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Flipping the First Year: A Case Study in Co-Teaching First-year Seminar as a Community of Inquiry

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Abstract: First-year seminar courses lay the foundation for student success in college, and it is important they engage students via social, cognitive, and teaching presence which are domains of the Community of Inquiry (CoI) Framework (Garrison et al., 2010). Previous evidence suggests that strategies such as a flipped classroom, co-teaching, and peer mentoring can improve course quality and learning outcomes both in-person and online. In this case study, qualitative and quantitative analyses of student evaluations of teaching were used to assess evidence of social, cognitive, and teaching presence for two instructors in online, co-taught, flipped first-year seminar courses compared to in-person instructor-centered versions of the course. Evidence suggested that the online courses received more positive and complex comments, encouraged greater social presence, and eliminated differences between instructors. Our work builds upon the CoI Framework and emphasizes collaborative activities which enhance social, cognitive, and teaching presence in learning environments. We discuss these dimensions of high-impact teaching and learning and how they worked to help prepare students for college success, both online and in-person. We include suggestions for how our case study can be generalized to other academic courses, modalities, and student populations.

Keywords: co-teaching, flipped classroom, Community of Inquiry, first-year seminar, peer mentoring

First-year seminars, designed to teach incoming college students basic social and academic skills, have been designated a high impact practice (Kuh, 2008; Steiner et al., 2019), and these courses have positive impacts on academic achievement, retention, and well-being (McBride et al., 2021; Permzadian & Crede, 2016; Qingmin et al., 2021). Although there are many different approaches to such courses, effective courses generally get students engaged through social, cognitive, and teaching presence (Panicker, 2017). This case study used a Community of Inquiry (CoI) framework (Garrison & Arbaugh, 2007; Garrison et al., 2010), an evidence-based pedagogical model for assessing online courses, to explore the effects of instructor-centered in-person first-year seminar courses versus co-taught flipped classroom online versions of the same course across multiple years to assess which method may be most successful. Thus, we used a variety of techniques to address the problem of transitioning first-year seminar courses, the purpose of which was to help students adjust to on-campus life, to an off-campus (online) format against the backdrop of the COVID-19 pandemic.

The transition to college is an important turning point in students' academic careers, and often involves significant changes in personal, social, and academic expectations (Andrews & Wilding, 2004; Cutrona, 1982; Shaver et al., 1985; Shell & Absher, 2019). This transition may be particularly challenging for students who entered college during the COVID-19 pandemic (Kinzie & Cole, 2022), and for first-generation college students and similarly vulnerable students from minoritized communities, who often have lower engagement, academic persistence, and poorer mental health in

college (Gopalan & Brady, 2020; Gopalan et al., 2022; Ostrove & Long, 2007). Our case study explored ways in which first-year seminar courses can facilitate this transition by promoting social, cognitive, and teaching engagement to help students learn the academic and social skills needed to succeed. Thus, our goals included effective teaching as well as supporting the more holistic academic and non-academic needs of first-year students facing multiple sources of precarity.

Theoretical Framework

One model that captures the multiple dimensions of dynamics that occur in a classroom is the Community of Inquiry (CoI) Framework first conceptualized by Garrison and colleagues (Garrison & Arbaugh, 2007; Garrison et al., 2010). The CoI Framework views the classroom as a community of learners and explores three dimensions of interactive presence within learning environments: social presence, cognitive presence, and teaching presence. These different types of presence can be used as a tool to evaluate classroom processes and compare across classes.

Social presence refers to learners' social and emotional engagement in a learning community, including emotional expression, open communication, and group cohesion (Garrison et al., 2010). This can involve engagement among students (through collaboration and discussion), and student-faculty engagement. In classes high in social presence, students feel comfortable expressing themselves and have many opportunities to do so; they engage in collaborative assignments and discussions which promote a sense of community within the class. Evidence suggests that engagement during class has positive impacts on student performance (Duncan et al., 2012), and in first-year seminars the opportunities to engage are particularly important to students (Sullivan & Haller, 2018).

