Through Their Eyes: Student Perspectives

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Abstract

Connecting with students has been shown to increase motivation, satisfaction, and perceived learning while decreasing anxiety. Connecting with students in an online or distance education environment can prove difficult. This study examined perceptions of higher education students who were enrolled in various modalities (e.g., hybrid, online asynchronous, and synchronous) during the COVID-19 pandemic in the United States of America. The study found that a high perception of instructor connectedness in the asynchronous classes resulted in lower anxiety levels for students. Four themes emerged from the results: the importance of instructor empathy; sociability; feedback; and course organisation. These helped students to connect to their instructor—thus reducing anxiety.

Keywords: instructor connectedness; social presence; online course design; online course facilitation

Introduction

Online learning is an appealing educational option because of its flexibility and convenience, but before the COVID-19 pandemic online programmes were typically for adult learners. However, the pandemic forced instructors at many brick-and-mortar institutions to pivot to remote learning for all students. Educators quickly became immersed in teaching remotely—in hybrid, synchronous, or asynchronous modes. After initially focusing on how to transfer content from a face-to-face environment to an online one, many instructors shifted or added a focus to building community and connecting in the online classroom space. By connecting with students, instructors humanise their courses, and this allows them to engage and construct meaning (Gustafson & Gibbs, 2000).

For almost 2 decades researchers have been trying to determine what students value in online learning, and how they connect with their instructors. Previous research has found that students appreciate caring, responsive instructors who establish communication methods between themselves and their students (Conklin & Garrett Dikkers, 2021; Hodges & Cowan, 2012; Sheridan & Kelly, 2010; Wise et al., 2004; Whiteside, 2015).

The facilitation method of the online instructor is crucial for establishing teaching presence or connectedness (Mandernach et al., 2006; Wise et al., 2004). Instructional practices that support instructor connectedness include posting regularly to discussion boards, posting timely responses to emails and assignments, and modelling good online communication and interaction (Kassinger, 2004; Martin et al., 2018; Palloff & Pratt, 2003; Whiteside et al., 2017). Additionally, timely responses to questions, feedback on assignments, and video introductions have been deemed important to students, (Martin et al., 2018; Whiteside et al., 2017). Many

researchers have tried to define instructor connectedness and to understand how to connect with students; a few researchers have attempted to define instructor social presence from the students' perspectives (Sheridan & Kelly, 2010). Overall, there are a myriad of methods for connecting with students. Our study focuses on providing the student perspective on how increased instructor connectedness is attributed to lower anxiety, and several methods used by instructors to connect with students. This study provides a voice to higher education students taking courses in multiple disciplines.

Facets of instructor connectedness

There are several factors to be considered in a definition of instructor connectedness, including instructor-created materials, communication, and feedback. Additionally, we consider outcomes of instructor connectedness such as student affect and motivation.

Student anxiety in the online classroom

Students may experience anxiety when faced with a distance education course, especially if they are unfamiliar with the online learning environment. Bolliger et al. (2012) found that learner anxiety related to computers, the internet, and online learning in general. Learners who had lower levels of technological anxiety felt higher degrees of satisfaction with the course. First-year and full-time students are more likely to be anxious when beginning an online course (Abdous, 2019). Since 2020, student anxiety has reached even higher levels in the face of the ongoing COVID-19 pandemic and the transition to online instruction. Wang et al. (2020) reported significant levels of stress among students, who noted particular concerns regarding their academic progress and future plans, academic performance, and ability to adapt to online learning.

Instructor connectedness

Within the range of student–instructor relationships, instructor connectedness and its effects on student outcomes have garnered particular research interest. Many researchers have focused on connectedness or presence in asynchronous online courses. Mehrabian (1968) describes closeness, or immediacy, as "the extent to which communication behaviors enhance closeness to and nonverbal interaction with another" (p. 203). Gallien and Ooman-Early (2008) characterise connectedness as "a person's sense of belonging or presence, feelings of support, and level of communication/interaction with the instructor" (p. 468), whereas D'Alba (2014) defines connectedness as "perceived closeness between the student and instructor as well as the instructor and the student" (p. 8). Overall, many definitions include perceived closeness, but Gallien and Ooman-Early (2008) augment this definition by adding the emotional aspect of connectedness.

