“It’s Doable”: International Graduate Students’ Perceptions of Online Learning in the U.S. During the Pandemic

Yesul Han, Yunjeong Chang and Erin Kearney

Abstract
This study aims to understand the learning experiences and challenges of international students enrolled in Master’s and PhD programs in various institutions who were forced to transition to online learning during the pandemic. In particular, the study explores the experiences and perceptions of seven non-native English-speaking international graduate students who came from six different countries and studied at different schools of education through phenomenological interviews. Analysis yields insight into these students’ online learning experiences and identifies factors which contributed to the mixed quality of these learning experiences. Overall, students tried to adapt to the “new normal,” while enduring learning and emotional challenges due to the harsh conditions of the pandemic in the United States and their home countries. Instructors’ readiness for online teaching as well as the extra support provided to help students cope with the sudden transition in the learning environment were particularly important factors affecting the students’ learning experiences. Our findings lead us to several recommendations for practice within graduate-level online learning environments and suggestions for further research, as well as broader considerations of what broader implications the case suggests for international education in light of digitalization.
Introduction

Due to the COVID-19 pandemic, schools around the world shut down or rapidly transitioned instructional methods from in-person to online learning (UNESCO, 2020). Given that cultural backgrounds and prior experiences in online learning affect quality of learning, international students’ learning may have been more affected than domestic students, potentially further aggravating educational inequalities. Over the last 20 years, the number of international students in the United States has increased by more than 120%, and these students contributed $45 billion to the U.S. economy in 2018 (Institute of International Education, 2019). Despite their importance in the United States, international students are quite vulnerable, as politically fueled policy decisions can restrict their mobility and visa status. Considering ongoing unpredictability brought about by the pandemic, it is critical to understand international students’ learning experiences and motivation (Zhou, 2015) and to explore means for improving the quality of their learning experiences. Thus, this study explores how seven international graduate students experienced the transition to an online learning environment during the early stages of the pandemic (June-July 2020) and seeks to identify what implications this case has for international education in light of digitalization.

The pandemic shifted instructional delivery and support systems online for students, including international students. UNESCO (2020) reported, “One in five students worldwide is staying away from school due to the COVID-19 and an additional one in four is being kept out of higher education establishments.” In this process, most universities in the United States transitioned their face-to-face courses online and some universities closed their dorms, a calamity for international students who had nowhere to go. Moreover, they were excluded from receiving federal aid appropriated for helping students (Dickerson, 2020).

International Students’ Experiences with Pandemic Upheaval

This research explores international graduate students’ perspectives and experiences with sudden and dramatic transition to online learning in early stages of the pandemic across various institutions in the United States, the country that has the most international students in the world (Project Atlas, 2019). The participants are seven international graduate students, hailing from diverse continents (South America, Asia, or Europe) and enrolled in education-related programs at a range of institutions. In pandemic conditions that necessarily rendered international students socially and emotionally isolated (Stolten, 2020), it is valuable to examine these experiences and to discern their commonalities as well as how they differed for each student.
Alongside radical shifts in educational experience as the pandemic set in, international students were subject to politically driven policy shifts and restricted mobility. International students experienced acute precariousness when, in July 2020, U.S. Immigration and Customs Enforcement announced that international students holding non-immigrant visas and enrolled fully online could neither enter nor remain in the United States. Even though this decision was rescinded a week later, the government affirmed that any new international students whose courses were fully online still could not enter the United States. Clearly, such political vicissitudes have concrete impacts on international students’ visa status and therefore their ability to study (Pacheco, 2020); they also represent significant emotional stressors, which can also influence international students’ academic performance, social interactions, and general well-being.

It is sometimes presumed that international students will continue their studies no matter what because they have strong self-determination and intrinsic motivation (Chue & Nie, 2016). However, such assumptions fail to recognize the true diversity of international students’ individual experiences and underemphasize how their motivation is impacted by environmental factors including family expectations, relationships between host and home countries, and immigration and political circumstances in the United States (Zhou, 2015). It is within this complex and dynamic set of circumstances that international students’ perspectives on and reported experiences with rapid shift to online learning in a pandemic must be situated.

**Inequitable Online Learning Experiences of International Students**

Although online learning presents potential for more accessible, interactive, and reflective educational experiences, multiple challenges have been identified as potential factors inhibiting learning. Digital learning environments provide learners with opportunities to interact and communicate with other people, choices to adapt the use of technologies per individual interest, and linked representations via various modes (e.g., diagrams, videos, or simulations) (National Academies of Sciences, Engineering, & Medicine, 2018). Online learning environments also provide more opportunities for learners to reflect upon the learning process than might occur during face-to-face classroom interactions without technology. Online learning can be especially beneficial for international students who experience foreign language anxiety related to speaking in class, as they report more comfort online in terms of interactions with classmates and an ability to contribute more to the conversations (Ngai, 2019).