Cognitive presence refers to the learner's own construction of meaning through reflection and discourse (Garrison et al., 2010). The focus is on critical thinking, which includes events that stimulate interest, exploration of material, integration across concepts, and application of material. Courses with high cognitive presence encourage students to think about and apply course material before, during, and after learning. Because first-year seminar courses focus on teaching students applied skills they can utilize in their studies, cognitive engagement and self-reflection are particularly important, and evidence suggests that students generalize these skills to other courses (Sullivan & Haller, 2018).

Finally, teaching presence refers to the ways in which course design, instructional facilitation, and instructional direction support meaningful learning outcomes (Garrison et al., 2010). This includes instructional management, classroom structure (e.g., student- vs. instructor-centered), and direct instruction. In classes with strong teaching presence, class information is presented clearly, instructors are effective at facilitating discussion, and students are presented with accurate, relevant, and developmentally appropriate material. Within first-year seminar courses, students report being strongly impacted by instructor enthusiasm, which significantly affects students' motivation to learn (Sullivan & Haller, 2018). Overall, the CoI framework provides a powerful tool for evaluating processes occurring within the classroom community, and this case study explored all three types of presence in first-year seminar courses.

Engaged and Collaborative Teaching Approaches in Online Classes

A goal of first-year seminar is to teach students classroom norms and encourage a sense of belonging in college, but there may be concerns about teaching such classes online, as students may not get the "true" classroom experience. Previous evidence suggests that online learning, and particularly online synchronous learning, can be just as effective as being in person when engaging relational strategies are applied (Yarmand et al., 2021). Furthermore, CoI studies have found that it is very possible to establish social, cognitive, and teaching presence in online classes (Fiock, 2020; Kim & Gurvitch, 2020;

Shea et al., 2022). Thus, we expected that with strategic efforts to focus on engagement, collaboration, and peer mentoring, online synchronous first-year seminar courses could be as effective as in-person courses (Yarmand et al., 2021). In order to ensure that our online first-year seminar courses contained strong social, cognitive, and teaching presence, we focused on promoting an engaged and collaborative environment via three strategies: (1) a flipped classroom model, (2) co-teaching, and (3) peer mentor engagement.

Flipped Classroom Model

A flipped classroom (FC) is defined as a methodology in which the more engaging and applied part of the class (e.g., activities and problem solving) is moved into the classroom session; while what traditionally is done in class (e.g., presentation of material) is moved outside and students are asked to complete those portions prior to the class (Galindo-Dominguez, 2021). In addition to offering students more pro-active and empowering roles in the class, FC offers a learner-centered and engaging community-building experience and contributes to teaching presence (Stover & Houston, 2019; Gunbatar, 2021). Compared to the traditional unidirectional lecture format, the FC experience is more interactive and social and transforms the classroom into a communal space. Evidence suggests that using learner-centered methods like FC can have a positive impact on overall learning achievement; self-efficacy and self-autonomy; cooperativeness and engagement; and a more positive and accepting classroom climate (Campillo-Ferrer & Miralles-Martinez, 2021; Galindo-Dominguez, 2021; Hew et al., 2020). Thus, it was expected that an FC model would improve social presence through more engaged and interactive class periods, cognitive presence through in-class applied activities, and teaching presence via the course structure.

Co-teaching

Collaborative teaching, or co-teaching, refers to the process wherein two educators co-plan, co-instruct, and co-assess the same course (Murawski & Lochner, 2011). These collaborative influences provide a depth of collegiality and support that often reinforces professional development and growth for instructors, and can also enhance the student experience. Previous research on co-teaching indicates that greater equity, inclusivity, positivity, and creativity can be achieved to benefit both partnering teachers and their collective students (Monteblanco, 2020). Co-teaching may be particularly important in first-year seminars, as the course involves exposing students to a broader range of instructional resources and skills from multiple perspectives. Furthermore, co-teaching may allow for improved teaching presence and more activities to promote social and cognitive presence, as course activities and structure are developed by multiple faculty with this in mind.

