What Does It Mean to Take Online Classes as an International Student During COVID-19?

Katie K. Koo
University of Georgia, USA

Mei Jiang
Texas A&M University-Commerce, USA

Abstract
Using the Theory of Social Support and the Community of Inquiry as theoretical frameworks, this qualitative study explored international students' experiences, challenges, and perceptions of online learning environments during the COVID-19 pandemic in the United States. By conducting three virtual focus group interviews with 18 international students, we identified four key themes that encapsulate participants' challenges and experiences of online learning: social isolation in online learning spaces, difficulties with engaging in online class discussions and activities, limited opportunities for improving English proficiency in the online setting and limited academic support from faculty and advisors. Implications for research and practice to support international students are discussed.

Keywords: Online learning, international students, COVID-19, online learning space, qualitative inquiry

Since the World Health Organization (WHO) declared COVID-19 a pandemic on March 11, 2020 (WHO, 2020), everyone in the world has experienced dramatic changes in their life and has been forced to adopt a new set of practices, without exception. According to WHO, through April 2021 the cumulative total of COVID cases soared to almost 150 million worldwide, with more than 3 million deaths. In the United States alone, there had been more than 30 million infections by the end of April 2021, and more than a half-million deaths (CDC, 2021). While people's knowledge, perceptions, attitudes, and practices regarding COVID-19 have been examined to help battle this novel disease (Alzoubi et al., 2020; Lai et al., 2020; Taghrir et al., 2020), the impact of COVID-19 on education has become the top concern for educators around the world. Dramatic overnight changes have forced all educators to make rapid-fire shifts to delivering courses online regardless of the subject matter. Teachers, faculty, students, and institutions all had to respond quickly to teaching and learning 100% remotely and mostly online; pedagogy had to be reconsidered to ensure effective online course design and delivery; and institutions had to find ways to provide adequate support (e.g., digital access) to all and maintain well-being among all faculty and their students (Bessett, 2020).

At such an unprecedented time, international students faced unique challenges and additional difficulties. They must face the reality of surviving in a foreign country while involuntarily taking online classes as second-language English learners (Koo, 2021b; Son et al., 2020). Since engaging international students in online classes is more difficult than engaging domestic students due to language barriers (Koo & Nyunt, 2022b), it is imperative to understand international students' unique challenges and experiences in the online learning environment during the uncertainty of the pandemic to meet their needs and provide timely support for them by employing the Theory of Social Support and the Community of Inquiry to explore different elements in online learning.

Purpose of the Study and the Research Questions

By using the Theory of Social Support and the Community of Inquiry as guiding theoretical frameworks, the purpose of this qualitative study was to explore international students' unique academic experiences and challenges with online learning during COVID-19. The study was guided by two research questions: 1) What kinds of unique academic experiences and challenges did international students encounter during COVID-19 in their online classes? 2) How did international students perceive online learning classes during the pandemic in cognitive, social, and teaching presence guided by the Community of Inquiry?

Theoretical Frameworks

Theory of Social Support

Social support is the perception and actual experience that one is cared for, has assistance from others, and is part of a supportive interpersonal social network, especially during major life transitions and crises (Cobb, 1976; Cooke et al., 1988). According to House (1981), there are four types of social support: emotional support, instrumental support, informational support, and appraisal support. *Emotional support* provides empathy, caring, love, trust, esteem, concern, and listening; *instrumental support* provides tangible aid such as money, labor, time, or any direct help; *informational support* provides advice, suggestions, directives, and information for use in coping with personal and environmental problems, and *appraisal support* provides affirmation, feedback, social comparison, and self-evaluation. Social support provides buffering resources for individuals during stressful life events and contributes to healthy well-being (Prati & Pietrantoni,

2010; Wang et al., 2003). In the online environment, supportive interactions on social networking sites were found to benefit adolescents' self-esteem (Zhou & Cheng, 2022). Both explicit verbal messages via Facebook (Rozzell et al., 2014; Vitak & Ellison, 2013) and implicit cues (e.g., Likes on Instagram and Facebook) could offer a form of emotional support (Carr et al., 2016). For college students that received less in-person social support, social media in the digital world could provide a source of online social support to help them battle depression and other adverse feelings (Cole et al., 2017). Particularly for international students that study in the host culture, more digital exposure could make it easier for them to adapt to online learning during the pandemic (Moon et al., 2020). With more learners joining online classes during the pandemic, we see an urgent need of applying the social support theory in the context of online learning to explore how different types of social support can be utilized to enhance people's online learning experiences especially for the international students with language barriers.

The Community of Inquiry (CoI)

The Community of Inquiry (CoI) framework has proposed a collaborative teaching and learning process in an online learning environment through three interdependent dimensions of presence: cognitive presence, social presence, and teaching presence (Garrison et al., 2000, 2001). Cognitive presence indicates the extent "to which the participants in any particular configuration of a community of inquiry can construct meaning through sustained communication" (Garrison et al., 2000, p. 89). This helps construct knowledge through online discourse and reflection in which learners collaborate to explore, construct, resolve, and confirm understandings to achieve critical educational goals in the online environment (Swan & Ice, 2010). Social presence refers to how people "project their characteristics into the community, thereby presenting themselves to the other participants as real people" (Garrison et al., 2000, p. 89) and is essential in facilitating cognitive presence and in achieving educational goals online. Teaching presence is about designing the teaching experience and facilitating students' learning processes, which makes it a necessary component to "support and enhance social and cognitive presence for the purpose of realizing educational outcomes" (Garrison et al., 2000, p. 90). Overall, cognitive, social, and teaching presence work collaboratively to create a sense of community in online learning, offer support, and make an impact on students' online learning outcomes (Garrison & Arbaugh, 2007; Stewart et al., 2021). As one of the widely used frameworks for building the online learning community, the CoI framework offers a lens through which to examine how international students perceive their online learning experiences based on cognitive presence, social presence, and teaching presence.

Literature Review
Impact of COVID-19 on International Students in the United States

While many students' academic experiences in United States higher education were deeply impacted under the constraints of COVID-19, international students reported unique challenges since they experienced this difficult time in a foreign country (Koo et al., 2022; Koo, Yao, et al., 2021). For example, shifting visa policies and travel restrictions left international students with unsettled futures; abrupt flight cancellations prevented international students from carrying out their routine travel plans; campus closures left them with few residential choices; and due to their immigration status, very few financial support programs were sensitive to international students' needs (Supiani et al., 2020). Such unique challenges in relation to

international students' legal status and immobility raise additional issues that domestic students do not encounter (Lipura, 2021; Ma et al., 2022; McDaniel et al., 2021).