However, the benefits of online learning remain inconclusive when it comes to individually different learners who have different access, prior experiences, and preferences with regard to online learning. Individual students pursuing graduate degrees may have had vastly different previous online learning experiences due to a lack of technical infrastructure, lack of affordability, or lack of digital literacies (Gargano & Throop, 2017). Cultural (e.g., race, ethnicity) or socioeconomic backgrounds of individual students may also affect online learning experiences. Individually different levels of access
and use of technologies significantly affect learning experiences of college students who transitioned to online during COVID-19 (Adnan & Anwar, 2020; Kim, 2020; Tigaa & Sonawane, 2020). Given the fact that only 58% of the world’s population has access to the Internet (Statista, 2020), some international students may have had fewer prior online learning experiences in their home countries. These limited online learning experiences may have required additional time and effort for international student to become accustomed to online learning during emergency remote learning.

Previous research examining online learning experiences of international graduate students has found several learning challenges. Karkar-Esperat (2018) notes that international graduate students experience challenges in online learning related to English language proficiency, instructor unpreparedness, or isolation. Participants in this case study, including two doctoral students and one master’s student in an online graduate degree program, said their lack of proficiency in English kept them from participating freely and that they felt isolated due to lack of communication with their peers and instructor. Moreover, the students were more motivated when the instructor was competent in dealing with technology and responsive to students’ requests. Crosta et al. (2016) found international students valued social interaction in online learning environments by analyzing asynchronous online discussion threads and interview data of 13 international graduate students in an online EdD program. The authors found that international students identified social interaction as a meaningful but missing component of successful online learning environments. However, previous research tends to investigate students enrolled in online graduate programs and who therefore already had experiences with and expectations about online learning. Thus, it is hard to generalize these results to international graduate students who had to suddenly adapt to the online learning environment.

Similar to studies of international students, early studies of non-native English-speaking (NNES) graduate students’ experiences in online learning highlight particular benefits of the online learning environment. Yildiz and Bichelmeyer (2003) found that English as a foreign language (EFL) speakers in web-based graduate-level courses could speak more confidently than in in-person courses. Biesenbach-Lucas (2003) found NNES graduate students preferred asynchronous discussion because they could have more time to draft and revise their written posts in. However, little research has explored the experiences of international graduate students not originally registered for online programs but forced to transition to online courses.

Despite continuing efforts to understand international graduate students’ online learning experiences, the perspectives provided have been limited. First, previous research was mostly conducted in asynchronous online learning environments than in synchronous online courses, which create different online learning experiences. Second, previous studies focused on online learning experiences of international students who registered for online or hybrid (i.e., mixed class which employed online as well as face-to-face instruction) course(s) in the first place, which did not capture international students’ experiences of a sudden transition into a fully online learning environment. Furthermore, online higher education literature has tended to overlook the
unique characteristics of international students who study online and view them as a monolithic group rather than a diverse one (Lee & Bligh, 2019). Students’ online learning is often taken for granted, as Biesenbach-Lucas (2003) notes that technology is frequently implemented in classrooms without appropriate strategies to create students’ positive learning experiences. Therefore, it is important to fill the gap in the international students’ online learning literature by extending the perspectives of international students’ uniqueness, specifically those who had to encounter a sudden transition into online learning, and factors that might affect their online learning.

Motivated by these concerns, this study explores online learning experiences and perceptions of international students who were enrolled in face-to-face degree programs but forced to transition to online learning. In particular, this research aims to answer the following research questions: (1) How do international graduate students perceive their experience of transitioning to online courses? (2) What are the factors that affected their online learning experiences during the pandemic?

Methods

Research Design and Context

This interview-based study draws on phenomenological methods, enabling a deeper understanding of the lived experiences of participants through elicitation and analysis of their narrations (Creswell, 2013). A semi-structured, in-depth interview protocol elicited participants’ experiences of the transition to online learning during the pandemic.

Study participants were students at a range of Graduate Schools of Education at universities in the U.S. Institutions varied in size, whether they were public or private, and in numbers of international versus domestic students. We focused particularly on the learning experiences of international graduate students in education degree programs (e.g., EdD, EdM, PhD). International students’ experiences with academic coursework and professional socialization are likely to vary across fields of graduate study since disciplines have distinct practices. In education degree programs, the focus of learning is developing insight into pedagogical theory and practices, usually through reading and discussion, meaningful interactions, and appropriate apprenticeship alongside faculty members. For students in colleges of education, it is particularly important to develop shared meaning surrounding the field of education, including “values, skills, attitudes, norms, and the knowledge base necessary to obtain the degree” (Gardner et al., 2007, p. 289). Schools of education in the United States often enroll a substantial number of international students (Zhou & Gao, 2021), and their involvement in such programs consequently creates a linguistically and culturally diverse environment. It is worthwhile to examine how these multilingual, often NNES students perceived the sudden shift to an online learning community which required different communication and social interaction practices.
Data Collection and Data Analysis

We recruited participants by emailing researchers, associations, and heads of Graduate Schools of Education in the United States, using a snowball sampling process that “accesses informants through the contact information that is provided by other informants” (Noy, 2008, p. 330). Students who volunteered to participate were interviewed in June and July 2020, arguably the most confusing period for international students during the pandemic. Each interview was conducted via Zoom and lasted 1–2 h. To understand each interviewee, we elicited some demographic and background information such as the year they first arrived in the United States, years spent in the U.S., major, school, and previous experiences living abroad (if any); participants all made mention of their visa status. We then asked participants about their experiences during the transition to online learning and probed about factors that might have affected their learning during the pandemic. Video-recorded interviews were transcribed, and data were initially coded using In Vivo coding, which made it possible to analyze the qualitative data while putting emphasis on participants’ actual spoken words (Manning, 2017). Data and these initial codes were then inputted to ATLAS.ti, to organize into categories and themes. Within segments identified as relevant to the analysis, we coded the data in several rounds. To create coding schemes, one researcher (author 1) generated coding schemes first and then discussed, synthesized, and finalized the coding schemes with another researcher (author 2). The initial agreement between two coders was about 80%. Discrepancies were resolved through discussion.