Peer Mentor Engagement

In addition to multiple instructors' perspectives, upper-class peer mentors can also support incoming first-year students across "social, emotional, or academic domains of life," (Lane, 2020, p. 483), and provide a range of learning resources. Peer mentors can be a source of holistic support whose involvement may alleviate transitional stress for first-year students, influence more realistic goal setting and first-year persistence (Fullick et al., 2012), and improve college adjustment, particularly for minority students (Graham & McClain, 2019). Peer mentors may help encourage social presence, but also provide real world examples to encourage cognitive presence. Overall, evidence suggests that online classes can be just as engaging as in-person courses, and particularly using an FC model, co-teaching, and utilizing peer mentors can help improve social, cognitive, and teaching presence. These

strategies may be particularly beneficial in first-year seminar courses as they set the stage for future learning expectations in college.

The Present Study

The current case study used student evaluations of teaching across four semesters to explore the effect of different course modalities (in-person vs. online synchronous) and structure on social, cognitive, and teaching presence in first-year seminar courses taught by two collaborating instructors. Previous evidence suggests that students are generally honest on student evaluations of teaching, particularly when they are perceived as a tool for improving classes (McClain et al., 2018), and that evaluation responses do reflect social, cognitive, and teaching presence (Ang et al., 2018). Although there are more formal assessments of CoI components (Garrison & Arbaugh, 2007; Garrison et al., 2010), in the context of this case study student evaluations of teaching provided standardized assessments of course quality across multiple years and instructors and aligned with CoI components. Qualitative analyses were used to code open-ended responses, and quantitative analysis of rating-scale items confirmed findings. It was hypothesized that, regardless of instructor, the students in online, FC, co-taught courses would report equal or greater social, cognitive, and teaching presence, compared to those in instructor-centered in-person courses.

Method

Participants

This study was done at a small, public liberal arts college in rural Appalachia, where many students are first generation and of low socioeconomic status. A total of 66 full-time, first-time freshmen (M_{age} = 18.21 years, SD = 0.48) completed course evaluations across four years (seven classes). Participants included 40 women (60.6%) and 26 men (39.4%). In terms of ethnicity, 50 participants identified as White (75.8%), 8 as Black/African American (12.1%), and 8 as other/unknown (12.1%). This sample is generally representative of the college population (61% female, 68.8% White, 11.7% Black/African American).

Context

The first-year seminar course was Freshman Success Seminar: a one-credit required course that "serves as an introduction to academic life, instruction about liberal arts core requirements, and the opportunity to develop skills that will serve the student academically." Faculty were given topics to cover, but freedom in how they approached topics. Each class had a peer mentor, an upper-level undergraduate student who assisted with the class. For the sake of anonymity, we designated one author as instructor A, and the other as instructor B.

In-person

The Freshman Success Seminar course was taught in person in fall 2018 (instructor A) and fall 2019 (instructors A and B), and during this time students did not have the option to take this course online. Classes were planned and taught independently, although classes covered the same topics and there were several similarities. In-person classes were instructor-centered and relied on lecture presentations or guest speakers. Classes had some large group instruction, but very few opportunities for small group interaction or group work outside of class. Peer mentors attended class but played a relatively small

role in the course (e.g., taking attendance).

Online Synchronous

During the COVID-19 pandemic, in fall 2020 and fall 2021, we transitioned to co-teaching Freshman Success Seminar in an online synchronous modality via Zoom. In fall 2020 students had the choice of online or in-person sections of the course, and those who selected the online sections had often opted for entirely remote classes due to the pandemic. In fall 2021, most classes at the college had returned to in-person. Both Freshman Success Seminar courses were originally scheduled to be in-person, but were switched to online shortly after classes started. In addition to modality change, we made significant changes in course structure. Although we each taught our own sections, we collaborated on planning and had the peer mentors play a more integral and interactive role. Several important components distinguished this version.