The COVID-19 pandemic has impacted international students' socio-emotional and psychological well-being as well (Firang, 2020; Koo, 2021b; Koo & Nyunt, 2022b). People living through crises generally experience increased emotional distress and an impaired sense of personal self-worth, lose interpersonal contacts, and experience adverse effects on their academic performance (Regehr, 2011). During this pandemic, sleep disturbances, increased depression levels, higher anxiety, and loneliness were observed among university students in Hong Kong (Popovic & Lim, 2020). Lai et al. (2020) further found that in comparison with their counterparts who returned to their home countries, international students who stayed in the United States had higher stress levels due to COVID-19-related stressors, more personal health concerns, greater perceived stress, more severe insomnia symptoms, and less social support. This was found to be especially true for female international students, who experienced greater stress due to uncertainties about their academic work compared to their male peers (Lai et al., 2020). Furthermore, xenophobia, racism, and perceived discrimination during the pandemic, unfortunately, caused additional anxiety among international students (White, 2022; Zhang et al., 2022), particularly Chinese American college students in the United States (Haft & Zhou, 2021).

International Students' Social Support During the Pandemic

In most cases, a university's responses to and support for international students via its international office are major factors in these students' well-being and choice of school (Fisher, 2020). Research has shown that academic competency, academic culture shock, academic resources, intercultural communication, and pressure are the main sources of international students' academic stressors (Cao et al., 2021; Stewart & Lowenthal, 2022). Also, the heritage culture strongly affected Chinese international students' behavioral features in class and their responses to academic stressors during the process of acculturating from the heritage culture to the host culture (Cao et al., 2021). During the acculturation process, social support has been found to have a significant relationship with international students' psychological adjustment (Bender et al., 2019; Koo & Nyunt, 2020, Koo, Nyunt, et al., 2021; Koo, Kim, et al., 2021). Subjective social support, compared to objective social support, showed a stronger relationship with psychological adjustment.

International students' well-being during the pandemic has attracted much research attention, including a cross-sectional multi-country study with 110 higher education institutions in 26 countries in 2020. Right after the first peak of the pandemic, a series of surveys were created to collect data about international students' living conditions, financial conditions, and academic workload before and during the COVID-19 outbreak, as well as students' mental well-being, perceived stressors, and resources (Van de Velde et al., 2021). In addition to this research effort, more studies on international students' well-being and social support continue to be a necessity to provide more specific and culturally sensitive support for this population (Koo & Nyunt, 2022a).

International Students' Online Learning During the Pandemic

The pandemic has impacted educators and students worldwide at all levels from K-12 to higher education institutions (Bessett, 2020; Darling-Hammond & Hyler, 2020; Donitsa-Schmidt & Ramot, 2020; Firang, 2020; Kim & Asbury, 2020; la Velle et al., 2020; Supiani et al., 2020). While the abrupt change from face-to-face to online learning has brought teachers and higher

education faculty uncertainty and worries, its impact on international students has been extraordinarily profound across all subject domains. As all other students, international students must rely on remote, online formats to continue their studies, including self-initiated labs and dance studios across all geographic and temporal locations. Furthermore, their limited English proficiency brings additional challenges to their online learning (Koo & Nyunt, 2022b) that native English speaking students do not have to experience (Fischer, 2020).

For those international students who continue to stay abroad, research shows that those who are more used to new types of social networks (e.g., Twitter, YouTube) in their host countries are more likely to have more productive online learning experiences (Chang & Gomes, 2017). The more digital exposure they had before their journey from the heritage to the host culture, the more capable they were in online learning during the pandemic (Moon et al., 2020). While the impact online class modes bring to international students remains ever-changing, research indicates that metacognitive competence regarding internal management of cognitive load—the way students utilize online information—is critical to their successful online learning (Chen et al., 2012). Students normally tend to experience increased anxiety with online information overload (e.g., university emails, class announcements, and hypertext) and increased cognitive load in exclusively online learning, thus adversely impacting their online participation and engagement (Chen et al., 2012; Sandberg, 2013). Therefore, online course designers and universities need to understand international students' characteristics and behavior to establish valid communication channels and effectively engage them in learning.

While multiple studies have investigated international students' experiences in general, only a limited number of studies have analyzed the specific qualities of the unique lived and academic experiences of international students in U.S. higher education (Lin & Scherz, 2014; Mukminin & McMahon, 2013). While researchers have investigated international students' unique academic experiences taking online classes during the COVID-19 pandemic in international contexts (Stewart & Lowenthal, 2022; Stewart & Lowenthal, 2021), studies of international students' experiences of online learning in U.S. higher education are underdeveloped. In addition, in comparison to domestic students, international students' experiences of online courses have received less attention from online learning scholars despite the increasing number of online programs and international students. Likewise, compared to their domestic peers, international students have reported more negative academic experiences and academic challenges due to language barriers and unfamiliarity with U.S academic systems (Koo, 2021b; Koo & Nyunt, 2022a; Luo et al., 2019). Thus, this study will add to the body of literature on academic experiences among minoritized populations, including international students.

Methods

We used a qualitative approach (Creswell & Guetterman, 2019) given the exploratory nature of our inquiry. As we attempted to "discover and understand a phenomenon, a process, or the perspectives and worldviews of the people of the world involved" (Merriam, 1998, p. 11), we specifically employed a qualitative design in this study using culturally responsive focus groups (Rodriguez et al., 2011). To capture international students' unique cultural backgrounds that shape their online learning experiences, we employed a modified version of culturally responsive focus groups (Koo & Nyunt, 2022b; Koo, Yao, et al., 2021) to highlight "unique situational referents and perspectives [that] are used to acknowledge and connect participants' multiple experiences and social identities within the inquiry process" (Lahman et al., 2011; Rodriguez et

al., 2011, p. 401). We were especially attentive to international students' unique cultures and positionalities that differ from those of domestic students.

Participants

Our sample for this study consisted of 18 international students participating in three focus groups: eight men and 10 women from seven different countries, including China, India, Korea, Saudi Arabia, Turkey, Nigeria, and Mexico, representing eight different majors from seven different institutions in five geographic regions in the United States. Detailed demographic information on all participants is presented in Table 1.