To ensure trustworthiness, the researcher who conducted interviews established prolonged engagement with participants. The detailed narratives elicited thick description of participants’ perspectives, backgrounds, and experiences in a way that supported transferability and authenticity (Connelly, 2016).

Findings

A total of seven international graduate students from different institutions voluntarily participated in this research. As summarized in Table 1 using pseudonyms, all

Table 1. Interviewee Information.

| Name (pseudonym) | Gender | Status | Country of origin | Years spent in the US | Years spent in current graduate school | Adult when first came to the US? |
|------------------|--------|--------|-------------------|-----------------------|----------------------------------------|---------------------------------|
| Grace            | Female | Master’s | China             | 1.5                   | 1.5                                    | Yes                             |
| Santiago         | Male   | Doctoral | Chile             | 4                     | 1                                      | Yes                             |
| Gabriella        | Female | Doctoral | Spain             | 5                     | 3                                      | Yes                             |
| Tania            | Female | Doctoral | Moldova           | 2                     | 2                                      | Yes                             |
| Roy              | Female | Doctoral | Taiwan            | 6                     | 2                                      | Yes                             |
| Liu              | Female | Doctoral | China             | 6                     | 4                                      | Yes                             |
| Anna             | Female | Doctoral | Israel            | 3                     | 3                                      | Yes                             |
participants first came to the United States as adults and from six different countries: China, Chile, Israel, Moldova, Spain, and Taiwan. Six are females and one is male. Except one participant who was in a master’s program, the other participants were enrolled in doctoral degree programs, and all of the interviewees attended different institutions. Average years spent in the United States was 3.93 years, and average years spent in graduate school was 2.36 years. Findings indicate that participants have both positive and negative perceptions of online learning experiences during the pandemic transition due to multiple factors.

Adapting to Online Learning while Enduring Emotional Challenges during the Pandemic

Although the international students we interviewed, drawing on their strong motivation and desire to achieve their goals, told themselves that studying in the United States in the pandemic was still “doable,” their experiences of social and emotional struggle and accompanying impacts on their learning experiences, as the pandemic set in, were also apparent through analysis.

*International graduate students had emotional challenges stemming from being away from their home and family.* The biggest emotional challenge for most international students in this study was that they could not see their family, even when there were family emergencies, because it was impossible for them to go back to their country. Especially prominent was Santiago’s case; Santiago was a doctoral student whose family was going through tough times because COVID-19 “triggered a family issue” so that “my family [was] sad and then [there was] tense and fighting.” He “was trying to help from here” but “all these family issues take [my] mind off the topics [I am] supposed to be studying” so that “it did affect my learning in several ways” because it “is hard to just focus or concentrate in whatever thing you have to study.” Gabriella, who was a third-year doctoral student and worked as a Spanish teacher for three years in the United States before entering the doctoral program, said “it’s been terrible that I haven’t been able to go home” and “that’s been the worst part of not being able to go back home for summer” because she “usually go twice a year to my home country.” This “affected my mood, my emotional feeling, yeah, maybe that didn’t help with my learning.” Tania, a second-year doctoral student, had experience attending graduate school in Southeast Asia and Northern Europe, and expressed emotional turmoil because she “wanted to go to my country” but she couldn’t because it was “risky” and “it might happen that I cannot come back.” This fear was prominent considering the tense situation in the United States at the time of the interview.

Nonetheless, students tried to adapt to the situation, including the transition to online learning, and to find positive aspects. “What can you do about that? It’s just the way things are.” Santiago’s remark shows a level of acceptance toward the
struggles he was enduring. Despite the upheaval of the pandemic and transitioning to online learning, Santiago said that he “learned a lot anyways” and came to think “everything was doable” and “that’s the lesson.” Roy, a second-year doctoral student in a counseling psychology program said, “it’s definitely hard to navigate in this very hard situation” and “domestic students may take it for granted (to have family here),” but she suggested that one positive aspect was that domestic students also “started to understand how it feels to not have a community, not having social content, not having family.” Also, she felt “lucky cause I have a roommate.” Gabriella had a hard time not being able to go back to her country, but when it came to academics, she said “it (the transition to online) didn’t really affect anything because I was already doing an independent study with my advisor,” which can be interpreted as some degree of accepting the pandemic situation.

**Limited Opportunities to Interact with Peers and Instructors**

Students missed in-person interactions. Interviewees expressed their preference for in-person classes over online classes. Roy likes “human contact” and “would prefer in-person class much better than online classes,” and Grace “may take less from online courses compared with in-person classes.” Gabriella preferred in-person discussions because it’s more “organic,” which can be interpreted as “interactive.” Anna also thought in-person is preferable “because people discuss more, and they feel more comfortable asking questions.” Some participants found the lack of human interactions challenging because “now we can’t meet each other and talk or discuss or go to the library” (Grace) and “I like hugging people and greeting people and sharing food with people” (Roy). Nevertheless, Grace tried to be positive because she and her cohort “can just still meet online, so it is another aspect.”