The sense of connectedness to instructors has been linked to positive effects such as increased satisfaction and motivation. Students who had informal interactions with faculty members (such as when faculty showed empathic concern for the student's cognitive and emotional development) noted increased satisfaction with the education programme and intellectual outcomes (Endo & Harpel, 1982). These findings were corroborated in Kim and Lundberg's (2015) study which showed the positive effect of student–faculty interactions on cognitive skill development. Students also displayed higher degrees of motivation through their connections with faculty members, especially if faculty members demonstrated interest in students' personal growth and career goals. Learners who experienced high quality and frequent contact with faculty members in non-classroom contexts showed statistically significant increases in academic motivation (Trolian et al., 2016). The students' perception of being respected by their instructors is an important dimension of faculty–student interactions. Students who feel respected by faculty

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link this respect to increased motivation and self-confidence, while students who feel disconnected from their instructors reported a lack of motivation (Komarraju et al., 2010).

Although much research has been conducted on instructor connectedness in the face-to-face environment, creating a solid connection between the instructor and student can prove more challenging in the online environment (Martin et al., 2018). Strategies to develop student connections consist of materials/videos created by the instructor (Martin et al., 2018) and providing intentional and timely feedback that responds to students' needs (Sheridan & Kelly, 2010).

Instructor-created course materials for connectedness

Using instructor-created course content has a beneficial effect on student and instructor interactions in the online classroom. Instructor-generated course materials such as video introductions, course orientations, and instructional content have been found to foster instructor connectedness (Conklin & Garrett Dikkers, 2021; Martin et al., 2018). Materials such as video introductions improve student perceptions of instructors as human. Jones et al. (2008) demonstrated how instructor-created video introductions help to create positive relationships between instructors and students early in a course, and humanise the instructor in distance education courses. Course orientations serve the essential function of situating students within the learning requirements and activities, and favourably influence student perceptions of the course. Bozarth et al. (2004) reported that course orientations reinforced the time commitment and time management capabilities required for distance learning. Course orientation is also linked to positive student feelings (Ko & Rossen, 2017).

In addition to introductions and course orientations, instructor-created materials in the form of video content positively affect online students' course experiences. Students valued instructional videos generated by instructors (Conklin & Garrett Dikkers, 2021; Griffiths & Graham, 2009; Rose, 2009). They reported that videos made them feel they were in the room with the instructor, thus creating a connection. Studies have found a positive correlation between instructor-created videos and student engagement in class discussions, overall course satisfaction, and student perception of value in instructor-made content through this connection. Finally, asynchronous video communication engenders a feeling of interconnection in students (Conklin & Garrett Dikkers, 2021; Borup et al., 2012).

Significance of instructor communication

A range of communication behaviour and methods have been shown to nurture instructor connectedness. Regular announcements, particularly weekly, function as a form of student support by welcoming students to the coming week or unit, reminding them of imminent course assignments and other due dates, and demonstrating instructor involvement and encouragement. The implementation and use of regular announcements have contributed to students' time management skills (Kelly, 2014; Ko & Rossen, 2017).

Students appreciate timely instructor responses to email and other forms of communication. Multiple studies have found that students rate timely instructor responsiveness very highly, especially if a response is received within 24 hours (Conklin & Garrett Dikkers, 2021; Miller, 2012; Sheridan & Kelly, 2010). Martin et al. (2018) corroborated this research in their study of facilitation strategies and reported that students' timely instructor responses were among the most highly rated strategies.

Providing multiple methods of communication also contributes to students' perception of instructor connectedness in the online classroom. The option to connect with the instructor via a range of modalities ultimately facilitates cooperation, information exchange, and easy

correspondence between the students and instructor (Whiteside et al., 2017). Conklin & Garrett Dikkers (2021) found that students valued connecting with their instructors through email and weekly announcements as well as synchronous meetings. Their findings support existing literature on the importance of instructor availability through several modalities such as email, chat, discussion forums, phone, and face-to-face or synchronous meetings (Martin et al., 2018; Sheridan & Kelly, 2010).

Power of instructor feedback for connection

Instructor feedback on assignments is an essential component of the student experience and provides numerous benefits to students and student perceptions of their instructors, especially if the feedback is personalised rather than collective. Personalised feedback contributes to positive student performance, course satisfaction, and learner satisfaction with the feedback itself (Gallien & Oomen-Early, 2008). Early and frequent feedback positively affects student performance and retention while also creating a connection with the instructor (Whiteside et al., 2017). Prompt and constructive feedback not only generates a bond with the instructor—it can also reduce learner anxiety, isolation, and lack of engagement online (Abdous, 2019). Types of feedback— such as constructive, detailed, and descriptive feedback—provide beneficial contributions to learners and their perceptions of distance education courses and instructors. Students desire constructive but positive feedback, which improves student satisfaction and their perception of improved progress (Conklin & Garrett Dikkers, 2021; Hosler & Arend, 2012; Shea et al., 2006). Instructors' feedback on student reflections has also been found to contribute to a sense of connectedness. Journal entries and reflections facilitate communication on sensitive and personal topics and create a dialogue channel in a low-risk and non-threatening environment (Black et al., 2000; Martin et al., 2018). Although feedback can be delivered in a range of modalities (e.g., text-based, video), research has shown that constructive, positive, and timely feedback promotes instructor connectedness because the learners perceive their instructors to be caring (Conklin & Garrett Dikkers, 2021; Borup et al., 2014; Ice et al., 2007).

