically the king), and because of this, they revolted and wanted representation to ensure that what the king does, is permitted with the CONSENT of the colonizers. This notion of wanting representation from a higher and powerful position relates to the process by early Americans re-writing documents throughout the century in order to give limits to the government so that its citizens can always have a voice. Comparing to today, the Government exists solely to maintain balance with a country twice the size of Europe and to mainly ensure that its citizens get everything they need to pursue, "life, liberty, and property" as said by John Locke. Also stating what Jean-Jacques Rousseau in "The Social Contract" (1762), he stated that if the government abuses its power and purpose in its citizen's right to their civil liberties, then they have the right to revolt against them and strive to create a new one that aligns with their needs. With that being said, if the government abuses people's freedom or violates anything in the constitution, then the community without a doubt have the right to step in and stand up for their rights.

For example, today many people feel that there have been many injustices in regards to people receiving short terms for their crimes due to their race and that could make people feel that, that's unjust and unequal. They have the right to revolt if they feel like the government isn't listening and giving them equal treatment for ALL. In regards to what the candidate's responsibility is, it ties back to Indirect Democracy and how people choose a representative to decide policies on what they believe in. A purpose of a candidate is to use their authoritative voice to advocate for its citizens. However, that depends on what the political ideology of the candidate is and with that, the things they believe in or what they want to implement in the country may not sometimes make the citizens feel like they have a representative advocating for their voice. Again, that's why the government is there to ensure that the candidate doesn't make such policies. [sic]

## Appendix B

**Instructor Question:** On Feb. 8th, a 3-judge panel of the 9th Circuit Court of Appeals (voting 2–1) affirmed gay couples’ right to marry, striking down Prop 8, a California voter-approved measure, because it “singles out same-sex couples for unequal treatment by taking away from them alone the right to marry. . . . It serves no purpose, and has no effect, other than to lessen the status and human dignity of gays and lesbians in California and to officially reclassify their relationship and families as inferior to those of opposite-sex couples.”

The judges maintain that Prop 8, prohibiting same-sex marriage, violates the 14th Amendment’s equal protection clause. (*14th Amendment* = “No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.”)

The court did not answer the “broader” and “highly controversial question” of whether same-sex couples may ever be denied the right to marry.

Republican presidential candidates rallied against the ruling. Newt Gingrich referred to the “radical overreach of federal judges and their continued assault on the Judeo-Christian foundations of the United States,” and Romney condemned “unelected judges” who “cast aside the will of the people of California who voted to protect traditional marriage.”

What do you think? Should same-sex couples possess the right to marry? Is marriage to the person of one’s choice a civil right that should be protected by the government, or is it a social institution that should be defined by the larger community and the values the majority holds (for example in certain states but not others, and therefore some states might define marriage as only between a man and woman)?

### **Student response and an exchange among students to Question:**

... marriage equality is a basic civil right and should be protected by the government, just as woman’s suffrage and slavery. No one should be told with whom they can or cannot build a life; it is a

personal choice. Just because someone’s perception of an ideal spouse does not align with yours, Mark, does not mean that you have the right to infringe on that choice.

If marriage should be limited, why stop at gender? Why not enforce age or race restrictions or better, require DNA testing first? To me, these limitations are just as arbitrary. Where does it state that marriage must be between a man and a woman? In religious doctrines? I thought one of the purposes of this country was to escape persecution. Many came to this country because they could not freely and openly practice what they believed. Who are we to take on the role of those long ago oppressive governments and prevent our fellow Americans from their personal freedoms? The opening line of the Declaration of Independence states that all “men” are endowed by their Creator with certain unalienable rights that among these are Life, Liberty and the pursuit of Happiness.” Does marrying the person of your choosing not fall under the pursuit of happiness?

### **A student response to a peer:**

... I don’t think that you managed to capture the entirety of my argument, Jose. All you managed to do was call me bigoted; and you support your argument by saying that the beliefs of many don’t mean anything (as in your case for Religion) when your opinion on gay marriage is at its foundation just a belief. The phrase of separate but equal was meant to be in respect to the Church and State. I’ll admit that it was a poor choice of words given the civil rights history of the U.S. I respect your point of view here, but you completely overlooked mine.