Restricted accessibility to the instructor as a challenge during online learning. Grace, a master’s student who soon plans to pursue a doctoral degree described the inconvenience of online learning when she could not reach out to instructors, something that happened more naturally in in-person courses. In online classes, she explained, “it’s just the end of the meeting”; before the transition, she could communicate with the instructor after class. She has to email professors if she has questions which makes this “a difficult aspect of online classes.” Roy felt, “the professor is more accessible” in in-person settings because she can “just go to his or her office” instead of communicating through email. Like Grace, Roy also believed interactions with the instructor were more natural in an in-person setting as she “could ask him or her anything during the break of class.” Due to these communication difficulties, sometimes participants did not bother to ask a question or ask for help if they are not “close with the professor or if I have a really important question” as Anna said. She “would just let it go.”
Perceptions of Online Learning Brought about by Rapid Transition to Remote Learning

Participants shared their preferences and perceptions about online learning that came about as a result of the forced transition to online learning.

Some positive aspects of the online learning experience in terms of future career. Roy had one-year work experience in psychotherapy in the United States before entering her doctoral program. Before working as a psychotherapist, she also received her master’s degree in the United States. She said experiences of online learning “have been opening up more career doors for me in the future” to teach at different institutions or organize workshops for people all around the world because she became familiar with online platforms unfamiliar to her before the pandemic. Grace said she needed to have various experiences like the pandemic “to help those early childhood teachers or children” because a teacher needs to know “exact situations” and “children’s real needs (during the pandemic situation)” and an expert in the field needs to have “such kind of practical (online) experience.” As she noted, “the real situation is different from what those textbooks told us.”

Preferred verbal participation over written participation. Most of the student interviewees mentioned they preferred verbal participation over written participation in the online learning environment. The main reasons they cited for this preference were that there are fewer interactive aspects of written discussions compared to verbal discussions, the time-consuming element of writing, and the fear of linguistically incorrect comments remaining online. Gabriella preferred in-person discussions because it’s more “organic, interactive and dialogic”. She felt written discussions were not interactive enough because “you just say something maybe two days after someone asked you a question” so that “it’s not like we are all talking at the same time.” Anna also thought in-person is better “because people discuss more, and we feel more comfortable asking questions” as well as Tania who said she could ask questions immediately in in-person classes. As Gabriella stated, “it’s true that writing down my thoughts takes longer than actually saying them”. Moreover, students’ fears of their comments remaining online were also a burden, as Tania said, “especially international students, they [can] feel shy for the writing style...everybody can see their question (online).”

Sometimes, online group discussion was preferred to in-person group discussion. Participants in this research tended to prefer in-person classes. Grace was one such participant; however, in terms of discussion, Grace preferred online discussion over in-person group discussion. She said it was easier to discuss in groups on Zoom because “the teacher can just choose the break [out rooms for] group discussion and we can immediately meet each other in groups.” She didn’t have to worry about finding a group like in in-person classes where “you can only talk with your elbow partner who sits next to you.” Gabriella preferred online group discussion for a different
reason. She found in-person group work with her close friends pleasant because it is “kind of an excuse to meet (with my friends),” but when “faculty assigned us to different groups” so that she “was in a group with three people that I’ve never seen in my life,” she “just did it online (even before the pandemic).”

**Instructor readiness and expertise in teaching online affected their online learning experiences.** When professors sent out the link so that students “have access of all the materials that we need in the classes” as Grace said or they are “already familiar with the Zoom meeting,” like Liu’s advisor, students perceived that professors are well prepared and expert in teaching online. However, when professors didn’t know how to strategically use Zoom and had a hard time focusing on online classes themselves, students also lost concentration. Tania had a professor who had not lectured online before the pandemic and did not know how to use Zoom. Tania knew that the professor was “very good” at teaching but remembered “it was so difficult for [the professor] at first” because he would ask if students could understand him “every five seconds” because he was not used to Zoom where all the students mute themselves mostly during the class. Grace thought it was “hard for us to concentrate on the classes” because she could tell that “[the professor] doesn’t want to have such a long period of class” and “doesn’t really pay attention to our class.”

**Receiving Additional Support was Valuable**

**Extra support from course instructors helped online learning.** Students reported that getting extra support from professors helped their learning considerably. Grace, whose professors “understood this is a special period” and they “always encourage [students] to talk and to express [their] ideas in the classes” made her “feel it’s ok if you don’t really finish it.” Similarly, one of Roy’s professors took the sudden transition to online learning very seriously such that he felt the professor “really addressed how changing format would impact the dynamic in class.” Roy “really appreciate[d] […] [the professor] checked in with everybody and see how we want to get the most out of online learning.” Tania also found it very helpful for instructors to provide extra support and understanding regarding the rapid transition to online classes because “otherwise I think I would have extreme stress.” She was thankful that “teachers were very generous.”

