

Supporting virtual international students: A comparative study of pandemic experiences in host and home counties

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ABSTRACT

The COVID-19 pandemic drastically altered educational experiences for international students. This comparative phenomenological study examined the experiences of six Chinese international students during the pandemic, analyzing how residency in a host or home country influenced their opportunities, challenges, coping strategies, and overall experiences. Thematic analysis highlighted the need for support mechanisms, providing recommendations for educators, policymakers, and mental health professionals to address the unique educational needs of international learners in virtual settings.

KEYWORDS

Virtual international education, online international students, remote international students, pandemic, comparative qualitative phenomenology

The COVID-19 pandemic disrupted global education, forcing universities to transition abruptly from in-person to virtual learning (Hodges et al., 2020). This shift created unique challenges for international students, who had to choose between virtual learning in their host country or their home country. During the pandemic, international students who remained in their host countries faced unique challenges, particularly racism, isolation, and academic disruption. Anti-Asian hate crimes rose sharply in Western countries, especially the United States, where students reported experiencing verbal harassment and fear for personal safety (Gover et al., 2020). Simultaneously, the abrupt transition to online learning led to increased academic stress and reduced motivation due to limited interaction and unclear expectations (Aristovnik et al., 2020). These conditions compounded existing challenges faced by international students, such as cultural adjustment and limited local support systems.

In contrast, students who returned to their home countries encountered a different set of difficulties. Accessing course platforms like Google Classroom or YouTube was often limited due to internet censorship, while synchronous classes posed challenges due to time zone misalignment (Zhang-Wu, 2020). Some students experienced disrupted learning rhythms and digital fatigue as a result of midnight class schedules (Liu et al., 2021). However, proximity to family and familiar cultural environments offered emotional and practical support, enabling some students to focus on academic performance or personal development (Ma & Miller, 2020). These contrasting experiences highlight how geographic location shaped virtual international students' ability to navigate the pandemic.

Among the limited research on virtual international students' experiences, studies quantitatively examine mental health and academic challenges without in-depth insights into students' daily lives (King et al., 2020; Ma & Miller, 2020). These studies find that international students reported heightened levels of anxiety, academic stress, and uncertainty during the pandemic (King et al., 2020). Ma and Miller (2020) further highlight how Chinese students, in particular, experienced a "double bind," feeling unsafe abroad yet stigmatized upon returning home. Virtual international students are often treated as a homogeneous group in these studies, overlooking the differences between those who reside in the host country and those who reside in their home country (Lai et al., 2020) and failing to capture how location affects students' academic, social, and emotional well-being (Bilecen, 2020). Between-group differences illuminate the distinct challenges and opportunities facing international learners based on their modality of learning engagement.

According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), the number of international students worldwide reached 6.4 million in 2024, up from 2.2 million in 2001. Yet not all international students are capable of geographic relocation beyond national borders, suggesting a growing need for virtual international learning options. Virtual exchange (O'Dowd, 2018) describes an intentional choice to center internationalization within cross-cultural learning experiences, and its research base provides guidance for educators on key approaches and issues, including equity, access, infrastructural support, and sustainability. Discussions of virtual exchange are closely related to internationalization, which involves addressing global considerations in the design and delivery of higher education, and virtual mobility, which involves learning across historical boundaries of time and space (Villar-Onrubia, 2015). Bali et al. (2021) discussed how the pandemic accelerated virtual exchange adoption, exposed equity issues (i.e., stable internet connections), foregrounded learners' socioemotional needs (i.e., inclusion), illuminated pedagogical redesign (i.e., student- and process-centered design), reiterated resource needs (i.e., infrastructure, professional development, and curriculum design), and illustrated the potential for virtual exchange to perpetuate global inequities. Since virtual exchange provides an opportunity for international study without geographic relocation, understanding learners' perspectives on what works well and what can be improved is essential for developing pedagogical approaches that meet the needs of virtual international learners in an evolving global context.

Rationale for Current Study

This study examined the experiences of international students during the 2020 pandemic to identify effective strategies for supporting them in virtual learning environments. Comparative analysis contrasted students' experiences in two virtual modalities (i.e., online international learning in their host country versus remote international learning in their home country). This phenomenological, exploratory qualitative study investigated individuals' thoughts, emotions, and experiences as they appear without relying on pre-existing literature or frameworks. Data were collected using a two-part interview to explore academic and personal experiences to address the following questions:

1. How did virtual international students experience the pandemic?
2. How did experiences compare based on modality (i.e., online versus remote international learning)?