Flipped classroom

Students were provided with most of the content **before** class met each week. They did assigned readings or watched videos and completed a short weekly assignment to ensure they were prepared for class. Class meetings were used for engaging and interactive activities that applied course material, including discussions, small group work, and student-centered presentations.

Community building

Because online courses happened in the context of the pandemic, there was concern that students would feel isolated and lack a sense of social connection during classes as well as to the college experience. Thus, several assignments and activities were specifically designed to help build peer relationships and a classroom community. These included regular small group work, individual meetings with instructors and peer mentors, and long-term partner activities.

Co-teaching

In addition to establishing a community for students, we also worked to build a sense of community among the instructional team. The two faculty and two student peer mentors met weekly. Together, we developed foundational materials, debriefed about previous course meetings, and planned weekly activities. Peer mentors provided significant contributions, and also were regularly assigned to lead discussions and collect and develop materials. Their creativity and innovation was encouraged and led to deeper levels of student connection and open reflection during class discussions.

Measures

With approval from the Institutional Review Board, we reviewed the anonymous student evaluations of teaching from our in-person and online courses. We conducted qualitative analyses on open-ended questions and confirmed findings with the rating-scale questions.

Qualitative Coding

An analytic inductive coding strategy was used to code comments following the Charmaz (2006) constructivist grounded theory method. All open-ended responses were coded; however, responses

were considered in the context of the prompt. Repetitive words and phrases were coded into a data matrix that was mapped to identify an emerging pattern of conceptual themes (see Table 1). Emergent themes were compared for alignment with the CoI Framework domains: social, cognitive, and teaching presence.

Table 1. Qualitative coding matrix and sample responses.

CoI Domain	Emergent Themes	Sample of Student Reponses (with contextual prompts)	
Social Presence	social/ community	*"This fits as it helped me learn social skills."*	(Do the contents of this course fit the General Education requirements?)
	discussion	*"Class discussion and interaction"*	(What features of the course contributed most to your learning?)
Cognitive Presence	self-reflection	*"I learned more about myself"*	(In what ways have you benefitted from taking this course?)
	content/ order of assignments	*"Unnecessary work took away from my other classes"*	(What features of the course detracted from your learning?)
Teaching Presence	buy-in/ caring	*"I enjoyed the way that the material was taught. I feel as though it is easier when you learn most of the information beforehand, and then discuss it in class. Each week was a new subject, and I enjoyed the content.*	(What features of the course contributed most to your learning?)
	enthusiasm	*"Do more fun exciting things outside the classroom"*	(What changes would you make to improve the course?)
	online/ technology & resources	*"iPad"* *"Zoom"* *"Helpful tips to navigate the college"*	(What positive feedback would you give the instructor regarding the manner in which the course was taught?)

Quantitative Measures

No rating-scale items directly assessed social presence components of the course. To assess cognitive presence, "I would recommend this course to other students" (1 *strongly disagree* to 5 *strongly agree*) was seen as evidence that students perceived the value of the course based on cognitive engagement with the material (e.g., Ang et al., 2018). In addition, two questions assessed teaching presence. "The instructor taught with enthusiasm" (scaled from 1 *strongly disagree* to 5 *strongly agree*), reflected how much students saw instructors as caring. "What is your overall rating of this instructor's teaching effectiveness compared with other college instructors you have had?" (scaled from 1 *not at all effective*

to 5 *very effective*) also measured teaching presence. Although these questions differ slightly from the traditional CoI definition of teaching presence focused on course design, they do address instructional facilitation components of the construct.

Results

Qualitative Findings

For the open-ended questions, comparative differences were observed between in-person versus online courses. For in-person courses, a combined total of 100 comments were received. Compared to online versions, in-person comments were much shorter and many were not full thoughts or complete sentences, although they still conveyed positive or negative feedback. A total of 38% of in-person comments were positive and 62% were negative in tone or statement. Comparatively, 82% of the online comments were positive and 18% were negative. Both positive and negative online comments were longer, more descriptive, and richly detailed (see Table 2).