**Advisors’ and institutional support helped students to overcome challenges.** Some students found themselves in the circumstance of having to change learning paths and future academic plans due to the pandemic. Gabriella’s career plans were affected by her dissertation data collection process, which “is delaying everything.” Santiago expressed concerns about doctoral students who “had to stop their dissertation” because his institution only assures five-year-funding and a delayed dissertation process can mean no funding. Santiago was also experiencing difficulty due to a family emergency and not being able to go back to his country, but he thought the school “did the best they could” and “many professors were really understanding” since the head of the department emailed him and told him he “could escape some classes” if needed. Grace was worried about
entering the Ph.D. program during the pandemic, and her advisor met her once a week and helped her with finding readings and research, which was “very helpful” for Grace to keep moving on. Roy also found it “definitely helpful” for her institution, specifically her program, to make opportunities for students and faculty to meet with each other and “discuss what was going on recently and how the department could do to support students.”

**Discussion**

Findings point to several factors that contributed to international graduate students’ mixed feelings during the forced transition to online learning. We identified unique learning challenges, needs, and attributes that critically affect international students’ learning experiences during the pandemic. Some of our findings support previous research findings on learning challenges of international graduate students online, while others open up future research directions. Below, we first discuss our findings and then share our suggestions for instructors, advisors, and institutions to create inclusive learning environments.

First, we found international graduate students were forced to cope with learning challenges caused by the sudden transition to online learning while also persevering in the face of various socio-emotional challenges (restricted travel, limited interactions with family, peers, and instructors). International students experienced further precariousness as non-immigrant visa holders due to continuous political and policy changes (Bilecen, 2020). Unlike domestic students, international students were not able to take care of family members at risk abroad but had to endure the pandemic while keeping up their learning.

Having real-time communication is particularly important for international students to clarify linguistic or conceptual misunderstandings that may arise. Some students shared their frustration that they had a hard time contacting instructors, and as a result, stopped asking questions. As previous research has reported, international students tend to have disadvantages in communicating with their professors via email because they face more risk than NES students (e.g. loss of status) and therefore may not receive an appropriate response (Biesenbach-Lucas & Weasenforth, 2000).

Similarly, we observed some international students preferred verbal communication over written communication when it comes to participating in classroom activities. This finding contradicts research that finds NNES students prefer written communication. Previous research has reported that second language learners in higher education settings have more interactive competence in written communication. Written online communication provides NNES students with more opportunities to display a wider range of lexical use for the given topic (Fitze, 2006), to make longer contributions to asynchronous discussions with less anxiety about their accents and pronunciation (Yildiz & Bichelmeyer, 2003). In contrast, our study found a verbal, synchronous format may promote international graduate students’ learning. It may be that international students enrolled in graduate-level programs, where academic and professional socialization are more significant and specialized than in undergraduate programs, value real-time interactions and discussions despite
linguistic challenges or language-related anxiety in those interactions. Given interviewees’ sense of disconnection and isolation due to lockdown and forced transition to online learning, verbal and real-time interaction were reported as crucial to maintaining a sense of belonging in the course and in the world.

Last, we found relatively well-prepared online pedagogy gave students more stability and confidence in the online learning experience. This finding corresponds with Karkar-Esperat; (2018) study that reports learning challenges of international students, who felt overwhelmed, discouraged, and unable to fulfill class requirements in online programs when they felt instructors were under-prepared for online teaching. Given learning needs of students from diverse cultural backgrounds, instructors need to be ready to select and implement highly differentiated online instructional strategies to engage and motivate international students. As Kung (2017) observes, instructors play a crucial role in terms of cultural and intercultural issues in an online space, such that their cultural awareness and intercultural competence in online teaching is key to improving international students’ experience of online learning. In line with the rapidly expanding digitalization, appropriate pedagogical training on creating inclusive online learning environments for international students is necessary for faculty.

Overall, our findings indicate online learning environments, especially in moments of transition, require different instructional strategies than in-person settings and that serving international graduate students in such environments requires considerations. Building on previous studies’ suggestion to develop instruction that promotes interactions among students of diverse backgrounds (e.g., Arkoudis et al., 2013), our findings suggest the need to develop a range of online pedagogies and to create coherent support systems for international students. In the next section, we discuss and urge designing inclusive learning environments for international students who might have linguistic challenges and emotional challenges as they study abroad. Although our suggestions are derived from our findings during the pandemic, our research-supported suggestions could be applicable to any digitalized learning environment with international students.

**Suggestions to Create Inclusive Learning Environments for International Students**

We first suggest instructors provide multiple channels and modes of communication between student-instructor, student-student, student-mentor or advisor, in addition to email correspondence or regular synchronous class sessions. For NNES students, having real-time, frequent interaction with a course instructor and peers is critical to minimize misunderstandings that may arise due to language differences. More interaction between students and student-instructor affects international students’ online learning experiences and sense of belonging (Wendt & Nisbet, 2017). During the pandemic students felt social isolation (Bilecen, 2020) and negative sense of well-being (Schlesselman et al., 2020). Offering regular virtual office hours, creating peer-support
through a buddy system, or incorporating a social network system as suggested in a recent study (Chang et al., 2021), in which students can get prompt support from each other can be options. Additionally, instructors may need to provide NNES online doctoral students with feedback in a variety of forms and modes rather than simply providing written online feedback. This is because understanding written feedback without any other form of feedback involves more than just decoding and coding a different language for NNES students (Olivier, 2016).