Analyzing students' experiences highlights pedagogical and programmatic strengths

and gaps within the curriculum for virtual international learners. Valuable insights are gained when research contextualizes students' lived experiences, and students' perspectives offer valuable insights on refining the design and delivery of virtual coursework. Findings illustrate how international students experienced virtual learning during a global crisis, offering educators, policymakers, and mental health professionals insights into supporting virtual international students, especially during uncertain times.

Method

This study followed a hermeneutic phenomenological approach to explore students' lived experiences during the pandemic, focusing on lived space, body, time, and human relations (Van Manen, 1990). Hermeneutic phenomenology is a methodology that captures experiences and highlights key dimensions of experience for participants who share certain characteristics (Van Manen, 2007; Neubauer et al., 2019). Data from six Chinese students enrolled in U.S. institutions were collected through in-depth, two-part interviews. Chinese international students represent a significant segment of the U.S. international student population, yet even before the pandemic, they faced cultural, linguistic, and educational hurdles (King & Bailey, 2021; Prieto, 2016). Qualitative comparison groups (Lindsay, 2018), a method for exploring how lived experiences vary between groups, were used to examine how students experienced each modality (i.e., online learning in their host country versus remote learning in their home country). This approach enabled thematic interpretive analysis (Braun & Clarke, 2006, 2019) to add in-depth qualitative research on international students' pandemic learning experiences to the literature.

Researcher Descriptions and Researcher-Participant Relationships

The researchers possess strong educational backgrounds and personal experiences with virtual international learning. Linlin Wu, a Chinese international student who studied in the United States before and during the pandemic, drew on personal experiences to shape the study design, driven by an interest in exploring the broader impact of the pandemic on peers. Robyn Thomas Pitts is a professor and methodologist who studies culturally sustaining programming and who taught virtual international students during the pandemic. Neither had prior relationships with participants.

Participants and Other Data Sources

The sample consisted of six Chinese international students, evenly divided

between those residing in the United States (host country) and China (home country) during the pandemic. Participants in each group were matched as closely as possible by gender, academic level, and university major (see Table 1). Additional materials (e.g., photos, diaries, and social media posts) were collected following the first interview, providing further context to the interview data.

Table 1

Participant Demographics by Location of Virtual International Learners

	United States <i>Participant 1</i>	China <i>Participant 4</i>
Gender	Female	Female
Level of Study	Undergraduate	Undergraduate
Major	Business	Business
Hometown	Southern China	Southern China
	<i>Participant 2</i>	<i>Participant 5</i>
Gender	Male	Male
Level of Study	Undergraduate	Undergraduate
Major	Science-related	Literature-related
Hometown	Southern China	Southern China
	<i>Participant 3</i>	<i>Participant 6</i>
Gender	Male	Male
Level of Study	Graduate	Graduate
Major	Science-related	Science-related
Hometown	Northern China	Southern China

Recruitment and Selection

After institutional review board approval (University of Denver 2117582), participants were recruited via Xiaohongshu, a popular social media platform among Chinese international students. Posts with relevant hashtags attracted eligible students whose demographic information was collected to assess eligibility and enable purposeful sampling (Palinkas et al., 2015). Participants were on U.S. student visas

during the pandemic, excluding students under 18 in 2020, those with family members residing nearby, and those with U.S. permanent residency. Only four participants initially qualified for the study, prompting the use of snowball sampling (i.e., participant referral) to expand the participant pool. Demographic checking ensured the sample broadly represented Chinese virtual international students and achieved a sufficient sample size (Guest et al., 2006).

Procedures for Collecting, Recording, and Translating Data

After obtaining informed consent, semi-structured video interviews were conducted using a two-part approach to collect data. All participants selected Mandarin, their primary language, for the interview, ensuring comfort and accuracy in expressing their experiences (Kang & Hwang, 2021) and enabling us to capture linguistic and cultural nuances accurately and authentically that may otherwise be lost in translation. The loss of meaning during translation was minimized by this approach, which effectively captured the subtleties of experience (Larkin et al., 2006). The first interview focused on overall experiences, while the second explored the initial analytic themes and materials that participants provided. Each interview lasted around 45 minutes and used open-ended questions. Interviews were recorded via Zoom (version 6.1.0.1043), and data were deidentified to protect confidentiality. The first author, Linlin Wu, a bilingual researcher, used translation and back-translation to ensure the integrity of meanings across languages. The process of translating data involved transcribing interviews, reviewing transcript accuracy, and analyzing the data in Mandarin before translating key quotes, codes, and themes, with a focus on preserving the core meanings.