Table 1

Demographic Information of Participants

Pseudonym	Gender	Degree Pursued	Major	Country of Origin	Region
Chung	F	Doctoral	Psychology	S. Korea	Midwest
Dohyun	M	Doctoral	Psychology	S. Korea	Midwest
Jamal	M	Bachelor	Biology	Nigeria	Mid-Atlantic
Jahwi	M	Doctoral	Education	S. Korea	Northeast
Lin	F	Bachelor	Accounting	China	Northeast
Maria	F	Master	English	Mexico	Northwest
Minjoo	F	Doctoral	Biomedical Engineering	S. Korea	Southwest
Qui	M	Bachelor	Biomedical Engineering	China	Mid-Atlantic
Sama	F	Master	Accounting	Turkey	Southwest
Selcuk	M	Bachelor	Psychology	Turkey	Mid-Atlantic
Seok	M	Doctoral	Electronic Engineering	S. Korea	Midwest
Sia	F	Master	Business	Saudi Arabia	Southwest
Suhyun	F	Doctoral	Sociology	S. Korea	Midwest
Pooja	F	Doctoral	Computer Science	India	Northeast
Wonsuk	M	Doctoral	Education	S. Korea	Northwest
Ying	F	Doctoral	Education	China	Northeast
Zheng	M	Bachelor	Civil Engineering	China	Southwest
Zhuo	F	Bachelor	Computer Science	China	Northwest

Upon receipt of Internal Research Board approval, we recruited participants. As part of a large longitudinal mixed-methods research project on diverse undergraduate and graduate students' experiences during and after COVID-19, purposeful sampling (Palinkas et al., 2015) was used to recruit international students who were born and raised in their home countries and were currently studying in the United States on temporary student visas (e.g., F1 student visa), and whose original family members were currently residing in their home countries. All participants were enrolled in degree programs at four-year research universities in the United States during the COVID-19 outbreak in the spring semester of 2020.

Data Collection

The three virtual focus group interviews were conducted by the first author via Zoom with four, six, and eight participants in each group, respectively. Each group interview lasted

approximately two hours and took place in July and August 2020. Participants received a $10 Amazon gift card as compensation for their participation. Before the focus group meeting, all participants reviewed and signed informed consent forms via email. At the beginning of the focus group interview, participants were asked to introduce themselves (e.g., their program of study, degree pursued, institution, location of the institution, and length of stay in the United States as an international student).

The interviewer asked participants about their academic experiences during COVID-19, including challenges, academic difficulties, and engagement in online learning environments. These interview questions are based on our theoretical framework, Community of Inquiry (Garrison et al., 2000) and social support (House, 1981), as well as current literature on international students' academic experiences (Koo, 2021b; Koo & Mathies, 2022). Focus group questions included, "Can you share any academic challenges and difficulties that you encountered during the pandemic as an international student?" and "Please share your own experiences of online classes, meetings, and research activities during the pandemic." The full list of interview questions is presented in Table 2 below. With participants' permission, focus group interviews were audio-recorded and later transcribed by the interviewer. After completing each interview, the interviewer also reflected on the interview in brief field notes.

Table 2
Focus Group Interview Questions

Questions	Additional Prompts
1. Tell me about unique experiences or challenges in your academic life during COVID-19. 2. Can you share any academic and social challenges and difficulties that you encountered during the pandemic as an international student? 3. Please share your own experiences of online classes, online meetings, and research activities via zoom during the pandemic. 4. What went well the best in your synchronous and asynchronous classes? And what were the least favorite things about taking synchronous and asynchronous classes?	- Tell me more about that experience. - Why did you think that way? - What was your emotion at that time? - What were your reactions then? - As other students just mentioned, does anyone have similar reactions or experiences? - Are there any other things that you want to share?

Data Analysis

Krueger and Casey's (2009) classic analysis framework, in combination with Braun and Clarke's (2014) approach to thematic analysis, was used for coding and analyzing transcripts and field notes. In an initial round of coding, each researcher highlighted keywords or phrases that addressed academic experiences and online learning experiences, guided by our research questions and theoretical framework; for example, we highlighted when participants shared

about their academic, social, and learning experiences as those are connected to cognitive, social, and teaching presence of Community Inquiry as well as Theory of Social Support. We also highlighted specific keywords about students' experiences in synchronous and asynchronous class formats. Upon the initial highlights, concepts that emerged consistently were grouped under categories such as social isolation, academic difficulties, English proficiency, and faculty support. Then we shared categories, developed a set of emerging findings, and examined all of them. We compared these to the additional data, further refining our categories: for example, we grouped students' perceived social isolation and loneliness under the category of social support. Next, the first author reviewed all interview transcripts again, comparing the categories to our theoretical framework to develop broader themes. The authors then teased out how participants' experiences were related to their unique online learning experiences as international students. In the final steps of data analysis, to ensure inter-rater reliability, the authors reviewed all grouped themes (e.g., social, academic, English, and faculty support) to make sure that contents of conversations and selected themes were consistent (Braun & Clarke, 2014; Krueger & Casey, 2009); we processed this stage twice.

Researchers' Positionality

The first author is a faculty member in an education program and was an international student who had experience taking online classes as a graduate student and thus has first-hand experience with the topic. The second author is also a current faculty member and a former international student in the field of education with more than 10 years of experience in teaching and taking online classes. Our positions as current faculty and former international students allowed us to quickly build rapport with participants and understand the conversation. Our insider perspectives also informed our interpretation of data, enabling us to capture international students' cultural backgrounds and unique online learning experiences.

Findings

We identified four key themes that encapsulated international students' experiences and challenges in online learning and are consistent with our research questions and the Community of Inquiry theoretical framework (Garrison, 2000): social isolation and being unable to build genuine interactions in online learning spaces during the COVID-19 pandemic, difficulties with engaging in online class discussions and activities, limited opportunities for improving English proficiency in online learning environments, and limited academic support from faculty and advisors.

Theme 1: Social Isolation and Being Unable to Build Genuine Interactions in Online Learning Spaces During the COVID-19 Pandemic

Most participants reported that due to limited social interaction and social support, social isolation was one of the most negative experiences of online learning during the pandemic. As reported, since the COVID-19 outbreak until the moment of the interview, most international students in this study stayed home and rarely went anywhere except for going grocery shopping and exercising outdoors, which meant that they barely had any in-person exchanges with others for a couple of months. Staying home alone for an extensive period with limited social support made them feel lonely and empty, which negatively affected their overall academic experiences in the United States. For example, Jamal, an undergraduate biology student from Nigeria, shared his feelings of isolation:

I really think that my loneliness and feeling of isolation are something different from those of domestic students. Feeling lonely in a foreign country is beyond the mere loneliness. I feel like I have no one to turn to when I want to speak here. Unlike domestic students, I don't have genuine friends or [a] support system that I can depend on here. This makes a huge difference. Also, this is not just for one time, but this loneliness will be here until I leave for my home country again. This prolonged loneliness is very difficult.

In addition, our participants reported that they were not able to build genuine relationships or supportive social interactions via online classes and online meetings because they did not feel comfortable interacting virtually in English. Thus, international students indicated that being international students taking online classes in the United States made them feel lonelier and more isolated. Minjoo, a doctoral student in an engineering program from South Korea indicated how hard it is to communicate in English naturally in online settings:

It's just very awkward and unnatural to speak English in Zoom. I am not sure if it is just me, but it has been very difficult for me to fully understand instructors' English and my peers' English when classes and discussions were via virtual spaces. I am not good at English already, but these virtual classes make my English even worse, and this makes me feel very lonely in online classes. Building [a] meaningful relationship via online classes is very limited for international students.

