

# Teaching Presence in Asynchronous Online Classes: It's Not Just a Façade

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## **Abstract**

The expanding scale and scope of online education options, both in terms of design and delivery, create significant questions that increasingly warrant research attention. Previous research has demonstrated that higher levels of teaching presence in online courses is positively related to student engagement, satisfaction and learning. Although there are many methods for infusing one's teaching presence into an online class, practicalities constrain choices. The purpose of this study is to identify and assess those methods students perceive to be the most valuable. We empirically investigate students' perceptions and evaluative judgments of a range of methods of setting and sustaining teaching presence in an online asynchronous course. Post hoc factor analysis of our data suggests refining our understanding of teaching presence in terms of stylistic versus substantive methods. Analyses of student survey data indicate that, while students see value in both types of teaching presence, they perceive significantly greater benefit from substantive relative to stylistic methods.

*Keywords:* teaching presence, asynchronous online classes, Community of Inquiry

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Online classes are no longer a novelty in post-secondary education. As of 2019, 89% of U.S. universities had online classes (Song et al., 2019) and by 2021, 52% of college students had taken an online class (Smalley, 2021). The trend toward increased online course offerings abruptly escalated in the Spring 2020 semester, when nearly all colleges and universities pivoted to online course delivery in response to the global COVID-19 pandemic. As concerns fade, most colleges in the U.S. have reverted to delivering many courses in some sort of in-person format. Nevertheless, it is likely that students' and instructors' exposure to online classes during the pandemic significantly legitimated online classes as an effective, meaningful educational format.

The nearly global use of online course delivery during the pandemic highlighted both the advantages of and concerns with online education. Online courses offer a unique flexibility for students to navigate the class and allow for larger class sizes (Song et al., 2019; Young et al., 2014). Students who appreciate working independently with reduced expectation of peer engagement are particularly drawn to online academic settings (Young et al., 2014). However, there are concerns that online education is not as effective as traditional in-person learning. These concerns largely stem from the lack of student-student and student-instructor relationships and interactions, which leave some students feeling isolated and disconnected (Song et al., 2019; Young et al., 2014). Furthermore, studies reveal students have lower quality of work, diminished satisfaction, and fewer opportunities for spontaneous formative feedback in online settings (Martin, 2019). According to Vygotsky's sociocultural theory of learning, higher-order thinking is fostered through social interaction, which is fundamental to cognition (Subban, 2006). Considering this, and the reduced social interaction in online courses, it is not surprising that students report perceiving poorer educational experiences and outcomes in online classes than traditional in person classes (Song et al., 2019). One of the most effective ways to limit the isolation and perceived lower educational experience is to increase the instructor's teaching presence in online courses (Mandemach et al., 2006).

## Teaching Presence

The concept of teaching presence in online courses is a rich, expanding theme in the literature. Despite wide-ranging interpretation, there is consensus that it is a vital element of effective online education. While some researchers use the term, instructor presence, Richardson and colleagues advocate a broader interpretation that speaks directly to the intersectionality of teaching and social presence (Richardson et al., 2015). This literature argues that instructor presence and teaching presence are distinct, in that instructor presence concerns the implementation of instruction in an online setting and reflects the online personality, or interactions, that an instructor has with students. Alternatively, teaching presence is more focused on the pedagogical design and development of the course (Richardson et al., 2015). In their review of this literature, Sheridan and Kelly (2010) conclude that "instructor presence is one of the keys to the effectiveness of online learning and that instructors need to be actively engaged in online courses" (p. 769). Instructor presence is essential in the creation of online norms, and the fostering of digital social interactions (Lear et al., 2009). Richardson, et al. (2015) define instructor presence as "the specific actions and behaviors taken by the instructor that project him/herself as a real person. In other words, instructor presence relates to how an instructor positions him/herself socially and pedagogically in an online community" (p. 259). Similarly, Bangert (2008) refers to instructor presence as "the 'methods' that instructors use to create ... quality online instructional experiences..." (p. 40). Ultimately, the conjuncture of social

presence and teaching presence results in instructor presence, which focuses on facilitating active learning in online classes (Martin et al., 2018).