Social Presence

More comments expressed valued social presence online compared to in-person sections (21% online vs. 13% in-person, see Table 2). The emergent concepts of **social/community** and **discussion** were based on evaluative comments such as the following example: "*thank you for making me feel accepted :)*" (online). Similar feedback statements indicated that students experienced a greater sense of social presence online and this was conveyed in terms that were more richly described. Longer and more detailed comments from online students suggested a more connected and socially meaningful learning experience.

Cognitive Presence

The emergent concepts of **self-reflection** and **content** aligned strongly with the CoI domain of cognitive presence. Table 2 includes responses suggesting a more deeply engaged cognitive experience of learning resulted from the online community-oriented FC courses. It is important to note that although an approximately similar frequency of in-person and online responses indicated cognitive presence (8% online vs. 11% in-person), online comments were more complex, demonstrating a more profound cognitive experience.

Teaching Presence

For teaching presence, emergent concepts within this domain include increased perceptions of **buy-in**, **caring**, and **enthusiasm**, as well as comments about being online and having access to online and on-campus resources. Similar to other domains, qualitative differences were found between in-person versus online courses. Despite receiving a higher number of responses in-person (80%) versus online (72%), teaching presence was often qualified in brief or negative terms in-person. For example, in response to the question, "What [course] features contributed most to your learning?", an in-person student briefly responded, "*teachers*," whereas an online student more richly stated, "*I really liked this class. It was helpful being an incoming freshman and having help to relieve stress and to be able to understand how to use all our online materials effectively."* Another online student stated, "*The professor was very kind and enthusiastic, as well as generally encouraging*." Their statements indicated that the FC structure online not only supported a more valued perception of social presence, but also a more appreciative perception

of teaching presence wherein we came to be viewed as more caring and enthusiastic.

Table 2. Comparison of in-person versus online courses.

CoI Domain	Sample Comments	
	In-person	Online
Social Presence	*"class discussion"*	*"I think working in groups contributed the most. Getting to talk with my classmates about the material and hearing their opinions was very enlightening"*
	"Discussions"	*"The main feature that contributed to my learning was the in-class discussion that we participated in during every class period."*
	"Interactive"	*"I benefited by learning the ability to engage with my fellow students easier."*
Cognitive Presence	*"I learned more about myself"*	*"The added videos to watch as part of the weekly RSVP and in-class Powerpoints really helped me learn more about skills and topics related to my first semester in college."*
	"*course content, assignments*"	*"The reading selections of this course coupled with the weekly response assignments contributed the most to my learning as they gave me good information and space for reflection."*
	"*clarity of the information"*	*"This course helps teach good study skills and time management."*
Teaching Presence	*"Good teacher"*	*"The professor was very kind and enthusiastic, as well as generally encouraging."*
	"Organized."	*"I really liked this class. It was helpful being an incoming freshman and having help to relieve stress and to be able to understand how to use all our online materials effectively"*
	"teachers"	*"I really enjoyed the broad range of information that was assigned throughout the semester. I was able to learn about a number of different topics on college and adult life, and I was also able to reflect upon my personal feelings. [The instructor] gave us multiple opportunities to reflect on our learning and reach out to her and [the peer mentor] if we wanted to talk, and I sincerely appreciated that.*

Quantitative Findings

Quantitative analyses of rating-scale items were used to confirm observations from qualitative analyses. A series of 2 (instructor) x 2 (modality: in-person vs. online) analyses of variance (ANOVAs) were computed.

Cognitive Presence

First, a 2 x 2 ANOVA was used to assess the effect of instructor and modality on student likelihood to recommend the course to other students. There was a significant Instructor x Modality Interaction, $F(1,62) = 8.22$, $p = .006$, indicating that in-person students were more likely to recommend instructor A (who had more experience teaching the course) compared to instructor B, but there were no significant differences online (see Table 3).