As in Minjoo's comment, we see repeated messages of loneliness and the lack of meaningful relationship during international students' online learning process. This indicates that social support is greatly needed to help international students learn and achieve their educational goals in the online community in the United States (Prati & Pietrantoni, 2010; Wang et al., 2003).

Theme 2: Difficulties with Engaging in Online Class Discussions and Activities
International students shared unique difficulties they encountered in online classes that prevented them from fully engaging in online class activities and discussions during the pandemic. Our participants reported that they felt less confident participating in online discussions or online group peer-review sections, not only because they were concerned about their limited English proficiency or accents but also because they did not feel comfortable or familiar with picking up conversation topics in online interactions. In addition, international students that are Asian felt the ongoing negative public views of Asian populations (Koo, Yao, et al., 2021), which increased Asian international students' discomfort in online classes. For example, Suhyun, a doctoral student in sociology from Korea, shared how online classes were more challenging for international students:

It is just so hard. Plus, it is harder for foreigners…. I guess our lives are harder in general compared to American students. Because we are foreigners. Also, being a foreigner makes it harder in the COVID-19 pandemic. They know the system. They know the language…. Here is their home, and it is not for us.

Some international students in the study shared that understanding and engaging with conversations in English is more difficult in online settings and when interactions happen via

online tools due to the lack of direct nonverbal communication. Minjoo shared her concerns regarding engaging in English conversations in online classes:

> I noticed that having conversations in class settings was not only involved with language but [a] more holistic approach in language and learning activities. For sure, to me, it has been so challenging for me to fully understand English instructions and engage in class participation. Of course, I am still not used to [the] American style of free conversations and discussions in classes, but I just don't know how to jump into the conversations when my peers exchange their thoughts. What if I am totally wrong and sound very weird? So it's sometimes much better to keep silent.

International students' struggles with joining free conversations seem to indicate a missing piece of cognitive presence (Garrison et al., 2000) in the online learning environment. Their previous traditional, face-to-face educational experiences and the different cultures they come from may not prepare them well for online learning because they did not intend to study abroad to take online classes and taking online classes with their second language is a challenge for international students (Koo, 2021; Koo & Nyunt, 2022b).

Theme 3: Limited Opportunities for Improving English Proficiency when Restricted to Online Learning Environments

Our participants indicated that they wanted to return home because taking online courses in the United States did not add value to their study abroad experiences. While they invested tremendously in the hope of maximizing their academic experiences and progress in the United States, opportunities for socializing with friends and learning about American culture became extremely limited in the online learning environment. The most frequently shared negative academic experience with online classes was that international students were not able to learn about American culture to improve their English proficiency as much as they expected.

For example, Sia, a master's student in business from Saudi Arabia, addressed how her English was not improved during the pandemic:

> I know that English is not everything, but it's everything for some international students. Getting a degree is a very important purpose for me, but English proficiency and learning about American culture are another good reason to study abroad and why I am here. However, those benefits are paused now as all those learning opportunities are online. Learning English in [an] online environment is not the best option for international students. Language is about learning culture and people and daily lives, but these are not happening right now due to the pandemic, and I feel like I lost all those opportunities because of this unique situation.

Like Sia, our participants shared that online interaction opportunities were so limited that they didn't believe they were fully engaged in learning, and they did not see any improvement in their English proficiency in online spaces. In addition, international students shared their complaint that taking online courses in the United States is not good value for the amount of tuition the students are paying. For example, Pooja, a doctoral student in engineering from India, discussed why taking online classes is so challenging for international students in terms of the financial investment:

> I did not intend to study abroad to take online classes and not engage in other academic activities. But there is no choice. I paid too expensive tuition, but what I am doing now is taking online classes and no internship, no practicum. That's unfair. But it's just hard for me to pack and go back to India now. I don't learn as much as I am supposed to learn

during the pandemic. I can learn English even when I am taking classes back in India in my undergraduate study because I went to a college where English was the official language in the institution in India. Why am I here in America with too much tuition paid?

As Pooja and other international students shared, taking online classes in American higher education during the pandemic makes it difficult for international students to maximize their learning due to the limited opportunities to improve their English proficiency or knowledge acquisition. (Koo, 2021b).

Theme 4: Limited Academic Support from Faculty and Advisors

International students in our study also reported that they had limited opportunities to interact with faculty and to receive support from faculty and advisors. These students reported that they rarely met with professors or their advisors virtually during the COVID-19 pandemic, while before the pandemic they used to interact with faculty and advisors more frequently via in-person meetings. Students indicated that they found it more difficult and hesitated to approach faculty and advisors to initiate one-on-one online meetings. Reasons varied from international students feeling awkward about virtual one-on-one meetings, limited English proficiency in virtual meetings, and unfamiliarity with online interactions. Seok, a Korean student in an engineering doctoral program, shared his feeling of being "lost" in terms of his relationship with his advisor during the pandemic:

As a doctoral student in [an] engineering program, lab experiences and close connections with my advisor [are] the key to success and key to timely graduation. But I lost this over the pandemic. I don't know why, but I lost contact with my advisor. Of course, we still communicate, and I think he is still my advisor, but I feel lost. It was not always easy for me to actively approach my advisor and take the initiative to meet with him for my academic progress. Although I feel an urgency sometimes, I just talk to myself "later" because I feel it is not very natural to talk to him only via Zoom. I wish I could attend the lab session and meet with [him]. This COVID-19 blocks those opportunities to work with my advisor in virtual settings, and I think this is only happening to me because I am afraid of active contact with him. I don't know why.

Like Seok, such a lack of academic support prompts the question of how we can improve cognitive, social, and teaching presence in online teaching (Garrison et al., 2000) considering international students' unique circumstances and challenges, particularly considering the intersections of their sociality, language, internationality, and culture.

Discussion

By exploring international students' unique experiences and perspectives on online learning during the pandemic, our results call for more social support to facilitate international students' online learning based on both the CoI framework (Garrison, et al., 2000) and the social support theory (House, 1981). During the pandemic, international students lost direct, in-person opportunities to seek support from faculty and staff while improving and building confidence in their English proficiency. Given such, they became hesitant to fully participate in the learning activities as classes abruptly changed to the online format.