Expectedly, efforts to develop integrative models to guide instructors seeking to establish their presence in online courses are growing. Much of this research anchors teaching presence within the context of the Community of Inquiry (COI) framework (Garrison, et al., 2000). The COI proposes that effective online education is best understood in terms of the interrelationship of three types of presence: cognitive presence, the ability of learners to construct meaning through sustained communication; social presence, the capacity of learners to identify with the learning community and convey individual characteristics; and teaching presence, the role of the instructor in setting and sustaining cognitive and social presences that support student success. In their detailed analysis of these presences, Kozan & Caskurlu (2018) note that cognitive presence specifically focuses on aspects of the course that are designed to assist cognitive development, such as assignments, feedback, and lectures (Sheridan & Kelly, 2010). Social presence stems from interpersonal interactions and is an essential component of classes as it helps build community and increases perceived learning (Martin et al., 2018). In online classes, through their teaching presence, instructors are facilitators who support and enhance cognitive presence and social presence. Teaching presence has been conceptualized as having the subdimensions of (1) instructional design and organization, or the design and planning of the online course, (2) facilitating discourse, or engaging students in active learning, and (3) direct instruction, which is the instructor's delivery of subject content (Anderson et al., 2001; Garrison and Cleveland-Innes, 2000).

The focus of this present study is on the role of the instructor in designing and delivering a course that encourages high levels of both cognitive presence and social presence. Thus, we will follow the COI terminology and use the term *teaching presence*, which most closely aligns with the intent of our study. There is a unique interconnectedness between teaching presence and the development of social and cognitive presences in online settings (Kozan & Richardson, 2014), as teachers must be intentional about how they craft their courses in ways that facilitate interpersonal relationships while also providing subject matter expertise. For example, many online classes have a discussion board. Here students and instructors alike post discussions to foster learning and cognitive development, while simultaneously interacting with others, facilitating social presence. Best practices of online learning require blended methods of teaching presence. These blended methods proactively encourage relationship building through course design elements (Dockter, 2016). This blended learning style creates a more student-centered, active learning environment. These blended environments increase student engagement through employing problem-based learning, case-based reasoning, computer simulations, design projects, and collaborative learning (Hannafin & Land, 2000). By creating learner-centered environments, instructors value the knowledge and skills students bring to class, and instructors can build on students' personal and cultural beliefs (Stewart et al., 2009). Furthermore, methods to increase teaching presence increase relationships, which are directly related to increased student outcomes (McCarty et al., 2016). Ultimately, post-secondary institutions that employ student-centered learning experience higher learning outcomes (Lightweis, 2013).

Research has shown that students' perception of the instructor's teaching presence in their online course is positively related to student satisfaction (Baker, 2010; Caskurlu et al., 2020; Ladyshevsky, 2013; Wise et al., 2004). Subsequent work operationalizes the dimensions of teaching presence, proposing a host of measures and advocating a series of techniques (Anderson et al., 2001; Baker, 2010; Lowenthal & Parscal, 2008; Miller et al., 2014). Cormier

and Siemans (2010) for instance, advise teachers to develop their teaching presence in terms of “amplifying, curating, aggregating, and modeling.” Likewise, Miller and colleagues (2014) link teaching presence to six methods: peer-to-peer interaction, active student engagement in learning, emphasis on practice and student effort, and personalization. While there are many ways to increase teaching presence, students place the most value on aspects of teaching presence directly linked to their learning (Martin et al., 2018).

As suggested by these definitions and research results, there is an abundance of means and methods to enhance teaching presence. Choices include video overviews/lectures that feature the instructor, discussion board interactions with students, in-depth feedback on activities and assignments, and course structures that promote student engagement (Swan & Shih, 2005). Furthermore, instructors can create videos to introduce themselves, create videos to review assignments, establish clear course expectations, and create opportunities for students to share relevant personal experiences (Martin, 2019). There is an ever-growing abundance of online tools to increase points of contact in online classes. These interactions build rapport and collaboration, while creating spaces for students to receive feedback (Dixson, 2010). Moreover, instructors can employ other technological tools to increase engagement and points of contact (Martin, 2019). These digital interactive communication tools foster strong student-student and student-instructor interactions that enhance student perception of instructor presence (Park & Kim, 2020). These interactions build a learning community that is essential for cognitive growth and the development of critical thinking (Stewart et al., 2009). Many methods of enhancing teaching presence are regularly linked to higher student satisfaction in online courses (Garrison & Cleveland-Innes, 2005; Caskurlu et al., 2020) and they enhance ways for students to actively engage online (Martin et al., 2018).