Instructor connectedness and student affect

Community of inquiry (CoI) is a theoretical framework that is used to achieve higher-order critical thinking skills and to create a community of students and teachers in computer-mediated distance learning environments (Garrison & Arbaugh, 2007). The CoI serves as a theoretical communication and interaction framework to support the learning process. Its focus is on facilitating critical reflection on the part of the student, and critical discourse among teachers and student peers (Garrison et al., 2000). Community of inquiry is grounded in specific philosophical and epistemological assumptions and learning theories, and it aims to encourage higher-order cognitive processing in a collaborative/constructivist environment (Garrison, 2011). There are three essential elements to CoI: social, cognitive, and teaching presence (Garrison et al., 2000). When designed in balance, these three elements create a collaborative environment comprising a community of learners (Akyol & Garrison, 2008).

The increase in blended and online learning as options for students and instructors has been accompanied by a growth in research seeking to understand the intersection of emotion and technology and the resulting effect on student learning and motivation. Seminal work on social presence (Rourke et al., 2001; Swan, 2002; Swan & Shih, 2005) outlined a social-presence coding scheme that specifically addressed the affective domain of learning, by detailing indicators of personal expressions of emotion, feelings, beliefs, and values. Social-presence research and, specifically, research relating to instructors' social presence, has continued to focus on the potential connection between the student–instructor relationship and student affect.

It has been noted that positive instructor ratings and SIRS (student–instructor relationship scale) led to higher student motivation (Davis, 2003). Positive ratings are also attributed to students'

ability to master a task and take on instructor values (Davis, 2003; Frisby & Martin, 2010). Yong (2019) was able to confirm that when students perceived better relationships with their instructor, they reported higher affective learning as measured by motivation, task value, and self-efficacy. Higher levels of student anxiety led to test anxiety, which indicates that students do not have a "secure base" for their learning tasks (Yong, 2019, p. 162). Although large lecture classes can reduce instructor connectedness, most studies have been at private universities where the expectations of students may be higher (Gannaway et al., 2018; Naidu & Derani, 2016; Yong, 2019). Therefore, it is important to look at the student profile to generalise the results.

Creasey et al. (2009) developed a 36-item SIRS-9 scale and researched relationship dimensions in face-to-face classroom settings. Their survey of 94 students documented two relationship dimensions (instructor connectedness; instructor anxiety) via factor analysis and found correlations between these dimensions and learner achievement orientations. Their research shows learners who felt more connected to their instructors experienced less anxiety than their peers, while learners who felt disconnected or threatened by their instructor experienced more stress. Although this instrument was developed in a face-to-face setting, it has been applied in the online environment (e.g., Lammers & Gillaspy, 2013) and was validated in online courses.

The current study makes several contributions to the literature. First, it supplies insight into instructor-to-student connectedness and student anxiety in multiple teaching modalities through quantitative and qualitative data. Moreover, it reaffirms existing research on facilitation strategies that promote instructor connectedness and presents data that determine why some students connect with their instructors. It also augments the growing literature on instructor connectedness in higher education and provides a valid survey instrument that features survey items directly tied to the instructor connectedness and instructor anxiety relationship dimensions (Hsu & Goldsmith, 2021; Martin et al., 2018, 2020).

Three main research questions guided the current study.

1. What aspects of instructor social presence do students respond to most?
2. What helps students connect to and trust their instructors?
3. Do students feel less anxiety when there is a perceived connectedness with the instructor?

Method

Data discussed in this manuscript is from a mixed-methods study for which qualitative and quantitative data were collected concurrently. The overall purpose of the study was to understand student–instructor connectedness from the students' perspectives, and the methods instructors used to connect with their students. In fall 2020, we conducted surveys with students and interviews with instructors. The focus of this manuscript is on the data collected from the fall 2020 student survey. The instrument was adapted from Creasey et al.'s (2009) 36-item student-instructor relationship scale (SIRS-9) to conduct further research on student–instructor relationship connectedness and anxiety. The SIRS-9 has good internal consistency with a Cronbach alpha coefficient of .98. Because the survey focuses on the outcomes (e.g., instructor connectedness and student anxiety), three open-ended questions were added at the end of the survey to ascertain how and why the students felt connected to their instructor.