In this study, it is evident that cognitive, teaching, and social presence (Garrison, et al., 2000) are severely lacking in international students' online learning. Due to their English barriers and the lack of an adequate support system, they feel like second language learner "foreigners"

and are not able to completely construct meaning through sustained communication as their American peers. Their hesitation in collaboratively joining online discussions prevented them from building online discourse and reflection, constructing knowledge, and further achieving educational goals via the triggering event, exploration, integration, and resolution cycle (Garrison, 2007). Similar to Dong and Ishige (2022) who noted teaching presence's vital role in shaping students' online learning experiences in an examination of international students' study-abroad-from-home experiences during the pandemic, our findings suggest that improvement in teaching presence is greatly needed to ensure that the international students feel safe learning online, particularly in discourse facilitation (Garrison & Arbaugh, 2007; Garrison et al., 2000). Anderson et al. (2001) conceptualized facilitating discourse based on how students are engaged in the process of interacting with the information provided in the course materials. To facilitate discourse, instructors are expected to create a sense of course community, engage students in learning, keep students on track, review students' comments, raise questions, and check for students' understanding (Richardson et al., 2012). To make that happen, instructional strategies should take account of international students' unique cultural backgrounds so international students can feel comfortable about the "American style of free conversations and discussions in classes" and learn how to "jump into the conversations" in the online learning environment. One of Fiock's (2020) principles of good practices for the online teaching stated that online instructors need to recognize students' diverse ways of learning and include a wide variety of instructional strategies to meet their needs. This is especially true for international students who involuntarily switched to online learning during the pandemic.

What stood out in our study is international students' social isolation and limited perceived social presence in online classes. Due to international students' English barriers and limited support systems, it is quite challenging for them to present themselves as "real people" in the online learning environment (Garrison et al., 2000) while they feel isolated in a foreign country away from their family and friends back home (Koo & Tan, 2021). Garrison et al. (2000) proposed emotional expression, open communication, and group cohesion in social presence. It looks like the "prolonged loneliness" repeatedly reported by the international students in our study limits their capabilities in sharing personal expressions, developing mutual awareness, and building and sustaining a sense of group commitment. A sense of inferiority further worsens the situation as the international students perceive their loneliness that takes place "in a foreign country is beyond the mere loneliness" of domestic students. It makes them feel "awkward and unnatural" to speak English in online classes, not to mention being real in the online learning process. This finding echoes Englander and Russell's (2022) study that both international students and instructors in an online English learning program identified social presence as the least satisfying in their online learning experiences during pandemic. Both groups reported the that students were not able to form social bonds with each other as in the face-to-face setting.

Furthermore, among the four domains of social support according to House (1981), i.e., emotional support, instrumental support, informational support, and appraisal support, the lack of emotional support and instrumental support are evident in study, with emotional support being the most needed. In online learning, while information support (e.g., advice, suggestions, information) can be provided via learning materials such as recorded lecture and YouTube clips and appraisal support (e.g., evaluation, feedback) can be provided via constructive feedback on students' work, emotional support (e.g., empathy, love, trust, caring) and instrumental support (e.g., tangible aid and service) present more challenging tasks for instructors to think beyond what they traditionally do in face-to-face classes (Federici & Skaalvik, 2013).

Instrumental support provides tangible aid such as, money, labor, time, or any direct help in students' learning. For instance, teachers help students solve a problem or accomplish a difficult task (House, 1981). Instrumental support in the online space could start from holding frequent, synchronous virtual meetings to increase faculty presence or responding to emails timely to help solve problems (Wells et al., 2022). For international students who may need extra help in understanding a new educational system online, more instrumental support from online instructors is especially important. Our data revealed a lack of instrumental support under the unrealistically challenging tasks such as the dilemma international students face between "paying too much tuition" and taking online courses "without internship or practicum" opportunities. Such situations leave the international students with tough decisions on whether they should go back to their home country or stay at a higher cost. While online learning has made higher education convenient—and indeed, possible—during the global pandemic, international students encounter different challenges in online learning environments that counterpart domestic students experience, only to a much lesser extent (Koo & Nyunt, 2022b; Son, 2020).

In this case, emotional support becomes increasingly vital. Online instructors must ask themselves how they should provide empathy, caring, love, trust, esteem, concern, and listening and whether students receive it (Han & Resta. 2020). While verbal and nonverbal cues in the face-to-face classroom setting can easily express caring, love, and empathy, online instructors must make additional efforts to ensure that their caring shows in the online space and the students can feel that the instructor is available to listen to them and care about their learning (Bailey et al., 2022). While the need for emotional support remains true for all online learners (Cleveland-Innes & Campbell, 2012; Lipman, 2003) including nontraditional adult students (Jiang & Koo, 2020), in this study we see a greater need for emotional support among the international students who come from different educational environments and are still working on their English competency. Under the pandemic, international students involuntarily took online courses and some of them feel "lost" after the abrupt change. For instance, they are not able to "actively approach advisor" despite feeling "an urgency" to do so due to varied reasons. One participant in our study reported "I have no one to turn to when I want to speak here… [since] I don't have genuine friends or a support system." In this case, any culturally sensitive supports of showing empathy, caring, trust, esteem, concern, or simply listening could make a huge different for the international online students. Any small gesture from the online instructor may attend to international students' needs given their unique situation during the pandemic. Even if this effort is only a smiley face at the end of an email, the caring tone in answering international students' questions, or a proactive email reaching out to the international students to ask if they need help, small steps help build relationships and deliver emotional support in the online environment. While international students struggle with conversing freely in online classes, they may just need a few words of encouragement and praise.

Limitations and Recommendations for Research

We recognize our study's limitations. First, the findings represent international students from limited geographical regions and from a limited number of institutions in the United States; these factors limit our study's generalizability to international students studying at higher education institutions in other regions of the United States. Therefore, a more systematic investigation comparing experiences across different regions and countries of origin will provide insight into how institutions' geographic locations shape international students' experiences on

online learning. Second, our analysis is limited to international students' experiences during one part of their academic journey and do not reflect their development over a longer course of study. Our study does not capture changes in international students' academic experiences. Thus, longitudinal research tracing changes over multi-wave time points would provide more insight into changes in minoritized students (Koo, 2021a) including international students' online learning experiences. Given that international students' English proficiency requires a few years of exposure (Hyun et al., 2018), a longitudinal investigation of international students' improvement in English proficiency and their adjustment to the online learning environment should provide further insight. Third, we investigated international students' experiences as one group although our participants come from different countries and cultural backgrounds. This study did not capture cultural diversity or the uniqueness of different cultural impacts on students' academic experiences. Thus, this study suggests a need to further explore experiences of specific cultural groups to gain better insight into international students' experiences in online learning and online classes.

Practical Implications

Our study provides several insights into supporting international students' online classes during and after the pandemic. First, given that international students feel lonely and isolated in online learning environments, it is imperative to provide these students with culturally sensitive social and community support (Koo & Mathies, 2022). While many forms of online social support for students are still very U.S.-centric and not culturally responsive to minority students in the U.S. higher education system (Koo & Nyunt, 2022a), it is important to create and develop community programs that would work for international students in online learning environments, such as online dissertation support groups or survival skills workshops for online classes. To create practical and applicable programs for international students, we recommend that online support developers who have worked with international students or who understand international students' unique needs are necessary.