Although it is clear that a strong teaching presence is linked to higher rates of perceived learning and better learning experiences, there is a dearth of research on students’ perception of the relative value of specific methods of instilling teaching presence into an online course (Dixson, 2010). Therefore, the purpose of this study was to determine which methods of teaching presence students perceive to be the most valuable.

### **Research Questions**

The existing teaching presence literature offers helpful guides to instructors aiming to optimize their presence in their online class activities. This paper, based on our issues encountered in personal class experiences and questions raised in related research activities, aims to enrich as well as extend this literature. A recurring perspective in the teaching presence literature regarding the relationship between the use and value of methods of teaching presence, is the idea that “more is more” (Imlawi et al., 2015; Kendall and Kendall, 2017). Studies advocate expanding the repertoire of methods that ostensibly establish an instructor’s presence, consistently reporting a positive correlation between teaching presence and various means of communication, responsiveness, direction, and engagement (Hajibayova, 2016; Skramstad et al., 2012). Hence, instructors are encouraged, often strongly, to engage in any and all efforts to set and sustain teaching presence to improve the learning experience. However, there is little guidance regarding which of the many methods of enhancing teaching presence are most worthwhile.

This exploratory study was designed to determine the methods of teaching presence that students perceive to be the most valuable to their academic success, or to answer the following research questions:

1. How well do students perceive the various methods of infusing teaching presence into an online course?
2. What methods of teaching presence do students perceive to be most valuable to their learning?

The results of our tests to answer these basic research questions led to a series of post-hoc analyses in which we determined through factor analysis that students perceive an underlying difference between the various methods of teaching presence that we conceptualize here as substantive versus stylistic methods. We then explored whether students perceive a significant difference in the value of these substantive versus stylistic methods of infusing teaching presence into an online course.

## Method

### Data Collection and Measurement

The sample for this study consists of students in the graduate business program at a mid-Atlantic university. We collected course analytics data and administered an exit survey to students in seven sections of the online version of the capstone course of the MBA program, from spring 2017 through spring 2019. Sections ranged in size from 31 to 44 students, most of whom were working adults enrolled in the graduate program part time. The survey was administered at the conclusion of each section of the course to a total of 259 students; 256 students submitted the survey, which was a response rate of 98.8%.

We follow precedent and interpret teaching presence as the proactive choices an instructor makes designing, influencing, facilitating, and directing cognitive and social processes in order to deliver a productive, meaningful educational experience (Anderson et al., 2001). As discussed earlier, there are numerous methods for enhancing teaching presence in an online course from which instructors and course designers must select those most suitable for their particular course. Given the nature of the capstone MBA course that served as the setting for data collection, we used eight course-embedded design elements to enhance the instructor's teaching presence. Specifically:

1. Teacher-created narrated PowerPoint content lectures
2. Weekly update emails/announcements from the teacher explaining upcoming assignments and deadlines
3. Three-minute professionally recorded, highly personal course introduction video of the teacher
4. Seven professionally recorded one-minute module overview videos by the teacher
5. 500-word biographic page profile of the instructor that incorporates a personal photo
6. Discussion board introduction post by the teacher that presents her personal and professional background
7. Individualized teacher feedback on assignments
8. Teacher email responses to individual student questions

In the post-course survey, we listed these eight course design elements and asked students (1) "For each of the following, please indicate how well it added to the instructor's presence in the course" (1 = Extremely well, 5 = Not well at all), as well as (2) "For each of the following types of instructor presence, please indicate the degree to which it provided value to you as a student in the course" (1 = Provided a great deal of value, 5 = Did not provide any value at all).