Table 3. Mean of Student Ratings.

	Recommend Instructor			Instructor Enthusiasm			Instructor Effectiveness		
Instructor	A	B	Sig(*p*)	A	B	Sig(*p*)	A	B	Sig(*p*)
In-person	3.77	2.57	0.009	4.47	3.43	<.001	4.00	3.14	0.010
Online	3.53	3.89	0.198	4.41	4.33	0.761	3.53	3.89	0.081

Note. Means are on a scale 1 to 5.

Teaching Presence

Next, a 2 x 2 ANOVA was used to assess the effect of instructor and modality on perceptions of instructor enthusiasm. There was a main effect of instructor, where instructor A ($M = 4.44$, $SD = 0.66$) had higher ratings than instructor B ($M = 3.88$, $SD = 0.95$), $F(1,62) = 8.89$, $p = .004$. There was also a main effect of modality, with instructors being rated as higher in enthusiasm online ($M = 4.37$, $SD = 0.69$) compared to in-person ($M = 4.00$, $SD = 0.97$), $F(1,62) = 5.07$, $p = .028$. Furthermore, there was an Instructor x Modality Interaction, $F(1,62) = 6.58$, $p = .013$, indicating that there were significant differences in enthusiasm between the instructors in-person, but not online. Similarly, for perceived instructor effectiveness there was a significant Instructor x Modality Interaction, $F(1,62) = 9.96$, $p = .002$, indicating that instructor A was perceived as more effective in-person, but there were no differences between instructors online.

Discussion

This case study evidence demonstrates that with strategic planning and a focus on collaborative engagement, online first-year seminar courses can provide just as much (if not more) social, cognitive, and teaching presence as instructor-centered in-person courses. Student comments on evaluations of teaching were substantially more detailed and positive in online versus in-person courses, and evidence suggests that students perceived social presence as a more meaningful and valued domain online. Although comments were less frequent about cognitive and teaching presence online, they were salient in both versions and were more positive and complex online. Quantitative findings confirmed that online courses increased perceptions of cognitive and teaching presence, particularly for the less-experienced instructor. These findings were particularly interesting given that a standardized curriculum was consistently used for all courses; thus, findings indicate that students experienced less connection in in-person instructor-centered courses, compared to FC online co-taught courses. Given the context of online courses and social isolation during the COVID-19 pandemic for many of these online students (Kinzie & Cole, 2022), improvements in feelings of community and social connection are particularly noteworthy. These findings suggest that course structure (e.g., FC and co-teaching) plays a significant role in student perceptions of social, cognitive, and teaching presence and indicate that implementing structural changes may improve student perceptions of the course regardless of

modality.

Our experience of transforming in-person first-year seminar courses into more impactful and engaged online classes not only reinformed our understanding of the importance of first-year seminar, an essential high impact practice (Kuh, 2008), but also deepened our understanding of the developmental and cognitive learning needs for emerging adults, as well as the importance of sustained and empowered active learning (Duncan et al., 2012). This case study reveals the possibilities of promoting more collaborative, equitable, and high-quality course delivery regardless of in-person versus online modality, and the ways in which doing so reinforces students' social skills, sense of belonging, and deeper levels of engagement. Our experience further aided each of us in our ability to generalize and globalize more engaged high impact teaching strategies across our other courses, both in-person and online.

Intersections with Existing Scholarship

Although this case study was conducted in a first-year seminar course, the multidisciplinary nature of the course itself, as well as the broad strategies collaboratively implemented provide connections with scholarship in many fields. This evidence not only underscores the significance and importance of high quality online teaching, but also suggests that, given the improvement over and above instructor-focused in-person sections, these same practices should be applied in-person as well. Thus, this case study demonstrates the effectiveness of a broad variety of existing evidence-based teaching strategies and suggests that similar strategies might be implemented beyond the pandemic and in both in-person and online courses.