Second, our study suggests that international students have been experiencing challenges in learning English and improving it in online learning environments during the pandemic. It is important for faculty, advisors, and practitioners to understand that international students are concerned about their English proficiency and help them to access practical resources and services to improve it. Further, it is critical not to blame international students for their limited English proficiency, but to understand the pernicious influence of the nativist perspective, in which English is the language of global domination (Koo, Baker, et al., 2021; Koo, Kim, et al., 2021).

Third, our findings indicate that because international students have limited interactions with their faculty advisors and don't feel comfortable working with their advisors online, this factor also will impede their academic progress (Koo & Nyunt, 2022b). Thus, we strongly recommend that educators, faculty, and advisors who work with international students provide culturally sensitive support (Koo & Nyunt, 2020) or support programs to accommodate international students' unique needs in online environments. For this, we recommend that academic affairs and student affairs collaborate with counseling centers or international student offices to develop new advising support systems that would better meet international students' needs. It is important to understand that some services that are designed for traditional domestic students do not work for international students. Therefore, it is important for practitioners and educators understand and learn more about international students' unique challenges in online

environments to better support them through challenging situations such as the COVID-19 pandemic.

Significance of the Study

The current study sheds new light on international students' experiences in online classes and online learning environments in the United States during COVID-19. Given that international students are among minoritized groups and face unique situations, these findings will contribute to the literature on higher education and online learning as well as on counseling and international education. Our findings offer insights into establishing appropriate support systems for international students, especially in terms of their online academic environments. We hope that this study provides insights that will help faculty and staff who work with the international student population to better understand their experiences and needs during the uncertain times of the pandemic and to support these students during the post-pandemic era as well.

Declarations

The authors declared no conflicts of interest.

All procedures performed in studies involving human participants were in accordance with the ethical standards and approval of Texas A&M University-Commerce.

Informed consent was obtained from all individual participants included in the study.

References

Alzoubi, H., Alnawaiseh, N., Al-Mnayyis, A., Abu-Lubad, M., Aqel, A., & Al-Shagahin, H. (2020). COVID-19 – knowledge, attitude and practice among medical and non-medical university students in Jordan. *Journal of Pure & Applied Microbiology: An International Research Journal of Microbiology, 14*(1), 17-24. https://doi.org/10.22207/JPAM.14.1.04

Anderson, T., Rourke, L., Garrison, D., &Archer, W. (2001). Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks, 5*(2), 1-17.

Bailey, D., Almusharraf, N., & Almusharraf, A. (2022). Predicting social presence in videoconference-supported LMS courses: Mediation through L2 writing and speaking strategies. *Online Learning, 26*(2), 148-169.

Bender, M., van Osch, Y., Sleegers, W., & Ye, M. (2019). Social support benefits psychological adjustment of international students: Evidence from a meta-analysis. *Journal of Cross-Cultural Psychology*, *50*(7), 827–847. https://doi.org/10.1177/0022022119861151

Bessette, L. (2020). Online learning and pandemic pedagogy amidst the COVID-19 crisis. *ACTA*. https://www.goacta.org/2020/03/lee-bessette-online-learning-and-pandemic-pedagogy-amidst-the-covid-19-crisis/

Braun, V., & Clarke, V. (2014). What can "thematic analysis" offer health and wellbeing researchers? *International Journal of Qualitative Studies on Health and Well-being, 9(*1), 1-2. https://doi.org/10.3402/qhw.v9.26152

Cao, C., Zhu, C., & Meng, Q. (2021). Chinese international students' coping strategies, social support resources in response to academic stressors: Does heritage culture or host context matter? *Current Psychology, 40*(1), 242-252. https://doi.org/10.1007/s12144-018-9929-0

Carr, C., Wohn, D., & Hayes, R. (2016). As social support: Relational closeness, automaticity, and interpreting social support from paralinguistic digital affordances in social media. *Computers in Human Behavior*, *62*, 385–393. https://doi.org/10.1016/j.chb.2016.03.087

CDC. (2021). COVID-19 integrated county view. *COVID Data Tracker*. https://covid.cdc.gov/covid-data-tracker/ - county-view

Chang, S., & Gomes, C. (2017). Digital journeys: A perspective on understanding the digital experiences of international students. *Journal of International Students, 2*(11), 347-366. https://doi.org/10.32674/jis.v7i2.385

Chen, C., Pedersen, S., & Murphy, K. L. (2012). The influence of perceived information overload on student participation and knowledge construction in computer-mediated communication. *Instructional Science, 40,* 325–349. https://doi.org/10.1007/s11251-011-9179-0

Cleveland-Innes, M., & Campbell, P. (2012). Emotional presence, learning, and the online learning environment. *The International Review of Research in Open and Distance Learning, 13*(4), 269– 292. https://doi.org/10.19173/irrodl.v13i4.1234

Cobb, S. (1976). Social support as a moderator of life stress. *Psychosomatic Medicine*, *38*(5), 300–314. https://doi.org/10.1097/00006842-197609000-00003

Cole, D., Nick, E., Zelkowitz, R., Roeder, K., & Spinelli, T. (2017). Online social support for young people: Does it recapitulate in-person social support; can it help? *Computers in Human Behavior*, *68*, 456–464. https://doi.org/10.1016/j.chb.2016.11.058

Cooke, B. D., Rossmann, M. M., McCubbin, H. I., & Patterson, J. M. (1988). Examining the definition and assessment of social support: A resource for individuals and families. *Family Relations*, *37*(2), 211–216. https://doi.org/10.2307/584322

Creswell, J. W., & Guetterman, T. C. (2019). *Educational research: Planning, conducting and evaluating quantitative and qualitative research*. Pearson.

Darling-Hammond, L., & Hyler, M. E. (2020). Preparing educators for the time of COVID … and beyond. *European Journal of Teacher Education, 43*(4), 457-465. https://doi.org/10.1080/02619768.2020.1816961

Dong, Y., & Ishige, A. (2022). Studying abroad from home: An exploration of international graduate students' perceptions and experiences of emergency remote teaching. *Education Sciences, 12*(2), 98. https://doi.org/10.3390/educsci12020098

Donitsa-Schmidt, S., & Ramot, R. (2020). Opportunities and challenges: Teacher education in Israel in the covid-19 pandemic. *Journal of Education for Teaching, 26*(4), 1-10. https://doi.org/10.1080/02607476.2020.1799708

Federici, R. A., & Skaalvik, E. M. (2013). Students' perceptions of emotional and instrumental teacher support: Relations with motivational and emotional responses. *International Education Studies. 7*, 21-36. http://dx.doi.org/10.5539/ies.v7n1p21

Fiock, H. (2020). Designing a Community of Inquiry in online courses. *The International Review of Research in Open and Distributed Learning, 21*(1), 135-153. https://doi.org/10.19173/irrodl.v20i5.3985