People have different views on this topic, if you believe it is right or wrong, the one thing we have to remember is why should we take away someone’s right to marry the person they love? I think that same sex couples should have the right to marry. Why should the government/society stop them from getting married to the person they love and have their marriage be recognized. Prohibiting them getting married would violate the 14th amendment, which begs the question, why is this even a debate anymore? I think this topic has turned into more of what society believes is wrong, but do not think about the rights we are taking away

## Appendix B (cont.)

from people to marry their significant other. Why should the government decide who someone should and shouldn't marry? I also believe religion has played a strong roll on this issue and how people see it. Everyone is a human being and if you are a US citizen, you should have the right to marry your love one, without the government to tell you otherwise. [*sic*]

## Appendix C

**Instructor Question:** Recently, the online encyclopedia, Wikipedia, went “dark” for a day protesting U.S. legislation aimed at cracking down on internet piracy. It was one of many online protests that argued that the Stop Online Piracy Act (SOPA) and the Protect Intellectual Property Act (PIPA) would hurt technological innovation and infringe on free-speech rights. The bills have attracted fierce opposition from many corners of the technology industry. Opponents say several of the provisions in the legislation, including those that may force search engines and Internet service providers to block access to Web sites that offer or link to copyrighted material, would stifle innovation, enable censorship and tamper with the livelihood of businesses on the Internet. Proponents argue that these bills propose to protect the intellectual property that others pirate off the web.

Given the need to balance these values between free speech and the right to privacy, the question for debate this week is how does one balance these values and/or be held accountable between the rights of free speech on the internet vs. the right to privacy? Whose role is it? And why?

Here are several of these linked discussions:

### **From blogs:**

[http://blogs.sfweekly.com/thesnitch/2011/12/wikipedia\\_sopa.php](http://blogs.sfweekly.com/thesnitch/2011/12/wikipedia_sopa.php)

### **Washington Post**

[http://www.washingtonpost.com/world/europe/ap-interview-wikipedia-f ...](http://www.washingtonpost.com/world/europe/ap-interview-wikipedia-f...)

### **N. Y. Times**

[http://bits.blogs.nytimes.com/2012/01/16/wikipedia-plans-to-go-dark ...](http://bits.blogs.nytimes.com/2012/01/16/wikipedia-plans-to-go-dark...)

### **N. Y. Times**

[http://www.nytimes.com/2012/01/16/technology/web-piracy-bills-invite ...](http://www.nytimes.com/2012/01/16/technology/web-piracy-bills-invite...)

<http://www.procon.org/headline.php?headlineID=005058>

### **Student response and an exchange among students to Question**

... The government should certainly impose strict regulations on just how freely copyrighted material can be distributed. With that said, they have to understand that internet piracy has been going on

for so long that it will be very difficult to simply pass bills like SOPA and PIPA. They need to attack this from a different angle, one which will not limit the freedom of speech people in the United States have been given by the founding fathers. Activism relating to internet piracy should be brought more into the spotlight, illuminating just what is negative about it, aside from the fact that it is stealing. This should be taught from a young age, with patience rather than sudden and rather harshly. The biggest fear that the opposing side has is that this will simply limit the freedom of internet speech, while bringing our internet closer to that of networks in countries run under dictatorships or communist. As for the roles, it is everyone’s role to enforce anti-piracy. If one less person is inclined to do this, it will be one less person downloading copyrighted material without expressed permission. It only takes one person to make a difference by inspiring others to do the same. [*sic*]

### **With a student response:**

... To truly solve this problem, I believe that “free speech” needs to be defined further. According to the First Amendment, “Freedom of expression consists of the rights to freedom of speech, press, assembly and to petition the government for a redress of grievances, and the implied rights of association and belief.” However, that does not actually define or outline what is allowed and what is not appropriate. Therefore, without removing the vagueness of the phrase “freedom of speech,” it is not sensible to expect that a law such as PIPA is going to be freely accepted by the people. If people are so accustomed to this loose term of “freedom of speech,” it is going to take more than a law to try and create these guidelines. The internet is a vast place for information, both on the retrieving and receiving end, and is constantly growing larger. Society values its freedoms and I think that it is everyone’s role to try to contribute to find a compromise in the middle. Whether that is possible, however, due to how much the term “free speech” has come to encompass today, is still a question. [*sic*]

Here is yet another example on a question about speech and the right to privacy, this student extends deliberation by asking a question further-

## Appendix C (cont.)

ing deliberations and using academic references as follows:

... One thing is for certain, to lose both free speech and right to privacy would be a terrible burden. Free speech is in our constitution and is our first amendment right. What sets our country apart from others is our Bill of Rights and our individual rights as Americans. That should be ALL for certain. It is true that the right to privacy has been threatened due to the new innovations of new technology. My biggest question is how can promise the right to privacy by internet users when technology is rapidly growing and improving exponentially? What I do know is that if (SOPA) and (PIPA) are truly attempting to infringe on free-speech rights and technological innovations, then that would hurt the business science heavily. However the best scenario I can think of is the Facebook analogy. Many individuals across the world use Facebook and post misc. things such as pictures and blogs. From an individual perspective people should aware of what they post online but not to the point where they are afraid. [sic]