CoI Framework

These findings support previous evidence for using the CoI framework to assess online courses (Garrison & Arbaugh, 2007; Garrison et al., 2010). Although some previous studies have found differences between online and in-person courses on the CoI metrics (e.g., Lee & Nuatomue, 2021; Mercado, 2022), our case study suggests that using learner-centered strategies such as FC can lead to online classes with just as much social, cognitive, and teaching presence (e.g., Miller et al., 2020). CoI has been used as a tool for evaluating instructor effectiveness after a course (e.g., Lawrence-Benedict et al., 2019), but our experience suggests that it might also be a tool for developing courses. Instructors who strategically consider how they will establish social, cognitive, and teaching presence during course development may be better able to address student needs.

Online Teaching and High Impact Practices

These findings are consistent with previous evidence suggesting that online courses can be as effective as in-person courses (Hew et al., 2020; Lawrence-Benedict et al., 2019; Yarmand et al., 2021). Furthermore, they bolster evidence that a focus on community building and the CoI framework can improve online course quality (Fiock, 2020). However, given the challenge that we faced (creating community in a course designed to orient first-year students, many of whom were isolated due to the COVID-19 pandemic, to a campus many did not yet physically attended), we view the strength of our online classes as evidence that the structure of the course (e.g., learner-centered vs. instructor-centered) may be more predictive of success than modality (Stover & Houston, 2019). Had we used the same instructor-focused, large group format online, we likely would not have seen such improvements. Conversely, had we implemented the same FC, peer mentor, and co-teaching strategies in-person we believe our in-person classes would have been much higher in quality. It was the change

in the structure of the course, not the modality, that enabled us to better meet the students' social and academic needs. Thus, a primary take-away is that, within the context of modality, course structure can set the stage for a more relational and interactive course that can promote social, cognitive, and teaching presence.

The COVID-19 pandemic revealed the essential utility of technology in modern life, and nowhere have we found it to more necessary than in promoting and sustaining equitable access to educational opportunities. Identifying the most effective pedagogical strategies and providing options for high quality courses both online and in-person provides greater opportunity for all students to benefit from such practices. For example, high impact practices such as first-year seminars have significant benefits for students in general (Steiner et al., 2019), and while historically underserved students are less likely to participate in such activities, they often experience greater benefits when they do participate (Zilvinskis et al., 2022). Offering high quality online as well as in-person options provides more equitable opportunities for students, regardless of their educational context and background (Finley et al., 2022). While the COVID-19 pandemic created the new challenge of a sudden pivot to online classes, the issue of needing to teach classes that are traditionally in-person in an online context continues today. Our case study reinforced this new reality and leaned into the promise of high impact teaching and learning in online courses which, when used with planning and intention, can deepen students' academic experience.

Flipped Classroom

Consistent with previous evidence demonstrating increased engagement in FC settings (Stover & Houston, 2019), we found that using an FC approach particularly improved student perceptions of social presence. Consistent with previous research (e.g., Hew et al., 2020), when students came to class prepared to discuss and engage with material, it created a community of learners where students learned, discussed, and experienced the social norms of college, even if not physically in a classroom. Furthermore, because first-year seminar course material is designed to help students succeed academically (Sullivan & Haller, 2018), this increase in both cognitive and social engagement was particularly important (Duncan et al., 2012).

Co-teaching

Finally, co-teaching and involving peer mentors contributed to improved student perceptions of the course. As instructors experiencing pandemic social isolation ourselves, co-teaching helped create a more interactive and engaging social space to discuss ideas and get excited about teaching (Monteblanco, 2020). This is consistent with previous findings that faculty who had learning approach goal orientations during the pandemic shift to online teaching viewed the change positively and had lower burnout (Daumiller et al., 2021). Our experiences of collaboratively experimenting with new co-teaching methods helped to provide each of us with professional **and** emotional support, and therefore enabled us to offer students more empathy and academic support. These processes are particularly reflected in the greater reports of social presence online.