Firang, D. (2020). The impact of COVID-19 pandemic on international students in Canada. *International Social Work, 63*(6), 820-824. https://doi.org/10.1177/0020872820940030

Fischer, K. (2021). The stranded. *The Chronicle of Higher Education, 67*(14), 24. https://www.chronicle.com/article/the-stranded

Garrison, D. R. (2007). Online community of inquiry review: Social, cognitive, and teaching presence issues. *Journal of Asynchronous Learning Networks, 11*(1), 61-72. https://files.eric.ed.gov/fulltext/EJ842688.pdf

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *Internet and Higher Education, 2*(2-3), 87–105. https://doi.org/10.1016/S1096-7516(00)00016-6

Garrison, D. R., Anderson, T., & Archer, W. (2001). Critical thinking, cognitive presence, and computer conferencing in distance education. *American Journal of Distance Education, 15*(1), 7–23. https://doi.org/10.1080/08923640109527071

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

Haft, S. L., & Zhou, Q. (2021). An outbreak of xenophobia: Perceived discrimination and anxiety in Chinese American college students before and during the COVID-19 pandemic. *International Journal of Psychology, 56*(4), 522-531. https://doi.org/10.1002/ijop.12740

Han, S., & Resta, P.E. (2020). Virtually authentic: Graduate students' perspective changes toward authentic learning while collaborating in a virtual world. *Online Learning, 24*(4), 5- 27. https://doi.org/10.24059/olj.v24i4.2326

House, J. S. (1981). *Work stress and social support*. Addison-Wesley.

Hyun, E., Kretovics, M., & Crowe, A. (2018). Curriculum characteristics of time-compressed course in a U.S. *Higher Education Institution, 6*(1), 1-11.

Jiang, M., & Koo, K. (2020). Emotional presence in building an online learning community among non-traditional higher education students. *Online Learning Journal, 24*(4), 93–111. http://doi.org/10.24059/olj.v24i4.2307

Kim, L. E., & Asbury, K. (2020). 'Like a rug had been pulled from under you': The impact of COVID-19 on teachers in England during the first six weeks of the UK lockdown. *British Journal of Educational Psychology, 90*(4), 1062-1083. https://doi.org/10.1111/bjep.12381

Koo, K. (2021a). Am I welcome here? Campus climate and psychological well-being among racially minoritized students. *Journal of Student Affairs Research and Practice, 58*(2), 196–213. https://doi.org/10.1080/19496591.2020.1853557

Koo, K. (2021b). Distressed in a foreign country: Mental health and well-being among international students in the United States during COVID-19. In Bista, K. & Chan, R. (Eds.), *Routledge Studies in Global Student Mobility Series- Impact of COVID-19 on Global Student Mobility and Higher Education.* (pp.28-41). Routledge. https://doi.org/10.4324/9781003138402

Koo, K., Baker, I., & Yoon, J. (2021). The first year acculturation: A longitudinal study on acculturative stress and adjustment among the first year international college students. *Journal of International Students, 11*(2), 278-198. https://doi.org/10.32674/jis.v11i2.1726

Koo, K., Kim, Y., & Lee, J., & Nyunt, G. (2021). It's my fault? A qualitative study on Korean international graduate students' psychological well-being and experiences. *Journal of International Students. 11*(4), 790-811. https://doi.org/10.32674/jis.v11i4

Koo, K. & Mathies, C. (2022). New voices from intersecting identities among International students around the world: Transcending single stories of leaving and going. *Journal of International Students. 12*(S2), 1–12. https://doi.org/10.32674/jis.v12iS2.4776

Koo, K. & Nyunt, G. (2022a). Mom, Asian international student, doctoral student, and in-between: Exploring Asian international doctoral student mothers' mental well-being. *Journal of College Student Development. 63*(4), 414-431. https://doi.org/10.1353.csd.2022.0035

Koo, K. & Nyunt, G. (2022b). Pandemic in a foreign country: Barriers to international students' well-being during COVID-19. *Journal of Student Affairs Research and Practice*. Online First Publication. https://doi.org/10.1080/19496591.2022.2056476

Koo, K., Nyunt, G., & Wang, B. (2021). Who spends too much time online? Associated factors of Internet addiction among international college students in the United States. *Journal of International Students, 11*(1), 122–143. https://doi.org/10.32674/jis.v11i1.2063

Koo, K., & Nyunt, G. (2020). Culturally sensitive assessment of mental health for international students. *New Directions for Student Services, 2020*(169), 43–52. https://doi.org/10.1002/ss.20343

Koo, K. & Tan, G. (2021). Mental wellness and stressors among international students in the United States during the COVID-19 pandemic. In Ghim, H. & Choi, S. (Eds.), *Transnational Education Post COVID-19: Rethinking the Future of Transnational Higher Education.* (pp.82-113) Dague University Press.

Koo, K., Yao, C., & Gong, H. (2021). It is not my fault: Exploring experience and perceptions of racism among international students during COVID-19. *Journal of Diversity in Higher Education.* Online First Publication. https://doi.org/10.1037/dhe0000343

Krueger, R. & Casey, M. (2009). Focus groups: A practical guide for applied research. Sage.
Lahman, M. E., Geist, M., Rodriguez, K., Graglia, P., Deroche, K. (2011). Culturally responsive relational reflexive ethics in research: The three R's of ethics. *Quality and Quantity: International Journal of Methodology, 45*(6),1397-1414, https://doi.org/10.1007/s11135-010-9347-3

Lai, A., Lee, L., Wang, M., Feng, Y., Lai, T., Ho, L., Lam, V., Ip, M., & Lam, T. (2020). Mental health impacts of the COVID-19 pandemic on international university students, related stressors, and coping strategies. *Frontiers in Psychiatry, 11*, 584240–584240. https://doi.org/10.3389/fpsyt.2020.584240

La Velle, L., Newman, S., Montgomery, C., & Hyatt, D. (2020). Initial teacher education in England and the Covid-19 pandemic: challenges and opportunities. *Journal of Education for Teaching, 46*(4), 596-608. https://doi.org/10.1080/02607476.2020.1803051

Lin, S. & Scherz, S. (2014). Challenges facing Asian international graduate students in the US: Pedagogical considerations in higher education. *Journal of International Students, 4*(1), 16-33. https://doi.org/10.32674/jis.v4i1.494

Lipman, M. (2003). *Thinking in education (1st ed.).* Cambridge University Press.