Participants

The regional public institution in the mid-south of the United States serves approximately 18,000 students. The week after an extended spring break in March 2020, all instruction shifted to remote delivery. The fall semester 2020 remained primarily remote, with 61% online, 25% hybrid, and 14% modified face-to-face delivery with social distancing and mask requirements.

Eleven instructors, teaching 22 courses, participated in the study. The instructors were determined from a previous study in spring 2020 in which students identified these instructors as employing successful strategies during COVID-19 remote learning (Conklin & Garrett Dikkers, 2021). A cross-section of instructors was selected across the primary academic colleges at the institution: Business, Education, Arts and Sciences, and Health and Human Services. Researchers contacted participants via their online course instructors after gaining permission from the instructors.

The survey had a 12.8% response rate (N = 84; 13 men, 67 women, 2 non-binary, 2 prefer not to say). The instructors were using a variety of modalities (e.g., asynchronous, synchronous, face-to-face with synchronous) because the instruction occurred during the COVID-19 pandemic (see Table 1). Most participants were undergraduates (96.4%), and 87% were in the age range of 18–24.

Table 1

Select the modality of the course you are taking with the identified instructor		Frequency	Percent
Valid	Online – asynchronous	33	39.3
	Online – synchronous	29	34.5
	Face to face with Zoom (remote)	22	26.2
	Total	84	100.0

Instrument

The survey instrument was adopted from Creasey et al. (2009) to assess the student-to-instructor relationships. This 36-item SIRS-9 was developed to tap into student–instructor relationship connectedness and anxiety. The students rated each item on a Likert scale from 1 (strongly disagree) to 5 (strongly agree). Eleven items related directly to instructor connectedness and eight items related to anxiety. Three open-ended questions were added to the survey to gain insight into student perspectives. Students were asked what the instructor did to make them feel connected or trust them, what they responded to in a course, and for additional information they would like to share.

Data analysis techniques included descriptive statistics for closed items on the survey as well as non-parametric analyses (e.g., Kruskal-Wallis, Mann-Whitney U) to determine if there was a significant difference between modalities and gender. Established and emergent coding of qualitative responses from the survey's open-ended questions was also used. Established codes were based on Conklin & Garrett Dikkers' (2021) codebook, specifically focusing on communication, empathy, and course organisation.

Results

In the following section, the quantitative and qualitative data analysis is presented with a discussion of the key findings.

Quantitative data

Descriptive statistics and non-parametric analysis were used to analyse the quantitative data. Non-parametric analyses were conducted due to the low sample size. Table 2 shows the comparison of means between class modalities. The connectedness mean between each group remained high while the anxiety of each group remained low.

Table 2 Comparison on means between class modality

		Connectedness	Anxiety
Online — asynchronous	Mean	3.7410	1.7852
	N	33	32
	Std. deviation	.97254	.86849
Online — synchronous	Mean	3.6698	2.2037
	N	28	27
	Std. deviation	1.00282	1.21050
Face-to-face with Zoom (remote)	Mean	3.3938	2.3125
	N	22	22
	Std. deviation	1.06976	1.16481

Additionally, a Mann-Whitney U Test revealed no significant difference in the anxiety of males (n = 33) and females (n = 66), $U = 307$, $z = -1.49$, $p = .135$, $r = X$. The test also revealed no significant difference in the connectedness of males (n = 33) and females (n = 66), $U = 379$, $z = -.655$, $p = .512$, $r = X$. Additional analysis was done by course modality specifically focusing on the online sections. A Kruskal-Wallis Test revealed no significant difference in the anxiety of the three modalities (asynchronous, n = 33; synchronous, n = 66; and face to face with Zoom, n = 22), $H(2)$, = 3.37, $P = .185$. The analysis also revealed no significant difference in the connectedness of the modalities, $H(2)$, = 1.19, $P = .552$.

Qualitative data

Four main themes emerged from the qualitative coding of open-ended responses: empathy, course organisation, feedback, and instructor personality. Students were asked to explain what instructors do to gain their trust or allow the student to feel connected to the instructor.

Empathic facilitation

Overall, there were 35 references to empathic facilitation, with seven in the asynchronous class, eight in the face-to-face class with the synchronous component, and 20 in the synchronous courses. Students alluded to instructors who went "above and beyond" and were "willing to take thought and feeling into consideration".