Second, embedding multiple social interaction opportunities into class further supports students in building a sense of connection and belonging. A collection of studies reported the benefits of building a community of inquiry (CoI) in online learning environments through purposeful critical discourse and reflection (Richardson et al., 2017). The CoI framework suggests creating meaningful online learning experiences through the development of cognitive presence (e.g., promotion of deep learning), social presence (e.g., interaction with peers), and teaching presence (e.g., interaction with the instructor) (Garrison et al., 1999). Among the three elements of CoI in online learning, social presence is an important feature for international students to feel a sense of belonging but one that is often missing in online classrooms (Crosta et al., 2016). To build social presence, building a trustful learning environment is necessary, however, instructors who have less experience teaching online often lack instructional strategies to build trustful online learning spaces for meaningful social interactions (Lowenthal & Dunlap, 2020).

Our findings, thus, suggest instructors undertake careful design for collaborative activities that involve meaningful interaction among students. Digitalization has broadened opportunities for students across the globe to learn from a distance; however, without intentional and systematic design to enhance remote learning, it may hamper international students’ learning. When shaping interaction spaces, appropriate instructional guidance is necessary because group work may inadvertently inhibit student learning performance and motivation (Chang & Hannafin, 2015; Chang & Brickman, 2018). As NNES students, many international students may have different preferences and challenges in group work due to linguistic and cultural differences. NNES students prefer working with the same group members throughout the semester and tend to prefer smaller size group discussions over whole group discussions to build close ties with NES peers in online settings (Sadykova, 2014). International students might also have various reasons for being reluctant to participate in face-to-face or online group discussions. Different communication styles (e.g., turn-taking styles) among students from different cultures are one reason why international students do not favor discussions. More active participants’ intention to help less overtly participatory students can lead to active participants dominating discussions, and even the intention to help can cause misunderstanding among students. Thus, collaborative learning needs to be carefully designed to meet the diverse learning preferences and needs of students from different cultures and educational experiences. In addition, online educators’ cultural awareness about their students can be a key to properly engage NNES students in online classes (Sadykova & Meskill, 2019).
Building a Sustainable and Organized Support System

Although students in this study acknowledged the value of support they received from individual instructors or advisors, we found none of the participants received institutional or departmental level support geared toward international students. To create sustainable inclusive learning environments, an organized support system through sustainable mentorship and institutional support may also be critical to build inclusive learning environments for international students. Students from different cultures or countries have different norms and comfort levels in seeking help from the instructor. Differing pedagogical values across cultures can introduce challenges since cultural appropriateness in one educational culture can be inappropriate in another. Hung and Hyun (2010) found East Asian students tend not to ask professors for help to overcome learning challenges because they think it is a student’s responsibility. Given instructional design of online education was originally developed in the West (Kung, 2017), instructors are recommended to bear in mind the need for cross-cultural instructional design for digitalized learning environments.

A formal institutional support system is also indeed critical to support international NNES students’ equitable learning experiences. Insufficiencies in formal support (e.g., determining types of support and tracking success and retention) for NNES students from the institution has been indicated as a chronic issue (Andrade et al., 2014). Kolm et al. (2021) urged developing methods to systematically teach and evaluate international collaboration competencies to promote the effectiveness of the digitalization of international education. Digitalization has broadened learning opportunities for international students to learn whenever and wherever they are. However, without intentional efforts to create inclusive learning environments for international students, its value may be limited. Acknowledgement of and planning for productive intercultural classroom interactions would also be beneficial if students themselves were involved in openly discussing and establishing norms for interacting with their instructor and peers.

Limitations

Despite the significance of the study, readers may cautiously interpret our results before applying them to their own contexts. First, due to constraints on time and accessibility during the pandemic, this research only employed a phenomenological interview methodology and was not able to triangulate with multiple data sources. Due to the qualitative nature of the research, results may not be overgeneralized to all graduate international students. Future research with a quantitative or mixed method with a survey instrument may contribute to further understand online learning experience patterns amongst many international graduate students across graduate program types and disciplines. Last, we did not cross-check student perception with those of faculty. Future research may generate further insights by examining faculty’s online teaching experiences which may also have been influenced by institutional support levels.
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**ORCID iD**

Yunjeong Chang https://orcid.org/0000-0002-1003-797X

**References**

Adnan, M., & Anwar, K. (2020). Online learning amid the COVID-19 pandemic: Students perspectives. *Journal of Pedagogical Sociology and Psychology*, 2(1), 45–51. https://doi.org/10.33902/JPSP.2020261309

Andrade, M., Evans, N. W., & Hartshorn, K. J. (2014). Linguistic support for Non-native English speakers: Higher education practices in the United States. *Journal of Student Affairs Research and Practice*, 51(2), 207–221. https://doi.org/10.1515/jsarp-2014-0020

Arkoudis, S., Watty, K., Baik, C., Yu, X., Borland, H., Chang, S., Lang, I., Lang, J., & Pearce, A. (2013). Finding common ground: Enhancing interaction between domestic and international students in higher education. *Teaching in Higher Education*, 18(3), 222–235. https://doi.org/10.1080/13562517.2012.719156

Biesenbach-Lucas, S. (2003). Asynchronous discussion groups in teacher training classes: Perceptions of native and non-native students. *Journal of Asynchronous Learning Network*, 7(3), 24–46. http://dx.doi.org/10.24059/olj.v7i3.1843

Biesenbach-Lucas, S., & Weasenforth, D. L. (2000). Could We Talk? Pragmatic Variations in Student-Professor Negotiations. Paper presented at the Annual Meeting of the American Association for Applied Linguistics, Vancouver, BC, Canada.