## Tables

Table 1. Example of Student Interactivity

<p><b>Jazmin Sanchez November 20, 2017 at 12:56 a.m.</b>          The freedom of speech is known to be the right to express any opinions without any censorship or restraint. This means that everybody has the right to say whatever they want, but without putting anyone else in harm or in danger. In my perspective, just because you are a celebrity the freedom of speech still regards to that person; however, the media will pay more attention to what they have to say than any other person. For example, when NFL player Colin Kaepernick preferred to kneel down rather than standing up for the national anthem, many people viewed it as disrespectful and not having patriotism. However, whenever a noncelebrity football player where to do the same act as Kaepernick nobody would have known about it or give so much importance to it. In my opinion, Kaepernick was there on the field for his team and nobody told him to do what he did, it was his own decision (freedom of speech) in which did not harm anybody at all by his act.</p> <p><b>Cesar Rojas November 20, 2017 at 12:01 a.m.</b>          @Elexis Ridgeway I think that your point that as long as it does not hurt another person is rather interesting. There is a dilemma here, where I can claim that anything would hurt me emotionally if I were not capable of taking constructive criticism. In your version of the freedom of speech a president let's say, could claim that the criticisms of his presidency hurt him emotionally thus anyone who speaks badly about him or criticizes him will be imprisoned. I agree that hurting someone's feelings is a bad thing, and even hurting someone emotionally but it is a hard line to draw because it can be so easily abused.</p>
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Table 2. Similarity Comparability of Course and the e-Collaboration

Campus	"A"	"B"	Common Syllabi Requirements
Location	Texas	California	1) 8 posts and 8 responses 2) 75-word minimum length 3) 10%–15% of grade
Course Level	Lower	Lower	
Institution Type	4-Year University	4-Year University	
Course Name	Survey to American Government	Survey to American Government	
Class Delivery	Face-to-Face	Face-to-Face	
Grade	15%	14%	

Table 3. Mean and Standard Deviation Scores by Academic Deliberation across the Two Universities

Institutions	Mean	N	Std. Deviation
Four-year Univ A	.31	91	.464
Four-year Univ B	.47	115	.501
Total	.40	206	.491

Table 4. ANOVA Academic Deliberation Scores across both Class and 4 Hypotheses

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	44.278 <sup>a</sup>	45	.984	30.982	.000	.897
H1: Respond Across Universities	.269	1	.269	8.470	.004	.050
H2: Personalize Discussions	.235	1	.235	7.393	.007	.044
H3: Extending Discussions	2.091	1	2.091	65.841	.000	.292
H4: Respond to Instructor Questions	.738	4	.184	5.807	.000	.127

## Tables (cont.)

Table 5. LSD post hocs across Significant ANOVAs by Academic Deliberation

	(I) Respond	(J) Respond	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
LSD	1.00	2.00	.05	.031	.114	-.01	.11
		4.00	.43*	.081	.000	.27	.59
		5.00	.43*	.127	.001	.18	.68
		7.00	.43*	.127	.001	.18	.68

Table 6. Semester-end Surveys

	Response Agreement by %
Discussion forums generally INCREASED my tolerance for others.	44.64%
Mostly challenged my political beliefs and values.	60.00%
This website helped me make personal meaningful connections with other students.	40.07%
I revisited site as it made me feel as if I am part of a larger political community.	58.11%
I feel I could personally relate to others who participated in the website.	90.82%
I can learn a lot from people with backgrounds and experiences that are different from mine.	57.14%

Table 7. What You LearnED by Participating in the American Politics Collaborative Website

<p>An understanding of other people's opinions on issues.</p> <p>I learned that people have different and similar views on subjects and issues. Sometimes the differences can be very drastic.</p> <p>Hearing everyone's point of view on the various topics was very enlightening.</p> <p>I learned that different students think the same about politics. We agreed to some things others stressed why but it was interesting to hear and gain knowledge about it. I know I might not pass but I will retake and give more to it.</p> <p>Other people's opinions were very intriguing.</p> <p>I learn so many things like others opinion and learnt new things about many issues.</p> <p>I learned to communicate with people I don't agree with.</p> <p>I learned to think more critically about current events/issues.</p> <p>The thing I found most interesting is that there are other people out there with the same curious questions as I and with great answers and suggestions.</p> <p>I saw how everyone really had a differing opinion about all subjects we talked about, especially politics.</p> <p>I learned to stay on top of my stuff and not get confused. I also learned that gov't is corrupted.</p> <p>I got a chance to interact with other students and understand differing values concerning politics and social issues.</p> <p>The various views of other college students in a different part of the country and the different views held by students in my class.</p> <p>Texans have different issue priority.</p> <p>That a lot of my peers' views differ from my own.</p> <p>I learned about people's different opinions concerning American politics.</p> <p>About the opinions and thoughts of other students taking the similar course or even my own peers. [sic]</p>
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