One student stated:

> Instructor empathy is something I desire more now online knowing how stressful this has been on me and my friends and probably the same way with the faculty. Instructors who are willing to work with you make me feel more valued as a student and a person especially in the online environment.

Another student wrote:

> My instructor's good intentions are what made me trust him and feel a sense of connection. He went above and beyond what falls under his job description. . .

Students frequently used descriptive words and phrases such as "empathic", "caring", "good intentions", "showed concern", and "compassion". Instructors could convey empathy through multiple channels such as synchronous technologies (e.g., Zoom), email, announcements, and asynchronous videos.

Course organisation

Students mentioned course organisation 15 times in the open-ended responses. Although this organisation usually occurs before the class starts, it can convey that an instructor cares about their teaching and, therefore, about student learning. Students mentioned being able to find content and assignments easily, and to work efficiently. For example, one student stated: "Organization helps keep everyone less stressed, more level-headed, and on task." Another student said: "She really made it simple and laid out to understand the course material", and another referred to course organisation and learning styles:

> The way she has structured the course has really shown me that she is trustworthy and willing to be flexible in any situation. What stuck out to me was for our lab they offered different things for different learning styles.

Feedback

Students discussed instructor feedback 13 times in response to the three open-ended questions. Several students expressed the importance of quality instructor feedback to their learning. One student wrote: "In an asynchronous online course, quality feedback for your work that you do fully on your own is an important aspect to me."

Another student described the components of quality instructor feedback and emphasised the significance of both positive and negative feedback.

They observed:

> This instructor is very open and easy to talk to. During [course name] a lot of feedback is given, she gives amazing feedback about positives/what went well and negatives/what could have been done better, yet always ending with a positive note. She allows everyone to gain more to be successful in class and beyond the classroom.

Moreover, students indicated that quality feedback contributes to connection in the online classroom. One student declared, "I think an instructor who gives you feedback is important in building a connection in an online course."

Instructors' approach

Students referred to instructors as being approachable, friendly, and welcoming. For instance, one student stated:

> Although I never met my instructor face to face, she was very welcoming and [responded to] to the needs of her students. Her online lectures are not required because she records them, but I felt that going to [synchronous] class and being able to ask questions was very beneficial. She was always open to helping us in any way we needed so that we could better understand the material.

Many students stated the use of humour assisted with connecting with their instructor. Students made comments such as:

- She is very friendly and always wants us to talk to her.
- . . . having a casual conversation with them.
- She was funny and laid back.

One student referred to instructor-created videos:

> I do not know Dr. [Instructor], nor have I met her in person, but her videos are relatable. She's funny, gives great examples, and if I had the time to go to some of her reviews I feel I could ask her any question about the course and she'd answer. I love that she talks at a good pace, like she's not a fast talker so you can write down what she says without having to rewind the video over and over.

Discussion

This study has implications for instructors and instructional designers. The results recommend connecting with students through multiple tools; having a clear, organised course; providing positive yet constructive feedback; and approaching students with humour or a conversational tone. This study did not focus on online course design (e.g., organisation); but students highly valued the time and energy instructors took to provide a clear, organised course.

The instructors in the current study were identified as being successful in keeping students connected to the course content, their peers and their instructor at the beginning of the pandemic in spring 2020. Students in all of the course modalities (asynchronous, synchronous, and face to face with remote components) reported high levels of connectedness and low levels of anxiety. Our results corroborate the study from Creasey et al. (2009), stating that if instructor connectedness is high, students will have low anxiety. This finding supports the idea that community can be built in multiple online learning modalities through a number of strategies. In fact, the asynchronous group had the highest connectedness score and the lowest anxiety score, which supports recent research by Martin et al. (2020), showcasing the power of connectedness in asynchronous learning.

Students commented on instructor empathy. They mentioned the tools used (e.g., announcement, email, video) to convey the message, but the focus of their comments related to the message, not the tool. Students valued instructors who demonstrated care about their wellbeing. These messages can be conveyed via asynchronous video, student–instructor meetings, email, announcements, and so on. Demonstrating care for the student as an individual, and for their learning, has been widely supported through the literature on instructor social presence (Conklin

& Garrett Dikkers, 2021; Sheridan & Kelly, 2010; Whiteside, 2015; Whiteside et al., 2017). The results of this study and previous research support using multiple modalities to communicate with students in a timely fashion, while conveying an empathic message which resonates with students (Martin et al., 2018).