Bilecen, B. (2020). Commentary: COVID-19 Pandemic and Higher Education: International Mobility and Students’ Social Protection. *International Migration*, 58(4), 263–266. https://doi.org/10.1111/imig.12749

Chang, S., Gomes, C., Platt, M., Trumpour, S., McKay, D., & Alzougool, B. (2021). Mapping the contours of digital journeys: A study of international students’ social networks in Australian higher education. *Higher Education Research & Development*, 1–17. https://doi.org/10.1080/07294360.2021.1962812
Chang, Y., & Brickman, P. (2018). When group work doesn’t work: Insights from students. *CBE—Life Sciences Education, 17*(3), ar52. https://doi.org/10.1187/cbe.17-09-0199

Chang, Y., & Hannafin, M. (2015). The Uses (and misuses) of collaborative distance education technologies. *The Quarterly Review of Distance Education, 16*(2), 77–92.

Chue, K. L., & Nie, Y. (2016). International students’ motivation and learning approach: A comparison with local students. *Journal of International Students, 6*(3), 678–699. https://doi.org/10.32674/jis.v6i3.349

Connelly, L. M. (2016). Trustworthiness in qualitative research. *Medsurg Nursing, 25*(6), 435–436. Retrieved from https://pubmed.ncbi.nlm.nih.gov/30304614/

Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed). Sage.

Crosta, L., Manokore, V., & Gray, M. (2016). From an online cohort towards a community of inquiry: International Students’ interaction patterns in an online doctorate program. *Journal of Interactive Online Learning, 14*(2), 45–57. Retrieved from http://www.ncolr.org/jiol/issues/pdf/14.2.1.pdf

Dickerson, C. (2020). ‘I Kind of Stopped Existing’: Foreign Students Are Stuck, and Reeling. *The New York Times*, p. A11

Fitze, M. (2006). Discourse and participation in ESL face-to-face and written electronic conferences. *Language Learning & Technology, 10*(1), 67–86. http://dx.doi.org/10125/44047

Gardner, S. K., Hayes, M. T., & Neider, X. N. (2007). The dispositions and skills of a Ph.D. in education: Perspectives of faculty and graduate students in one college of education. *Innovative Higher Education, 31*(5), 287–299. https://doi.org/10.1007/s10755-006-9029-1

Gargano, T., & Throop, J. (2017). Logging On: Using online learning to support the academic nomad. *Journal of International Students, 7*(3), 918–924. https://doi.org/10.32674/jis.v7i3.308

Garrison, D. R., Anderson, T., & Archer, W. (1999). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education, 2*(2), 87–105. https://doi.org/10.1016/S1096-7516(00)00016-6

Hung, H.-L., & Hyun, E. (2010). East Asian international graduate students’ epistemological experiences in an American university. *International Journal of Intercultural Relations, 34*(4), 340–353. https://doi.org/10.1016/j.ijintrel.2009.12.001

Institute of International Education (2019, November 18). Number of international students in the United States hits all-time high. https://www.iie.org/Why-IIE/Announcements/2019/11/Number-of-International-Students-in-the-United-States-Hits-All-Time-High

Karkar-Esperat, T. M. (2018). International graduate Students’ challenges and learning experiences in online classes. *Journal of International Students, 8*(4), 1722–1735. https://doi.org/10.32674/jis.v8i4.227

Kim, S., Rosenblith, S., Chang, Y., & Pollack, S. (2020). Will ICMT access and use support URM students’ online learning in the (post) COVID-19 era? *Sustainability, 12*(20), 8433. https://doi.org/10.3390/su12208433

Kolm, A., de Nooijer, J., Vanherle, K., Werkman, A., Wewerka-Kreimel, D., Rachman-Elbaum, S., & van Merriënboer, J. J. G. (2021). International online collaboration competencies in higher education students: A systematic review. *Journal of Studies in International Education, 1*-19. https://doi.org/10.1177/10283153211016272

Kung, M. (2017). Methods and strategies for working with international students learning online in the U.S. *TechTrends, 61*(5), 479–485. http://dx.doi.org/10.1007/s11528-017-0209-x

Lee, K., & Bligh, B. (2019). Four narratives about online international students: A critical literature review. *Distance Education, 40*(2), 153–169. https://doi.org/10.1080/01587919.2019.1600363
Lowenthal, P. R., & Dunlap, J. C. (2020). Social presence and online discussions: A mixed method investigation. *Distance Education, 41*(4), 490–514. https://doi.org/10.1080/01587919.2020.1821603

Manning, J. (2017). Vivo coding. In J. Matthes (Ed.), *The international encyclopedia of communication research methods*. New York, NY: Wiley-Blackwell. Retrieved from https://doi.org/10.1002/9781118901731.iecrm0270

National Academies of Sciences, Engineering, & Medicine (2018). *How people learn II: Learners, contexts, and cultures*. The National Academies Press.