Lipura, S. J. D. (2021). Deconstructing the periphery: Korean degree-seeking students' everyday transformations in and through India. *Research in Comparative and International Education, 16*(3), 252–275. https://doi.org/10.1177/17454999211038769

Luo, Z., Wu, S., Fang, X., & Brunsting, N. C. (2019). International students' perceived language competence, domestic student support, and psychological well-being at a U.S. university. *Journal of International Students, 9*(4), 954–971. https://doi.org/10.32674/jis.v0i0.605

Ma, X., Wang, B., & He, X. (2022). Migration aspirations and polymorphic identifications of the homeland: (Im)mobility trajectories amongst Chinese international students amidst COVID-19. *Global Studies in Culture and Power.* Advance online publication. https://doi.org/10.1080/1070289X.2022.2083411

McDaniel, A., Dionne, J., & Regan, E. (2021). Examining international students' holistic wellness. *Journal of Student Affairs Research and Practice, 58*(2), 227–240.

Merriam, S.B. (1998). *Qualitative Research and Case Study Applications in Education.* Jossey-Bass.

Moon, C. Y., Zhang, S., Larke, P., & James, M. (2020). We are not all the same. *Journal of International Students, 10*(1), 28–49. https://doi.org/10.32674/jis.v10i1.770

Mukminin, A., & McMahon, B. J. (2013). International graduate students' cross-cultural academic engagement: Stories of Indonesian doctoral students on an American campus. *Qualitative Report, 18*(35), 1-19. https://doi.org/10.46743/2160-3715/2013.1473

Palinkas, L., Horwitz, S., Green, A., Wisdom, J, Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services, 42*(5), 533-544. https://doi.org/10.1007/s10488-013-0528-y

Popovic, M., & Lim, F. (2020). The mental health and wellbeing of university students during the COVID-19 pandemic. *Journal of Pain Management, 13*(4), 319–322.

Prati, G., & Pietrantoni, L. (2010). The relation of perceived and received social support to mental health among first responders: A meta-analytic review. *Journal of Community Psychology, 38,* 403-417. https://doi.org/10.1002/jcop.20371

Regehr, C. (2011). Crisis theory and social work treatment. In F. J. Turner (ed.), *Social work treatment: Interlocking theoretical approaches* (pp. 134–143). Oxford University Press.

Richardson, J. C., Arbaugh, J. B., Cleveland-Innes, M., Ice, P., Swan, K. P., Garrison, D. R. (2012). Using the Community of Inquiry framework to inform effective instructional design. In: Moller, L., Huett, J. (eds) *The Next Generation of Distance Education.* Springer, Boston, MA. https://doi.org/10.1007/978-1-4614-1785-9_7

Rodriguez, K. L., Schwartz, J. L., Lahman, M. K., & Geist, M. R. (2011). Culturally responsive focus groups: Reframing the research experience to focus on participants. *International Journal of Qualitative Methods, 10*(4), 400-417. https://doi.org/10.1177/160940691101000407

Rozzell, B., Piercy, C., Carr, C. T., King, S., Lane, B., Tornes, M., et al. (2014). Notification pending: online social support from close and nonclose relational ties via Facebook. *Computers in Human Behavior, 38,* 272-280. http://dx.doi.org/10.1016/j.chb.2014.06.006

Sandberg. (2013). Hypertext: Its Nature and Challenges for College Students. *Journal of College Reading and Learning, 44*(1), 51–71. https://doi.org/10.1080/10790195.2013.10850372

Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F. (2020). Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of Medical Internet Research. 22*(9), 1-14. https://doi.org/10.2196/preprints.21279

Stewart, W. & Lowenthal, P. (2022) Distance education under duress: a case study of exchange students' experience with online learning during the COVID-19 pandemic in the Republic of Korea. *Journal of Research on Technology in Education, 54*(1), 273-287. https://doi.org/10.1080/15391523.2021.1891996

Stewart, W. & Lowenthal, P. (2021) Experiences and perceptions of exchange students learning online during the COVID-19 pandemic in the Republic of Korea: An exploratory descriptive study. *Asian Journal of Distance Education 16*(1), 119-140.

Stewart, M. K., Hilliard, L., Stillman-Webb, N., & Cunningham, J.M. (2021). The community of inquiry in writing studies survey: Interpreting social presence in disciplinary contexts. *Online Learning, 25*(2), 73-94. https://doi.org/10.24059/olj.v25i2.2275

Supiani, Rafidiyah, D., Yansyah, & Nadia, H. (2020). The emotional experiences of Indonesian PhD students studying in Australia during the COVID-19 pandemic/Pengalaman Emosional Mahasiswa Program Doktor Asal Indonesia Belajar di Australia selama Pandemi COVID-19. *Journal of International Students, 10*(S3), 108-125.

Swan, K, & Ice, P. (2010). The community of inquiry framework ten years later: Introduction to the special issue. *The Internet and Higher Education, 13*(1-2), 1-4. https://doi.org/10.1016/j.iheduc.2009.11.003

Taghrir, M. H., Borazjani, R., & Shiraly, R. (2020). COVID-19 and Iranian medical students: A survey on their related-knowledge, preventive behaviors and risk perception. *Archives of Iranian Medicine, 23*(4), 249-254. https://doi.org/10.34172/aim.2020.06

Van de Velde, S., Buffel, V., Bracke, P., Van Hal, G., Somogyi, N. M., Willems, B., & Wouters, E. (2021). The COVID-19 International Student Well-being Study. *Scandinavian Journal of Public Health, 49*(1), 114–122. https://doi.org/10.1177/1403494820981186

Vitak, J., & Ellison, N. B. (2013). 'There's a network out there you might as well tap': Exploring the benefits of and barriers to exchanging informational and support based resources on Facebook. *New Media & Society, 15*(2), 243-259. http://dx.doi.org/10.1177/1461444812451566

Wang, H. H., Wu, S. Z., & Liu, Y. Y. (2003). Association between social support and health outcomes: A meta-analysis. *The Kaohsiung Journal of Medical Sciences, 19*(7), 345-350. https://doi.org/10.1016/S1607-551X(09)70436-X

Wells, C. N., Pass, M. B., & Walsh, J. E. (2022). Face-to-face vs. online asynchronous teaching in a conservation biology course. *Online Learning, 26*(2), 241-253.

White, A. (2022). Xenophobia, prejudice, and blame in pandemic times. *The Lancet (British Edition), 399*(10324), 512–513. https://doi.org/10.1016/S0140-6736(22)00197-0

WHO. (2021). Weekly epidemiological update on COVID-19 – 20 April 2021. Word Health Organization. https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---20-april-2021

Zhang, X., Wong, G. T. F., Liu, C. H., Hahm, H. "Chris", & Chen, J. A. (2022). International student stressors and mental health during the COVID-19 pandemic: A qualitative study. *Journal of American College Health*, 1–7. https://doi.org/10.1080/07448481.2022.2068015

Zhou, Z. & Cheng, Q. (2022). Relationship between online social support and adolescents' mental health: A systematic review and meta-analysis. *Journal of Adolescence (London, England.), 94*(3), 281–292. https://doi.org/10.1002/jad.12031