Students placed a high value on course organisation as a means of connecting with their instructor. They conveyed that the course organisation allowed them to focus on the content, thus lowering their anxiety. Clear, organised course design facilitates the student learning process by allowing students to focus on the content rather than determining what is due and when it is due (Conklin & Garrett Dikkers, 2021).

Finally, students mentioned the instructor's approach, which includes humour and/or a conversational tone to project their personality. Both of these aspects of instructor style can be employed through text, audio, or video. Other studies have found that using a conversational tone improves the learning experience and increases student motivation, demonstrating the importance of the affective area of teaching and learning (Conklin & Garrett Dikkers, 2021; Swan, 2002; Whiteside, 2015; Whiteside et al., 2017). Humour and conversational tone have been noted to increase instructor connectedness and increase student motivation (D'Alba, 2014).

Limitations and future research

There were limitations to this study. First, because the study was conducted during the COVID-19 pandemic, many instructors' and students' situations were not typical. Instructors were teaching under a range of circumstances, and many were teaching in a blended or fully online environment for the first time. Additionally, although the survey questions were designed to address instructor connectedness, students might not have knowledge that is relevant to instructor connectedness to provide appropriate answers to open-ended questions about teaching. However, we were explicitly seeking to understand students' perceptions. Finally, this survey was deployed specifically to courses taught by instructors who had been identified by students as being successful in shifting their classes to remote learning at the beginning of the pandemic.

The researchers are now conducting a sequential exploratory mixed-methods approach (Creswell, 2009) to further determine student perceptions on instructor connectedness and the effect of satisfaction and perceived learning. The researchers will deploy the survey used in this study with a larger population of students at the institution who have had a range of instructors, not just those identified as being successful during the pandemic. Furthermore, those instructors who are identified as being successful will be interviewed to determine the practices they employed during remote teaching to ensure a successful class, and how remote teaching will affect their future teaching practices.

References

Abdous, M. H. (2019). Influence of satisfaction and preparedness on online students' feelings of anxiety. *The Internet and Higher Education*, *41*, 34–44. https://doi.org/10.1016/j.iheduc.2019.01.001

Akyol, Z., & Garrison, D. R. (2008). The development of a community of inquiry over time in an online course: Understanding the progression and integration of social, cognitive and teaching presence. *Journal of Asynchronous Learning Networks*, *12*(3), 3–22.

Black, R. S., Sileo, T. W., & Prater, M. A. (2000). Learning journals, self-reflection, and university students' changing perceptions. *Action in Teacher Education, 21*(4), 71–89. https://doi.org/10.1080/01626620.2000.10462982

Bolliger, D. U., & Halupa, C. (2012). Student perceptions of satisfaction and anxiety in an online doctoral program. *Distance Education*, 33(1), 81–98. https://doi.org/10.1080/01587919.2012.667961

Borup, J., West, R. E., & Graham, C. R. (2012). Improving online social presence through asynchronous video. *The Internet and Higher Education*, *15*(3), 195–203. https://doi.org/10.1016/j.iheduc.2011.11.001

Borup, J., West, R. E., Thomas, R. A., & Graham, C. R. (2014). Examining the impact of video feedback on instructor social presence in blended courses. *International Review of Research in Open and Distributed Learning*, *15*(3), 232–256. http://dx.doi.org/10.19173/irrodl.v15i3.1821

Bozarth, J., Chapman, D. D., & LaMonica, L. (2004). Preparing for distance learning: Designing an online student orientation course. *Educational Technology & Society, 7*(1), 87–106. https://www.jstor.org/stable/jeductechsoci.7.1.87

Conklin, S., & Garrett Dikkers, A. (2021). Instructor social presence and connectedness in a quick shift from face-to-face to online instruction. *Online Learning*, *25*(1), 135–150. http://dx.doi.org/10.24059/olj.v25i1.2482

Creasey, G., Jarvis, P., & Knapcik, E. (2009). A measure to assess student–instructor relationships. *International Journal for the Scholarship of Teaching and Learning*, *3*(2), 14. https://doi.org/10.20429/ijsotl.2009.030214

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed method approaches*. Sage.

D'Alba, O. A. (2014). *A case study of student instructor connectedness in an asynchronous modular online environment.* [Doctoral dissertation, Georgia State University]. ScholarWorks @ Georgia State University. https://scholarworks.gsu.edu/msit_diss/140

Davis, H. A. (2003). Conceptualizing the role and influence of student–teacher relationships on children's social and cognitive development. *Educational Psychologist*, *38*(4), 207–234.