Ngai, P. (2019). Online social networking and transnational-competence development among international students from Japan. *Journal of International Students, 9*(2), 432–459. https://doi.org/10.32674/jis.v9i2.607

Noy, C. (2008). Sampling knowledge: The hermeneutics of snowball sampling in qualitative research. *International Journal of Social Research Methodology, 11*(4), 327–344. https://doi.org/10.1080/13645570701401305

Olivier, G. J. (2016). *Non-Native English speaking online doctoral students attitudes, perceptions and actions in response to written feedback*. the University of Liverpool ProQuest Dissertations Publishing database.

Pacheco, E. M. (2020). International student well-being and the influence of politics. In U. Gaulee, S. Sharma, & K. Bista (Eds.), *Rethinking education across borders* (pp. 193–207). Springer.

Project Atlas (2019). *A Quick Look at Global Mobility Trends*. Retrieved from: https://www.iie.org/Research-and-Insights/Project-Atlas/Explore-Data/Infographics/2019-Project-Atlas-Infographics.

Richardson, J. C., Maeda, Y., Lv, J., & Caskurlu, S. (2017). Social presence in relation to students’ satisfaction and learning in the online environment: A meta-analysis. *Computers in Human Behavior, 71*, 402–417. https://doi.org/10.1016/j.chb.2017.02.001

Sadykova, G. (2014). Mediating knowledge through peer-to-peer interaction in a multicultural online learning environment: A case study of international students in the US. *International Review of Research in Open and Distance Learning, 15*(3), 24–49. https://doi.org/10.19173/irrodl.v15i3.1629

Sadykova, G., & Meskill, C. (2019). Interculturality in online learning: Instructor and student accommodations. *Online Learning, 23*(1), 5–21. http://dx.doi.org/10.24059/olj.v23i1.1418

Schlesselman, L. S., Cain, J., & DiVall, M. (2020). Improving and restoring the well-being and resilience of pharmacy students during a pandemic. *American Journal of Pharmaceutical Education, 84*(6), ajpe8144. https://doi.org/10.5688/ajpe8144

Statista (2020, July 24). Digital users worldwide 2020. Retrieved from https://www.statista.com/statistics/617136/digital-population-worldwide/

Stolten, A. (2020). Living in Social Isolation and Uncertainty - Experiences of International and Domestic Higher Education Students in the U.S. during the 2020 COVID-19 Pandemic: An Interpretative Phenomenological Analysis. Retrieved from: https://lup.lub.lu.se/student-papers/search/publication/9029384

Tigaa, R. A., & Sonawane, S. L. (2020). An international perspective: Teaching chemistry and engaging students during the COVID-19 pandemic. *Journal of Chemical Education, 97*(9), 3318–3321. https://doi.org/10.1021/acs.jchemed.0c00554

UNESCO (2020). With one in five learners kept out of school, UNESCO mobilizes education ministers to face the COVID-19 crisis. Retrieved from https://en.unesco.org/news/one-five-learners-kept-out-school-unesco-mobilizes-education-ministers-face-covid-19-crisis
Wendt, J. L., & Nisbet, D. (2017). The Role of Perceived Learning and Communities of Inquiry in Predicting International Students’ Course Grades in Computer-Mediated Graduate Courses. *Journal of Research in Education, 27*(1), 1–23. Retrieved from https://files.eric.ed.gov/fulltext/EJ1142364.pdf

Yildiz, S., & Bichelmeyer, B. A. (2003). Exploring electronic forum participation and interaction by efl speakers in two web-based graduate-level courses. *Distance Education, 24*(2), 175–193. https://doi.org/10.1080/0158791032000127464

Zhou, E., & Gao, J. (2021). International graduate applications & enrollment: Fall 2020. Council of Graduate Schools. Retrieved from: https://cgsnet.org/sites/default/files/civicrm/persist/contribute/files/Final%20for%20the%20Public%20Release%20-%20Fall%202020%20Int_l%20Report%20_2021.02.17_pdf

Zhou, J. (2015). International students’ motivation to pursue and complete a Ph.D. in the U.S. *Higher Education, 69*(5), 719–733. https://doi.org/10.1007/s10734-014-9802-5

**Author Biographies**

**Yesul (Rosa) Han** is a full-time lecturer at the University of Virginia and a Ph.D. candidate in the Foreign and Second Language Program of the Department of Learning and Instruction at the State University of New York at Buffalo. Her interest is in perceptions and identity of non-native English-speaking students in higher education settings and foreign language teaching pedagogies focusing on Korean as a foreign language.

**Dr. Yunjeong Chang** is an Assistant Professor in the Department of Learning and Instruction at the State University of New York at Buffalo. She holds her PhD in Learning, Design, and Technology from the University of Georgia. Her research centers on designing equitable face-to-face, hybrid and online student-centered learning environments for learners of varied abilities in higher education settings.

**Dr. Erin Kearney** (PhD in Educational Linguistics, University of Pennsylvania) is Associate Professor of Language Education and Multilingualism at the State University of New York at Buffalo. Her research relies on fine-grained analysis of classroom interactions as well as interviews with educational stakeholders in order to understand how multilingual awareness, intercultural competence and both teacher and learner agency develop alongside language learning in settings that span from pre-K to higher education.