Data Analysis

Analysis proceeded with an initial round of coding of the transcripts to identify significant statements that captured the essence of students' experiences. These statements were categorized into clusters of meaning, which were developed into broader themes, guided by the criteria of content relevance, frequency, and expression style (Groenewald, 2019). This selective coding process ensured that only the most meaningful data were retained, providing a comprehensive understanding of what students experienced and how they experienced it (Braun & Clarke, 2006, 2019). Thematic interpretation was further guided by Van Manen's (1990, 1997) existential framework, which includes lived space, body, time, and human relations. These four lifeworld dimensions offered a conceptual lens to analyze how students' physical

location, social disconnection, temporal disruption, and embodied experiences shaped their engagement with virtual learning during the pandemic. At the same time, the analysis followed an open, inductive approach that did not rely on predefined categories or assumptions, allowing patterns to emerge organically from participants' lived experiences rather than being constrained by an a priori conceptual model. Themes were described using two methods: textural description, which detailed the participants' experiences, and structural description, which explored the factors influencing these experiences. This dual approach allowed for a nuanced portrayal of their lived realities, considering both the personal content of their stories and the broader contexts in which these stories unfolded (Creswell & Poth, 2018).

Next, a comparative analysis (Lindsay, 2018) highlighted similarities and differences between students in the host and home countries to reveal the influence of location. Distinct codes and themes were maintained during analysis to capture diverse perspectives (Groenewald, 2019), ensuring even less frequently mentioned sentiments were represented. Findings offer a structured understanding of students' experiences, contributing to discussions on how location influences virtual international learning.

Methodological Integrity

Rigorous procedures emphasizing data adequacy, researcher reflexivity, and evidence-based findings (Lincoln & Guba, 1985) strengthened the methods in the following ways:

1. A diverse participant selection process ensured a varied representation of perspectives, capturing the complex experiences of Chinese international students during the pandemic.
2. The sequential structure refined the interview focus, providing comprehensive and reflective data collection of participants' perspectives.
3. Additional materials were analyzed alongside transcripts from the second interviews to deepen the understanding of the participants' lived experiences.
4. After each interview, the transcriptions were carefully reviewed, and reflexive memos were written to maintain data integrity, thereby allowing for richer participant engagement and enhanced data depth (Creswell & Poth, 2018).
5. An iterative analytic approach was used, with data reviewed after each interview to refine emerging patterns, enable early trend identification, and ensure data consistency.
6. Direct participant quotes were integrated throughout the analysis to strengthen

the link between data and conclusions, thereby enhancing the validity of the findings and authentically representing the participants' voices.

7. Study findings enrich the discussion of the needs of virtual international students and provide valuable insights into the challenges they face across virtual settings.

Findings

The findings highlight the unique and shared experiences of virtual international students in both their host and home countries during the pandemic. The first two subsections explore the experiences of students living in each location, organized through key themes. All virtual learners expressed challenges with online learning, technology, communication, and social interactions, although the nature of these themes varied by modality. Online learners in the host country faced difficulties with safety and self-care, necessitating the need for atypical support and resources. In contrast, remote international learners had increased opportunities for personal and professional growth. The final subsection presents a comparative analysis, incorporating key takeaways for supporting virtual international students.

Online International Students in the Host Country

Four primary themes emerged from the experiences of virtual international students residing in the host country: online learning challenges, social adaptation, self-coping, and a need for support and resources. Themes illustrate how students grappled with academic difficulties, social isolation, and inadequate institutional support while finding ways to cope with uncertainty.

Online Learning Challenges

The first theme that emerged was the significant difficulties students faced transitioning to online learning, an abrupt shift that left many students frustrated and confused. Students expressed that the lack of face-to-face interaction made it difficult for them to understand the course material. Additionally, the unstructured nature of online classes required heightened self-discipline. One participant, Gary, vividly described his frustration:

While attending online classes, many things felt unclear and somewhat uncertain. Being unable to attend classes in person led to a somewhat hazy and confused learning experience; till now, I still feel somewhat perplexed about many things I learned during the pandemic.