## Analysis and Results

Our analysis consisted of an examination of the means of the eight course design elements with respect to students' perceptions of how well they added to the instructor's presence in the course and their relative value to them as students. These results led to a set of post-hoc analyses in which we first conducted factor analyses of the two sets of items, which resulted in our conceptualization of substantive versus stylistic design methods. We then tested for significant differences in the effects of stylistic and substantive methods on their contribution to the level of the instructor's presence in the course, as well as their perceived value.

Results consistently indicate that students saw all applied teaching presence methods as increasing the presence of the instructor in the online course. Table 1 reports students' mean response, on a scale of 1 to 5, where 5 = "extremely well" and 1 = "not well at all," as to how much that element of the course increased the instructor's presence in the class. Students rated all eight elements at least 3.8 out of 5.0, indicating that all elements contributed to teaching presence. Average ratings ranged from 3.84 to 4.60 out of 5.0, as shown in Figure 1, in ranked order.

**Figure 1**  
*Strategies for Increasing Instructor Presence*

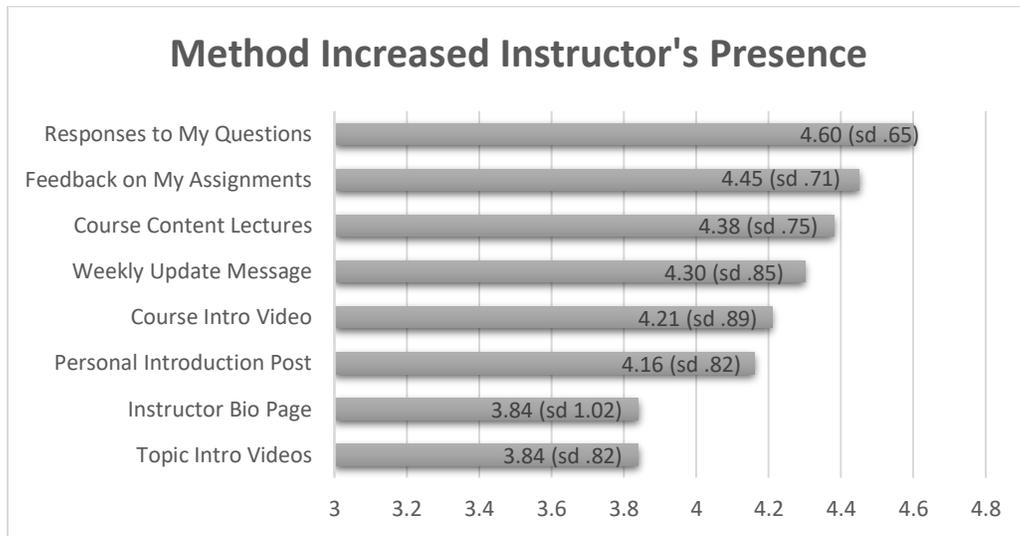
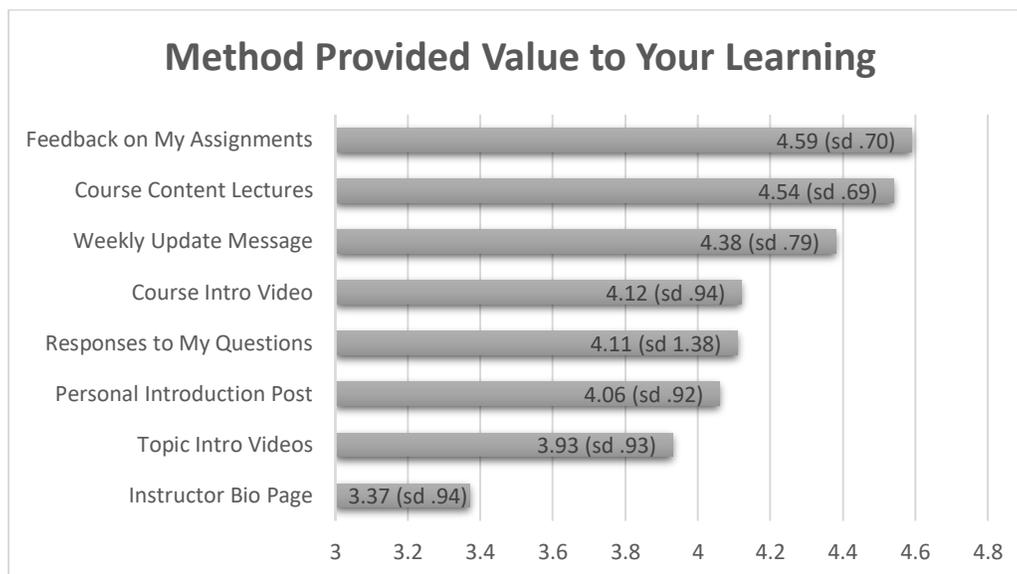