Implications for Practice

These case study findings suggest several practices that can be implemented across higher education contexts to improve social, cognitive, and teaching presence. Although implemented online in a first-year seminar course, these strategies are not limited to this context. It is worth noting that there were multiple differences between in-person and online versions of the course, and that the online course

was done in the context of an ongoing global pandemic. Although we cannot identify one single practice that led to improvements, we have highlighted some of the most salient practices that we believe contributed to changes in various types of instructional presence. While this case study utilized these activities and tools only in the online context, the vast majority of these could easily be translated to in-person contexts as well. Therefore, many of these strategies could be used for any instructors seeking to establish social, cognitive, and teaching presence, regardless of modality or even course topic.

Social Presence

Encouraging social presence and connection was a key goal for the online course, given students were taking classes online during the pandemic and social isolation. One of the ways we established peer engagement was through long-term partner activities. In pairs, students did an activity (modified for online) designed to generate interpersonal closeness (Aron et al., 1997). After partner cohesion was established, pairs had out-of-class assignments to complete together, giving them opportunities for social engagement. In addition, we increased instructor social presence by assigning compulsory individual meetings with instructors and peer mentors, providing opportunities to ask questions and practice course skills. Peer mentors also provided additional support and advice.

Cognitive Presence

A variety of online tools were used to promote cognitive presence, which could also be accessible in-person and across educational domains. Each class period started with a check-in question - a light-hearted or thought-provoking question that students responded to via chat or polling. Thus, students were engaged from the first moments of class. Classes concluded with a check-out question related to the session topic. Throughout the class, online polling tools were used to assess understanding and ensure continuous cognitive engagement.

In addition to large group discussions, breakout groups were used each class period. Students were randomly assigned to small groups (3-4) to reflect on material, discuss personal applications, or collaboratively solve problems or identify resources. These smaller groups ensured students had opportunities to share thoughts in a less intimidating setting, increasing cognitive presence. Furthermore, breakout groups were often asked to post written responses to shared class tools (e.g., Google Docs). This held groups accountable for organizing and recording discussions, provided a non-verbal option for engagement, as well as a resource to which students could later refer.

Teaching Presence

A number of structural changes in the class improved teaching presence. The FC structure exposed students to material before class and allowed for engagement and interaction with material and peers during class. To confirm students were doing assigned work before class, they completed weekly R.S.V.P. assignments, in which they (1) **R**esponded to material, (2) **S**ummarized main findings, (3) Identified and defined **V**ocabulary terms, and (4) **P**osed a question. During class, teaching presence emerged primarily through discussion facilitation. On rare occasions when new material was presented in class, it was via student-led presentations. This changed our instructor role from lecturer to facilitator and guide, empowering students to take ownership of material and learning experiences.

Co-teaching also led to substantial changes in teaching presence. Although this may have been less visible to students, collaboratively planning the course enabled us to use a wider variety of activities, spend more time reflecting on goals for the class and how effectively they had been executed,

and further provided mutual social support to instructors.

Conclusions

In conclusion, we found through this multi-year collaborative teaching partnership that implementing an FC approach that was informed by the CoI framework was a better learning experience for students as reported in student evaluations of teaching. It also was a more positive and transformative teaching experience for us. Since completing this case study, both of us have worked individually and collaboratively to translate these strategies to other classes and modalities. We continue to find that these high-impact strategies allow for higher degrees of interactive and relational student engagement. As our case study demonstrates, the CoI framework offers a best-practice model for engagement, relationship-building, social support, learning, and collaborative social interaction. Our challenge centered on building an engaged classroom community in an online first-year seminar course during the COVID-19 pandemic, but our findings are readily generalizable to other modalities, courses, and student populations. Although the improvement in course quality via social, cognitive, and teaching presence was the primary focus, we also take away a greater appreciation for the co-teaching experience through which we gained new pedagogical insights and much valued peer support.

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