Another participant, Julia, emphasized the loss of structured learning environments: “I used to at least go to the library to study where I wouldn’t be disturbed. ... For a year and a half, I didn’t even know what our library looked like.” Warren highlighted the psychological toll of remote learning, describing how he began playing video games during lectures: “I ended up playing video games crazily to the point where I stopped listening to the classes altogether, just leaving the class on in the background while I played games.” While not a productive academic behavior, Warren later reflected that gaming became a way to distract himself from the monotony and emotional fatigue of online learning. It offered a form of escape and routine during a period that felt repetitive and disorienting. He eventually acknowledged that this coping habit affected his academic engagement, but at the time, it helped him manage feelings of isolation and burnout. Overall, these quotes reflect the academic and emotional toll the transition to online learning had on students, forcing them to develop new coping mechanisms to manage their educational experiences.

Social Adaptation

The second theme centered around how the pandemic deeply impacted the students’ socialization. Many struggled with feelings of isolation due to the curtailment of in-person interactions. At the same time, some faced incidents of racism linked to the origins of the virus, which further heightened their sense of vulnerability. Julia expressed how the pandemic affected her daily routine and her ability to access familiar comforts:

We Chinese like to prepare foods that we enjoy eating, and many of the items are sold quite far from where we live. It’s not very convenient to go there; it takes over an hour by car. Then, with the pandemic, it felt like such a hassle.

Warren also spoke about how safety concerns began to influence his behavior:

After all, I’m a homebody, so whether I can go out or not doesn’t really affect me much. But later, every time I went out, I had to wear a mask ... for more crowded places like malls or any densely populated areas, I would wear an N95 mask.

In addition to safety precautions related to the virus, some participants described experiences that reflected racial hostility and xenophobia. Julia recalled being verbally harassed in public spaces: “Sometimes on the street, some would say to me that ‘it’s all the Chinese people who brought COVID to the U.S.,’ shouting it out loud.” Although she dismissed the behavior outwardly—“I would just think those people were too stupid, so

I'd leave"—the encounter still made her wary of public interactions. Gary noted a more subtle form of social tension: "Although we didn't face any verbal discrimination, there were times when people looked at us differently, like when we were shopping or at a restaurant. You could feel it." This sense of being watched or othered reinforced feelings of being out of place, especially during a time when Asian identities were hyper-visible.

While Warren did not mention racial harassment directly, he shared a heightened awareness of personal safety, especially after a nearby robbery: "After the robbery, I felt it wasn't safe to stay and quickly left the scene. We went out and bought some weapons for self-defense." Together, these accounts show how fear of disease was compounded by fear of being targeted and experiencing a broader sense of being unwelcome in public spaces. Whether through direct hostility or subtle social exclusion, xenophobia shaped how participants navigated public space and further constrained their already limited social lives during the pandemic. These accounts reveal the challenges of navigating a social landscape altered by safety concerns, isolation, and incidents of xenophobia, underscoring how the pandemic affected not just their academic lives but also their sense of social belonging. In contrast, students who returned to China reported no in-person experiences of xenophobia. As Victor shared, "I didn't feel any discrimination or negativity in China. Everything felt familiar, and people around me were very supportive." Some noted that anti-Chinese sentiment did appear online or in news from abroad, but it did not directly affect their daily interactions at home.

Self-Coping

With many avenues for social interaction restricted, students turned to personal hobbies and entertainment to cope with the monotony and isolation of pandemic life. Most participants described how their daily routines became repetitive, leading them to seek refuge in activities such as video gaming, watching TV shows, and engaging in other indoor hobbies. Julia described her pandemic routine: "Apart from attending classes during the normal school period, my routine consisted of attending classes, sleeping, doing homework, eating, and playing video games." Julia mentioned "emptiness" several times. Similarly, Warren shared how he coped with restrictions: "I spent most of my time indoors due to the pandemic restrictions and just played video games. It became my way of managing the dullness and confinement." Gary also reflected on his repetitive lifestyle: "My typical day involved waking up, attending online classes, doing homework, and playing video games. It was just the same thing every day." These narratives highlight how students relied on indoor activities to fill the void

left by pandemic disruptions, using hobbies as a form of emotional escape and self-coping.

Support and Resource Needs

The final theme focuses on the limited support students received from their universities during the pandemic. While essential assistance was provided (e.g., moving classes online and sending generic emails), students often felt that their institutions did not adequately address their specific needs. Gary was dissatisfied with the university's efforts: "Our school basically just sent out some emails and moved everything online, but they didn't seem to think much about how we were actually coping." In contrast, embassies and personal networks emerged as significant sources of aid, providing medical supplies and emotional support. Julia expressed gratitude for the support from the Chinese embassy: "We got so much support from the embassy ... things like masks and medicine that were really hard to find back then." Warren also highlighted the importance of community support during the pandemic: "Neighbors helped each other out a lot, whether it was sharing groceries or just checking in; it made the whole thing a bit easier to bear." These quotes highlight the gap between institutional support and students' needs, while underscoring the critical role of embassies and local communities in supporting students.