Endo, J. J., & Harpel, R. L. (1982). The effect of student–faculty interaction on students' educational outcomes. *Research in Higher Education, 16*, 115–138. https://doi.org/10.1007/BF00973505

Frisby, B. N., & Martin, M. M. (2010). Instructor–student and student–student rapport in the classroom. *Communication Education*, *59*(2), 146–164. https://doi.org/10.1080/03634520903564362

Gallien, T., & Oomen-Early, J. (2008). Personalized versus collective instructor feedback in the online courseroom: Does type of feedback affect student satisfaction, academic performance and perceived connectedness with the instructor? *International Journal on E-learning, 7*(3), 463–476.

Gannaway, D., Green, T., & Mertova, P. (2018). So how big is big? Investigating the impact of class size on ratings in student evaluation. *Assessment & Evaluation in Higher Education*, *43*(2), 175–184. https://doi.org/10.1080/02602938.2017.1317327

Garrison, D. R. (2011). *E-learning in the 21st century: A framework for research and practice.* Taylor & Francis.

Garrison, D. R., & Arbaugh, J. B. (2007). Researching the community of inquiry framework: Review, issues, and future directions. *The Internet and Higher Education*, *10*(3), 157–172. http://doi.org/10.1016/j.iheduc.2007.04.001

Garrison, D. R., Anderson, T, & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, *2*, 87–105. https://doi.org/10.1016/S1096-7516(00)00016-6

Griffiths, M. E., & Graham, C. R. (2009). The potential of asynchronous video in online education. *Distance Learning, 6*(2), 13–23.

Gustafson, P., & Gibbs, D. (2000). Guiding or hiding? The role of the facilitator in online teaching and learning. *Teaching Education, 11*(2), 195–210. https://doi.org/10.1080/713698967

Hodges, C. B., & Cowan, S. F. (2012). Preservice teachers' views of instructor presence in online courses. *Journal of Digital Learning in Teacher Education, 28*(4), 139–145. http://dx.doi.org/10.1080/21532974.2012.10784694

Hosler, K. A., & Arend, B. D. (2012). The importance of course design, feedback, and facilitation: Student perceptions of the relationship between teaching presence and cognitive presence. *Educational Media International*, *49*(3), 217–229. https://doi.org/10.1080/09523987.2012.738014

Hsu, J. L., & Goldsmith, G. R. (2021). Instructor strategies to alleviate stress and anxiety among college and university STEM students. *CBE—Life Sciences Education*, *20*(1). https://doi.org/10.1187/cbe.20-08-0189

Ice, P., Curtis, R., Phillips, P., & Wells, J. (2007). Using asynchronous audio feedback to enhance teaching presence and students' sense of community. *Journal of Asynchronous Learning Networks, 11*(2), 3–25. http://dx.doi.org/10.24059/olj.v11i2.1724

Jones, P., Naugle, K., & Kolloff, M. (2008). Teacher presence: Using introductory videos in hybrid and online courses. *Learning Solutions*. www.learningsolutionsmag.com

Kassinger, F. D. (2004). *Examination of the relationship between instructor presence and the learning experience in an asynchronous online environment.* [Doctoral dissertation, Virginia Tech University]. VTechWorks @ Virginia Tech University. https://vtechworks.lib.vt.edu/handle/10919/30248

Kelly, R. (2014). Five things online students want from faculty. *Faculty Focus.* https://www.facultyfocus.com/articles/online-education/online-course-delivery-and-instruction/online-students-want-from-faculty/

Kim, Y. K., & Lundberg, C. A. (2016). A structural model of the relationship between student-faculty interaction and cognitive skills development among college students. *Research in Higher Education, 57*(3), 288–309. https://doi.org/10.1007/s11162-015-9387-6

Ko, S., & Rossen, S. (2017). *Teaching online: A practical guide* (4th ed.). Routledge.

Komarraju, M., Musulkin, S., & Bhattacharya, G. (2010). Role of student–faculty interactions in developing college students' academic self-concept, motivation, and achievement. *Journal of College Student Development, (51)*3, 332–342. https://doi.org/10.1353/csd.0.0137

Lammers, W. J., & Gillaspy Jr, J. A. (2013). Brief measure of student–instructor rapport predicts student success in online courses. *International Journal for the Scholarship of Teaching and Learning*, *7*(2). https://doi.org/10.20429/ijsotl.2013.070216

Mandernach, B. J., Gonzales, R. M., & Garrett, A. L. (2006). An examination of online instructor presence via threaded discussion participation. *MERLOT Journal of Online Learning and Teaching*, *2*(4), 248–260. https://jolt.merlot.org/vol2no4/mandernach.pdf