Figure 2 displays in ranked order the mean value of students' perceptions of the degree to which each element of teaching presence provided value to their learning. Similar trends mark students' perception of the value, with the mean for all elements at a level of 3.8 or better. Yet here, the range was a bit greater, from 3.37 to 4.59 out of 5.0.

**Figure 2**  
*Strategies for Learning Support*



We found it interesting that, for both questions, students' ratings of the various methods of teaching presence were quite similar, in that methods reflecting direct interaction with the instructor or course content were rated more highly than personal/professional information about the instructor or informational videos about the course. These results prompted us to engage in a set of post hoc analyses.

### Post Hoc Analyses

Given the rankings of students' responses to the survey as shown in Figures 1 and 2, we suspected that there might be deeper factors underlying students' perceptions of the various methods of teaching presence embedded in the course. We performed exploratory factor analysis on our data to better understand whether associations existed between the eight initial variables, and whether the eight variables could be reduced to fewer dimensions or latent variables.

We factor analyzed both sets of teaching presence items separately, first using the eight items that asked how well each element contributed to the instructor's presence in the course, and then the items assessing the degree to which each element added value to their learning experience. Factor analysis using varimax rotation and an eigenvalue cutoff of 1.0 resulted in a two-factor solution for each set of eight teaching presence items. Figures 3 and 4 show the results of the two factor analyses, respectively.

In both instances, the same four items loaded on each of the two factors. The four items loading on the first factor were: the instructor's personal introduction on the discussion board, the professionally shot video introduction by the instructor, the professionally shot one-minute topic introductions by the instructor, as well as the instructor's internet bio page. These elements of teaching presence all show information, photos and/or video footage of the instructor, but they provide little in the way of course content, nor do they provide direct interaction with either the instructor or other students. Rather, these items provide a visual or narrative overview of the instructor or the course material. The items in this factor we named *stylistic* teaching presence because they all add an aesthetic presence of the instructor, but little else.

The four items that loaded on the second factor were quite different. These items all related to substantive course content or personal interaction with the instructor: the instructor’s weekly update regarding upcoming assignments and due dates, the instructor’s personal responses to individual student email questions, the instructor’s personal feedback on students’ individual assignments, and the content lectures narrated by the instructor. Each of these elements of teaching presence provides students with essential information on the course structure or content that they needed to make successful progress in the course. Because of their substantial contribution of course information, we named this second factor *substantive* teaching presence.

**Figure 3**  
*Instructor Presence Items*

**Factor Analysis Loadings—Instructor Presence Items**

Item	Factor 1	Factor 2
	Stylistic Presence	Substantive Presence
Instructor’s Introduction Post on Discussion Board	<b>0.812</b>	0.275
Professionally Shot Instructor Course Introduction Video	<b>0.787</b>	0.324
Instructor’s Bio Page	<b>0.833</b>	0.119
Professionally Shot Instructor Topic Introduction Videos	<b>0.758</b>	0.215
Instructor’s Weekly Update Message	0.229	<b>0.738</b>
Instructor Prepared Voice-over Content Lectures	0.361	<b>0.559</b>
Instructor’s Responses to Individual Student Questions	0.130	<b>0.841</b>
Instructor’s Feedback on Individual and Team Assignments	0.203	<b>0.767</b>