Remote International Students in the Home Country

Three primary themes emerged from the experiences of virtual international students residing in their home country: online learning challenges, social adaptation, and growth opportunities. Themes illustrate how cultural and geographical contexts added complexity to students' experiences while underscoring growth, academic challenges, and personal struggles.

Online Learning Challenges

Like their counterparts in the host country, students residing in their home country faced significant difficulties with online learning. Additional factors compounded these challenges, including time zone differences, internet censorship, and poor internet connections, which made accessing educational resources even more difficult. Emily found some benefits in the recorded nature of online courses, saying: "I found that some professors would speak too slowly in my perspective, so I'd listen to their recorded lectures at double- or 1.5-times speed." Ted, however, described the difficulties of

attending live online classes: “My schedule became highly irregular. I had to attend classes at midnight or in the early hours of the morning, and it left me constantly tired.” Victor also expressed frustration about missed hands-on learning opportunities: “I was really disappointed that I couldn’t participate in the lab work that my university is renowned for. It’s one of the reasons I came here.” These experiences underscore the substantial impact of online learning challenges on students in their home countries, particularly in terms of the need for flexibility, technological adaptation, and managing the effects of time zone differences.

Social Adaptation

The theme of social adaptation revealed a mix of positive and negative experiences: while some participants enjoyed enhanced social interactions with friends and family, others experienced isolation and disconnection from their academic communities abroad. Ted reported a positive shift in his social life: “Back in China, I had many friends, and compared to before the pandemic, I actually socialized more during it.” Victor echoed these sentiments: “I would meet with friends to play basketball ... and I would exercise twice a week, each time with at least four or five people.” In contrast, Emily’s experience was less favorable, characterized by feelings of isolation: “My social life was aimless and muddled. I spent most of my time indoors and didn’t feel like I was making meaningful connections.” This theme highlights the varied social experiences of students. Some found solace in being closer to home, while others struggled with disconnection from their academic and social environments abroad.

Growth Opportunities

A unique theme that emerged for students in China during the pandemic was the availability of opportunities for personal and professional growth. Despite the challenges of remote learning, students found ways to leverage their time in China to focus on academic performance and self-improvement. Emily used the flexibility of online classes to improve her academic performance: “For me, it was all about improving my GPA [grade point average], and my approach to doing so was pretty much the same in both China and the U.S.—solving problems and consulting professors mainly via email.” Ted reflected on how his nocturnal schedule impacted his academic habits: “I had to change the way I studied due to the time difference, but I used this time to reflect on my academic journey and how to adapt better.” This theme highlights how remote virtual learners demonstrated resilience and adaptability by leveraging the pandemic as an opportunity for self-reflection and academic growth.

Comparing Students' Experiences

Students' experiences shared many similarities as seen in Figure 1. All virtual international learners struggled with online learning as they adapted to virtual settings. Common issues included unstable internet connections, communication challenges, and disengagement. Virtual learning modalities lack the engagement and structure of the in-person classes to which learners were accustomed, and these factors often create feelings of isolation and disconnection. As Emily described, life during the pandemic was "aimless and muddled." A second theme was a sense of frustration: students felt their institutions provided insufficient support, had unclear expectations, and left them to navigate the pandemic with limited guidance. Gary expressed this sentiment clearly:

The school just sent me an email, considering that, as an international student, if you need any psychological consultation or anything, you can access it through some channels provided by the school. Other than that, I don't recall receiving much else.

Third, none of the students expressed regret about their choice of residency. Students who stayed in the host country appreciated having a close proximity to campus resources and not having to risk infection by traveling. Meanwhile, students in the home country found comfort in returning to a familiar cultural environment where they could rely on family and community networks for support. As Ted reflected, "Back in China, I had many friends, and compared to before the pandemic, I actually socialized more during it." All students demonstrated resilience and adaptability in navigating the unexpected.

Notable differences in experiences emerged in social interactions, safety concerns, and personal development. Students in the host country faced a significant decline in their social lives due to isolation measures and curfews, which confined them to indoor activities. Some also experienced heightened anxiety from racist incidents related to the pandemic's origins. As Warren, a student who stayed in the United States, noted, "Staying inside became the norm, and we had to find new ways to keep ourselves busy." These students often prioritized safety and mental health over socializing, relying on personal coping mechanisms like hobbies or online interactions.