Martin, F., Wang, C., & Sadaf, A. (2018). Student perception of helpfulness of facilitation strategies that enhance instructor presence, connectedness, engagement and learning in online courses. *The Internet and Higher Education*, *37*, 52–65. http://dx.doi.org/10.1016/j.iheduc.2018.01.003

Martin, F., Wang, C., & Sadaf, A. (2020). Facilitation matters: Instructor perception of helpfulness of facilitation strategies in online courses. *Online Learning*, *24*(1), 28–49. http://dx.doi.org/10.24059/olj.v24i1.1980

Mehrabian, A. (1968). Some referents and measures of nonverbal behavior. *Behavior Research Methods & Instrumentation 1*(6), 203–207. https://doi.org/10.3758/BF03208096

Miller, J. M. (2012). *Finding what works online: Online course features that encourage engagement, completion, and success*. [Doctoral dissertation, California State University, Northridge]. Scholar Works @ California State University, Northridge. http://scholarworks.csun.edu/handle/10211.2/1062

Naidu, P., & Derani, N. E. S. (2016). A comparative study on quality of education received by students of private universities versus public universities. *Procedia Economics and Finance*, *35*, 659–666. https://doi.org/10.1016/S2212-5671(16)00081-2

Palloff, R. M., & Pratt, K. (2003). *The virtual student. A profile and guide to working with online learners*. Jossey-Bass.

Rose, K. K. (2009). Student perceptions of the use of instructor-made videos in online and face-to-face classes. *MERLOT Journal of Online Learning and Teaching*, *5*(3), 487–495. https://jolt.merlot.org/vol5no3/rose_0909.htm

Rourke, L., Anderson, T., Garrison, D. R., & Archer, W. (2001). Assessing social presence in asynchronous text-based computer conferencing. *Journal of Distance Education, 14*(2), 50–71. https://www.learntechlib.org/p/92000/

Shea, P., Li, C. S., & Pickett, A. (2006). A study of teaching presence and student sense of learning community in fully online and web-enhanced college courses. *The Internet and Higher Education, 9*(3), 175–190. http://doi.org/10.1016/j.iheduc.2006.06.005

Sheridan, K., & Kelly, M. A. (2010). The indicators of instructor presence that are important to students in online courses. *Journal of Online Learning and Teaching, 6*(4), 767. https://jolt.merlot.org/vol6no4/sheridan_1210.htm

Swan, K. (2002). Building learning communities in online courses: The importance of interaction. *Education, Communication, and Information, 2*(1), 23–49. http://doi.org/10.1080/1463631022000005016

Swan, K., & Shih, L. F. (2005). On the nature and development of social presence in online course discussion. *Journal of Asynchronous Learning Networks, 9*(3), 115–136. http://doi.org/10.24059/olj.v9i3.1788

Trolian, T. L., Jach, E. A., Hanson, J. M., & Pascarella, E. T. (2016). Influencing academic motivation: The effects of student–faculty interaction. *Journal of College Student Development, 57*(7), 810–826.

Wang, X., Hegde, S., Son, C., Keller, B., Smith, A., & Sasangohar, F. (2020). Investigating mental health of US college students during the COVID-19 pandemic: Cross-sectional survey study. *Journal of Medical Internet Research, 22*(9). http://doi.org/10.2196/22817

Whiteside, A. L. (2015). Introducing the social presence model to explore online and blended learning experiences. *Online Learning, 19*(2). http://dx.doi.org/10.24059/olj.v19i2.453

Whiteside, A. L., Garrett Dikkers, A., & Lewis, S. (2017). Overcoming isolation online: Strategies to enhance social presence in practice. In A. L. Whiteside, A. Garrett Dikkers, & K. Swan (Eds.) *Social presence in online learning: Multiple perspectives on research and practice* (pp. 180–187). Stylus, LLC.

Wise, A., Chang, J., Duffy, T., & del Valle, R. (2004). The effects of teacher social presence on student satisfaction, engagement, and learning. *Journal of Educational Computing Research, 31*(3), 247–271. http://dx.doi.org/10.2190/V0LB-1M37-RNR8-Y2U1

Yong, E. (2019, July). Impact of student–instructor relationships on affective learning and test anxiety perceptions. In *Proceedings of the 2019 3rd International Conference on Education and Multimedia Technology* (pp. 160–164). https://doi.org/10.1145/3345120.3345133

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Hartline, A., Conklin, S., Garret Dikkers, A. (2022). Through their eyes: Student perspectives. *Journal of Open, Flexible and Distance Learning, 26*(1), [5–19.].