**Figure 4**  
*Value Added to Student*

**Factor Analysis Loadings—Provide Value to Student**

Item	Factor 1	Factor 2
	Stylistic Presence	Substantive Presence
Instructor’s Introduction Post on Discussion Board	<b>0.807</b>	0.239
Professionally Shot Instructor Course Introduction Video	<b>0.852</b>	0.240
Instructor’s Bio Page	<b>0.786</b>	0.199
Professionally Shot Instructor Topic Introduction Videos	<b>0.784</b>	0.247
Instructor’s Weekly Update Message	0.373	<b>0.715</b>
Instructor Prepared Voice-over Content Lectures	0.256	<b>0.633</b>
Instructor’s Responses to Individual Student Questions	0.186	<b>0.664</b>
Instructor’s Feedback on Individual and Team Assignments	0.101	<b>0.850</b>

**Stylistic versus Substantive Teaching Presence**

In broad terms, style refers to methods that focus on impression management, aiming to influence what students perceive, think, and feel. Methods include information about or presented by the instructor, such as a personal introduction discussion post, video introduction to the course, brief video overviews of topics, and the link to the instructor’s professional website. In contrast, substance refers to methods that focus on content management and delivery, aiming to provide helpful information, recommendations, and interpretations to students. Methods include detailed feedback on assignments, responses to email inquiries, direct moderation of discussion board activities, and video content lectures. In actuality, both stylistic and substantive elements of teaching presence are commonly used concurrently, although to different degrees. Given the demands imposed by both, the matter of degree has pivotal importance to optimizing the design of an online class.

**Value of Stylistic versus Substantive Teaching Presence**

Based on these results, we created multi-item scales using the four items that loaded together, each measuring a critical dimension of the course design. Regarding the results for teaching presence shown in Figure 3, we combined the four items that loaded on the first factor into a four-item scale; it is labeled *Stylistic Teaching Presence*, and shows a high measurement reliability, with a coefficient  $\alpha$  of .854. The remaining four items that loaded on a second factor we labeled *Substantive Teaching Presence*. It, too, has a high reliability, with a coefficient  $\alpha$  of .763. Applying the same procedure to items assessing the perceived learning value of each item resulted in the *Value of Stylistic Teaching Presence* ( $\alpha = .848$ ) and *Value of Substantive Teaching Presence* ( $\alpha = .691$ ).

To statistically test whether stylistic or substantive elements of teaching presence added more to the instructor’s presence in the course, we conducted a paired samples t-test of mean differences between these two multi-item constructs. These results are shown in Table 1. The variable, Stylistic Teaching Presence, had a mean of 4.00 out of 5, while the mean of Substantive Teaching Presence was 4.41. Results of the paired samples t-test indicate that these means are significantly different ( $p < 0.000$ ), with Substantive Teaching Presence contributing significantly more to the teacher’s presence in the course than Stylistic.

**Table 1**  
*Increases in Instructor Presence Alongside Value to Students*

Increases Instructor Presence			Provides Value to the Student		
Variable	Mean (std dev)	Paired Samples t-test	Variable	Mean (std dev)	Paired Samples t-test
Stylistic Presence	4.00 (sd .79)	t = -9.488	Stylistic Presence	3.87 (sd .87)	t = -11.116
Substantive Presence	4.41 (sd .60)	p < .000	Substantive Presence	4.41 (sd .68)	p < .000
N = 253			N = 256		

We conducted a second paired samples t-test of mean differences to test whether students perceived more value to their learning from stylistic versus substantive forms of teaching presence (see Table 1). The variable, Value of Stylistic Teaching Presence, had a mean of 3.87 out of 5.0, whereas Value of Substantive Teaching Presence had a mean of 4.41 out of 5.0. The paired samples t-test indicated a significant difference in these means ( $p < 0.000$ ), with students indicating that substantive teaching presence is significantly more valuable to them than stylistic teaching presence.