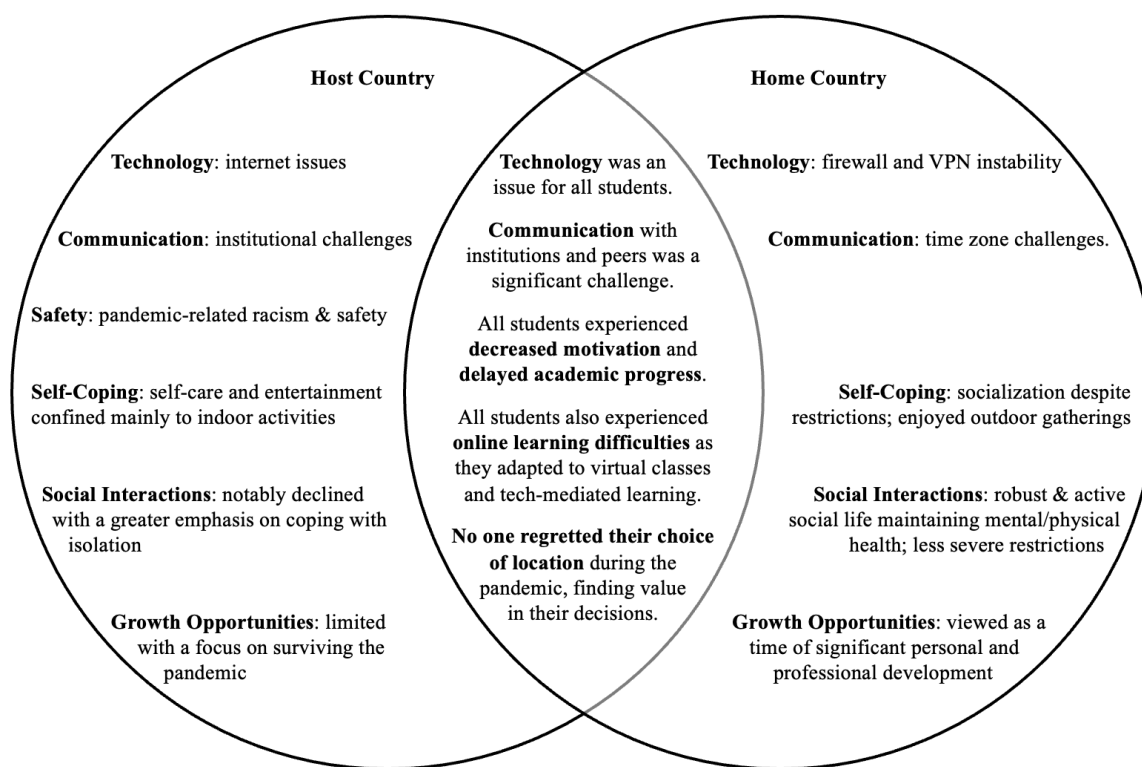
In contrast, students who returned to their home country could maintain a more active social life, albeit under different circumstances. Ted shared that he experienced more social interactions during the pandemic than before: "The time I spend with

friends tends to be more joyful... maybe six or seven people coming over to my place. We play cards, chat, and I really enjoy those moments.” Activities like meeting friends for basketball games and spending time with family gave students in China a sense of normalcy, which helped them mitigate feelings of isolation. Additionally, safety concerns were less prevalent for those in China, as incidents of racism and xenophobia were uncommon.

A notable boon for remote students was their perception of the pandemic as an opportunity for growth. For instance, Victor, who returned to China, used the time to build skills and refine career plans: “I took courses that greatly enhanced my skills, and it shaped my future career plans.” These students viewed the pandemic as a period for self-reflection and development, not merely survival. In contrast, students in the United States focused on coping with immediate challenges of social isolation, physical safety, and academic disruptions. They viewed the pandemic as a crisis to endure and overcome.

Figure 1

Venn Diagram of Virtual Learning Experiences in Host and Home Countries



Discussion

This study enhances educators' understanding of the experiences of virtual international students, with a focus on Chinese international students who stayed in the United States versus those who returned to China during the pandemic. By examining the influence of location, the findings provide insights into the complex challenges these students faced during a global health crisis. Those who stayed faced challenges related to racism, isolation, and online learning difficulties (Boyle, 2020; Gallagher et al., 2020), while those who returned encountered time zone issues, technical difficulties, and limited resources due to internet censorship (Zhang-Wu, 2020). Students in host countries were particularly vulnerable to anti-Asian sentiment, with reports of verbal harassment and racial scapegoating heightening fears in public spaces (Gover et al., 2020). This social hostility compounded the emotional toll of academic disengagement and isolation (Aristovnik et al., 2020). In contrast, students in home countries like China faced disrupted sleep cycles, restricted access to key platforms, and increased digital fatigue—barriers that often went unaddressed in institutional support models (Aristovnik et al., 2020; Zhang-Wu, 2020). These findings underscore how structural and sociocultural environments differentially shaped the challenges experienced by virtual international students.

This study adds depth to the existing literature by illustrating how cultural and geographical factors can significantly alter students' coping strategies and outcomes. These considerations extend field discussions beyond issues of psychological distress and academic disruption to include student-level factors affecting their experiences. The comparative findings illustrate how the location of residency influences the experiences of virtual international students in terms of social isolation, academic performance, and cultural adaptation. Reflection on these findings presents an opportunity to enhance support for virtual international learners across all learning modalities.

Consistent with prior studies, this research confirms that the pandemic had a significant impact on the academic performance and social well-being of international students. It adds a new dimension by emphasizing how residency location shapes these experiences. While previous studies have primarily focused on students who remained in their host countries, they have consistently reported challenges such as heightened psychological distress, social isolation, and racial discrimination. For example, Gover et al. (2020) documented a surge in anti-Asian hate crimes, underscoring how racial scapegoating shaped Asian students' sense of safety. Similarly, Aristovnik et al. (2020)

conducted a global survey of higher education students and found that international students in host countries reported greater emotional distress and decreased academic motivation compared to domestic peers.

These studies, however, rarely addressed the distinct barriers faced by students who returned to their home countries. This research reveals that students who returned to their home country faced unique challenges, such as disrupted academic schedules and limited access to educational technology. An analysis of the geographical dimension underscores the need for policies and systems that support all virtual students, offering a fresh perspective on this research. As described in the next section, study findings deepen educators' understanding of the need for tailored support systems that take into account geographical and cultural contexts. These recommendations integrate findings from this study with the literature on virtual exchange (O'Dowd, 2018), a virtual learning modality for an intentionally international learner audience.

Tailoring Learning Experience for Virtual Exchange

The findings suggest two key pedagogical recommendations for better meeting the needs of virtual international students: enhancing communication and connection, and rethinking engagement and assessment strategies. Though designed for virtual exchange, these practices enable educators to create a supportive learning environment for all international students, whether they are studying virtually or in person.

Enhancing Communication and Connection

All virtual students reported insufficient guidance and unclear expectations, likely due to the uncertainty associated with the pandemic. While the pandemic was unprecedented in modern times, uncertainty is persistent for global learning audiences. In uncertain times, students benefit from open lines of communication that are transparent and grounded in fact. While educators are not well-positioned to answer every question that may arise from students, our experience has been that creating spaces for non-academic discussion and debriefing goes a long way toward helping students feel seen, heard, and part of a community. Town hall-style meetings are a valuable strategy for assessing an evolving situation and describing how the institution, academic unit, and course are being adapted to accommodate changing realities. The Center for Courage and Renewal (www.couragerenewal.org) offers a touchstone framework of communication principles for cultivating meaningful relationships. Touchstones encourage community because relationships and connection provide the

means for gaining emotional and practical support, strengthening resilience by successfully tackling difficult tasks, and navigating the new or unknown.

These guiding principles for enhancing communication are equally as useful in non-crisis times, as virtual international students may reasonably feel isolated, disconnected, and out of community with the academic milieu due to the virtual learning modality. International learners benefit from a sense of community when participating in courses in in-person or virtual settings. Online discussion forums were identified as a valuable approach for building a virtual learning community because they create a safer learning environment than traditional face-to-face classroom interactions, as evidenced by student reflections and survey data (King & So, 2014). Interactive activities, virtual social events, and collaborative learning spaces help alleviate feelings of isolation among students, addressing disengagement and disconnection while promoting a whole-student approach—one that extends beyond academic considerations and acknowledges learners as multifaceted people with complex needs and interests. Academically, virtual international learners benefit from detailed instructions, regular check-ins, and accessible resources. For example, course and assignment overview videos are useful for addressing frequently asked questions about practical expectations and learning outcomes, thereby reducing feelings of confusion or frustration for virtual learners. Additional practical recommendations for course design are elaborated further in the following section.