## Discussion

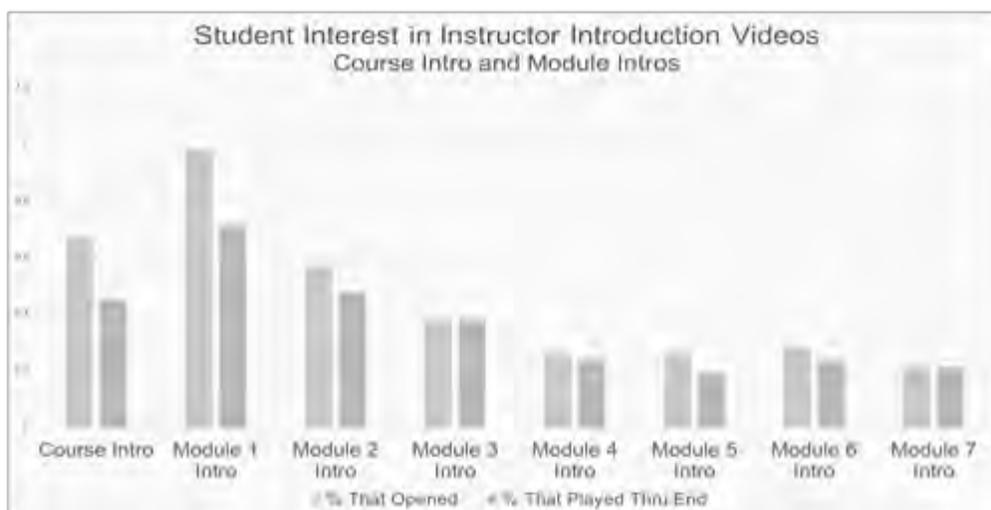
Presently, assessing the issues and identifying best practices in the realm of teaching presence is challenging. In the least, the rapid emergence and expansion of online education runs ahead of educators' efforts to design classes with high levels of teaching presence. For instructors, synthesizing best practices requires sifting through an expanding, variegated literature, or reliance on course designers for advice on which elements of teaching presence will provide the most value in their courses. Consequently, one routinely sees advocacy of the idea of "more is better," with teachers encouraged to devise and implement any and all possible methods and means to enhance students' sense that the instructor is a proactive, vigilant, and conscientious presence in the course. Yet, the time, effort, and resources required to design an online class suggest that instructors face limitations on how much they can reasonably do to institute a confident, engaging teaching presence.

Where is the balance for instructors striving to enhance their presence in their online courses? Our findings suggest that students see value in nearly all methods of teaching presence, which expands on the findings of Sheridan and Kelly (2010). However, students assign higher value to elements of teaching presence that provide meaningful substance, such as content lectures, assignments that directly apply course material, detailed feedback on their performance, and quick response to email queries. These results are not surprising as they are points of contact for students and instructors specifically designed to enhance student learning, which has been found to be the most valuable part of class in prior research (Martin et al., 2018; Richardson et al., 2015; Sebastianelli & Tamimi, 2011; Sheridan & Kelly, 2010). Students assign lesser value to elements of teaching presence that emphasize visual personalization, presence, socialization, or interaction, such as that developed via introductions and an ongoing series of professionally shot overview videos. This finding is consistent with existing literature, as these aspects of teaching presence are more stylistic in nature and less substantive, or they are course features less directly linked to the development of course content and feedback (Martin, 2019; Sheridan & Kelly, 2010). Ultimately, while stylistic forms of teaching presence can increase students' feelings of online community, the cornerstones of learning are those aspects we call substantive teaching presence.

Indeed, data from the LMS analytics on student behavior support our finding that students do not see high value in stylistic elements of teaching presence. This is not surprising as stylistic elements, such as short videos, do not provide significant content or skills. Rather, they create another space for interactions between instructors and students that aspires to increase the social learning environment climate online (Lear et al., 2009). We gathered data on the number of student views of the professionally shot course introduction video, as well as each of the seven one-minute module introduction videos. As depicted in Figure 5, less than 70% of students opened the course introduction video, while less than half watched the entire three minutes. The results are even more striking when looking at students' behavior with respect to the module