Rethinking Engagement and Assessment Strategies

Careful course design is key in overcoming virtual modality-related barriers to learning. The most significant technical issue that arose for virtual learners was internet instability, which scholars position as a social justice issue that mediates global access to higher education (Bali et al., 2020). Two additional significant barriers included other connection issues (e.g., the need to use a virtual private network [VPN] to bypass firewalls) and time zone considerations (e.g., the need to attend class outside of typical working hours due to geographic location). Beyond the themes that arose from the student sample in this study, Villar-Onrubia and Rajpal (2015) caution that engagement tends to taper following initial momentum, and virtual learners struggle when they feel that learning activities or assessments provide little educational value. Research has identified additional challenges that arise when educators support global learners. Barron and Arcodia (2002) summarize struggles facing Western educators supporting learners who are viewed as memorizing information rather than learning, viewing the

instructor as the sole source of expertise, lacking experience in active learning, participatory learning styles, and writing as assessment, and needing enhanced support speaking, writing, and using academic referencing in non-native languages.

In light of these challenges, virtual learning benefits from intentional course design that centers on assessing the appropriateness of the learning processes embedded within a pedagogical approach and how it aligns with the sociocultural heterogeneity of learners. In short, course design should center learners and processes (Bali et al., 2020). It is unlikely that educators will ever be well-positioned to tailor learning to meet the needs of a varied learner audience. A more parsimonious approach is to mitigate the issues that arise from using our typical in-person pedagogical practices in virtual exchange settings. The evidence continuum provides one tool for designing customized learning experiences based on the unique attributes of the learner audience (Pitts, 2023). Course design is influenced by contextual factors such as cultural and demographic attributes, the timing of learning experiences (i.e., synchronous or asynchronous), and the ability for learners to engage in group work (i.e., the ability to communicate readily in the language used for the course or ability to connect synchronously outside of class times for group work). Asynchronous learning, alternative forms of participation, and flexible deadlines are effective strategies for overcoming potential barriers that international learners may encounter. Recordings are particularly useful because they enhance access, provide structure and flexibility, and enable personalized learning.

There are several advantages to using recordings for virtual international learning. According to Danielson et al. (2014), instructional recordings enhance learning by providing flexibility and control over learning pacing, allowing for the review of key takeaways or unclear points, compensating for class absences, and preparing for assessments. Recordings also produce learning gains for non-native language learners by enabling them to slow the pace of the lecture and revisit concepts multiple times. Recordings are also valuable for supplementing academic skills developed across many courses for which learners often receive no formal instruction, such as writing. Li (2024) employed a meta-ethnographic synthesis to identify factors influencing the writing of non-native English-speaking students, highlighting the need for additional cognitive, linguistic, and affective support to develop writing skills. Recordings are invaluable when modeling the underlying processes of an academic skill, such as writing, by breaking it into smaller pieces and relationships that make it easier to understand and apply to new settings. A recent study by Chen et al. (2024) found that the style of recordings matters,

and the picture-in-picture video approach (i.e., displaying two windows simultaneously, one with instructional material, such as slides, and the other showing the instructor) was more cognitively demanding for international learners and led to lower recall of the learning material.

Limitations

The small sample study relies on self-reported data, which introduces the potential for recall bias (i.e., when participants do not accurately recall the past). Additionally, the U.S.-based participants were all located in the Midwest (i.e., Minnesota, Iowa, Missouri, Wisconsin, Illinois, Michigan, Indiana, and Ohio), limiting the broader applicability of the findings. Similarly, variations in personal resilience, access to support networks, and academic disciplines could also affect individual experiences.

Future Research Directions

Future research is needed to expand the sample size of this study, explore the relevance of Chinese international students' experiences to those of other international students, investigate the long-term effects of virtual international learning on student learning outcomes, and develop policies that support virtual international students in online and remote learning modalities. Future research should utilize a more diverse sample as demographic factors, such as socioeconomic status and psychological resilience, would enrich future research. Crisis research should examine the multifaceted effects of crises on international students in virtual settings.

Conclusion

This study offers valuable insights into the lived experiences of virtual international students engaged in online or remote international learning. Findings highlight significant differences between students who remained in the host country (i.e., "online international learning") and those who returned to their home country (i.e., "remote international learning"), particularly regarding academic, social, and emotional challenges. While all participants faced difficulties adapting to online learning and maintaining academic discipline, those in the host country experienced heightened isolation and racism. In contrast, those in the home country faced time zone differences and technological barriers, yet they experienced a positive sense of growth and community. These results underscore the need for tailored support systems that take into account the sociocultural contexts of international students in virtual settings,

especially given the growing number of international learners worldwide and the potential for virtual exchange to foster internationalized learning for a global learning audience.

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