introduction videos. Nearly all students opened and began watching the one-minute introduction to the first course module, yet only 70% watched it in its entirety, despite it being only one minute long. As the course progressed, fewer and fewer students opened the module introduction videos, with less than 60% opening the video for module 2, less than 40% for module 3, and between 20 to 30% opening the remaining module introductions. Clearly, as demonstrated by their video-viewing behavior, students see lower value in elements of teaching presence that provide style with little substance. In fact, Martin et al. (2018) also noted that introductory videos and other stylistic media were less valued than substantive materials. Instead, students found value in clear directions provided on the syllabus with timely feedback (Sharoff, 2019). Although the module introduction videos were a brief snapshot of what was to come in the upcoming module, they had little in the way of substantive content, being only one minute in duration. Thus, while there are endless ways to enhance class features, students appreciate substance over style (Martin et al., 2018).

**Figure 5**  
*Student Interest in Videos by Module*



These findings support and extend previous research that demonstrated the importance of teaching presence in terms of course structure and design in promoting cognitive and social connections (Garrison & Cleveland-Innes, 2005). Our findings indicate that, in the “clicks of the students,” not all forms of teaching presence provide equivalent value. Instead, students find value in clear, organized classes that are designed to help them efficiently learn while receiving direct, timely feedback from instructors (Martin et al., 2018; Sebastianelli & Tamimi, 2011). Moreover, our findings clarify the performance implications of substance and style when designing and delivering a productive, meaningful online learning experience. Similar to traditional class settings, the most useful forms of interaction are still individualized feedback designed to develop mastery of knowledge or skill (Martin, 2019).

While our findings echo those of some of these previous research studies, the results of our factor analysis confirm that students in online classes perceive the difference between what we have herein labelled substantive and stylistic forms of teaching presence. These findings have implications for best practices in online education. For instance, some of these substantive

elements of teaching presence that are most valued by students, such as detailed, individualized feedback on assignments and quick responses to individual questions can be quite time consuming for instructors. Thus, high quality online courses may require either smaller class sizes or multiple instructors in order to maintain a manageable student-instructor ratio so that instructors are able to provide such individual attention to students. It also is important that instructors new to fully online teaching receive appropriate training and support, not only in course design, but also with respect to within-course delivery, to build and maintain a high level of teaching presence in their courses.

## **Limitations and Future Research**

This research was conducted within the official context of an existing asynchronous online course, which limited some of our research decisions and methods. For instance, we included eight important methods commonly used to establish teaching presence in an online course, but there were other methods that we did not include. For instance, the course did not include discussion boards in which the instructor was an active participant, in large part because the course already included other rigorous assignments and assessments for which the instructor provided detailed feedback. We also collected the data from multiple sections of a single academic course, taught by the same instructor. While this method controlled for course content and instructor, there may be some moderating effects due to those factors. We encourage future research to evaluate additional elements of teaching presence in a course as well as across multiple courses and instructors. Another possible limitation of this study is the sample, which consists of graduate students in a Master of Business Administration program. Graduate students tend to be older and more experienced and have higher education, so they may be more aware of the differences between stylistic and substantive teaching presence as compared to undergraduate students. Graduate business students tend to be working adults, often with family obligations on top of their school and work commitments. Thus, they may perceive more value in those elements of teaching presence that facilitate their timely and effective completion of assignments in the course. Expanding the sample to include undergraduate students and students in disciplines outside the business field may enhance the generalizability of the findings of this study.

In principle, the process of assessing, systematizing, and validating the usefulness of various options is a hallmark of improving understanding and refining interpretation in any domain. Here, we find that students perceive various methods of enhancing teaching presence in an online course quite differently; in particular, elements of teaching presence are perceived as either stylistic or substantive. In this study, our results validate the utility of including both stylistic and substantive methods of teaching presence into online courses, although students perceive substantive methods as providing significantly more value to their learning experience. In other words, the stylistic methods provide a general façade of teaching presence, whereas the substantive methods construct a more concrete or solid presence. In practice, these results help both the novice and experienced teacher identify options and make tradeoffs in the quest to optimize his or her teaching presence. Together, these issues frame our assessment of the challenge and opportunity of infusing teaching presence in an online course.

### **Declarations**

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The authors received approval from the institutional review board of University of Delaware for this study.

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