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Remote Global Learning: The Role and Use of Virtual Exchange for U.S. and Irish Graduate Students

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Abstract

The importance of internationalization and effective online collaborative learning is well established, and the recognized value of cross-cultural exchanges by higher education institutions has resulted in a diverse range of initiatives including the use of virtual exchanges. Virtual exchanges are global online learning experiences for students enrolled in postsecondary coursework. The purpose of this study was to examine a virtual exchange learning opportunity for U.S. and Irish graduate education students. Using an online collaborative learning theoretical lens, this case study found that while there were varying levels of commitment and unequal expectations and contributions of the graduate students, students described the importance and significance of the unique learning experience. Implications for research and practice are discussed for future use of virtual exchange within the postsecondary environment.

Keywords: virtual exchange, higher education, graduate students

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Identified as a high-impact educational practice by the Association of American Colleges and Universities (AAC&U), *global learning* allows students to “explore cultures, life experiences, and worldviews different from their own” (AAC&U, n.d., para. 9), through intercultural learning activities, global education course opportunities, and study abroad experiences. While high-impact educational practices typically focus on the undergraduate postsecondary student, significant benefits also exist for graduate students participating in study abroad opportunities (Dresen et al., 2019; Witkowsky & Mendez, 2018). However, graduate students often have numerous personal and professional responsibilities, including full-time employment, increased academic responsibilities, and caring for children (El-Ghoroury et al., 2012; Nicklin et al., 2019; Sallee, 2015). These ongoing demands for graduate students may create challenges for engaging in and completing long-term international learning opportunities. As such, it is important to explore creative approaches for graduate students to engage in global learning opportunities, while still providing flexibility to their schedules and personal and professional obligations.

One such option can occur through the use of virtual exchanges—global online learning experiences for students enrolled in postsecondary coursework. Virtual exchanges involve “the engagement of groups of learners in extended periods of online intercultural interaction and collaboration with international peers as an integrated part of their educational programs and under the guidance of educators and/or facilitators” (Garces & O’Dowd, 2020, p. 283). For graduate students unable to participate in study abroad opportunities, virtual exchanges provide the opportunity to engage and collaborate with international peers on projects and activities associated with their program coursework. Often guided by the Collaborative Online International Learning (COIL) framework, virtual exchanges provide students the ability to work together with other students from different backgrounds and cultures, engage in synchronous or asynchronous online interactions with international peers, and participate in reflective activities focused around increasing global perspectives and international initiatives (Online International Learning, n.d.). While there is great benefit for students to develop their global learning competencies and engage in more equitable global learning opportunities, limited research currently exists on graduate students engaged in virtual exchange experiences, as well as their perceptions of the virtual exchange experience.

The purpose of our study was to examine a virtual exchange learning opportunity for U.S. and Irish graduate education students. This study included a central question: What are the perceptions and experiences of an online collaboration with international peers? To expand on the central question, our research work explored questions about (1) peer collaboration within an online learning environment, (2) the role of international collaboration in graduate students’ coursework, and (3) the use of online collaborative tools for synchronous and asynchronous learning activities for graduate students participating in a virtual exchange experience. We sought to understand the student experiences, as well as the structural components of a virtual exchange occurring within the spring 2021 term.

Literature Review

Virtual Exchanges and Internationalization of Higher Education

Defined by the American Council on Education (n.d.) as “a strategic, coordinated process that seeks to align and integrate policies, programs, and initiatives to position colleges and universities as more globally oriented and internationally connected” (para. 1), comprehensive internationalization provides institutions of higher education to collaborate and create

opportunities for student and faculty partnerships throughout the world. The importance of internationalization (de Wit & Altbach, 2021; Mihut et al., 2017) and effective online collaborative learning (Beelen & Jones, 2018) is well established, and the recognized value of cross-cultural exchanges by higher education institutions has resulted in a diverse range of initiatives across the globe for university students to study abroad (Bruhn-Zass, 2021; Hudzik, 2014). Investments in programs such as the Erasmus Program in Europe or individual university study abroad programs are believed to help students adapt to an increasingly global world (Dresen et al., 2019). However, expense and limitations to mobility and time are potentially significant barriers for some students, leading to increased investment by higher education institutions and governments in virtual exchange programs to create more inclusive educational opportunities for all university students. Programs such as The State University of New York's (SUNY's) COIL (Collaborative Online International Learning) model, and several European projects including EVE (Erasmus+ Virtual Exchange), Evaluating and Upscaling Telecollaborative Teacher Education (EVALUATE), and Evidence-Validated Online Learning through Virtual Exchange (EVOLVE) have gained increasing support and interest due to their ability to increase opportunities for students to engage in global collaborations (Arndt et al., 2021; O'Dowd & Dooly, 2020).

The term *virtual exchange* refers to the ways educational institutions and practitioners integrate opportunities within their coursework for students to engage in “online intercultural interaction and collaboration with partners from other cultural contexts or geographical locations” (O'Dowd, 2021, p. 1). In an increasingly digitized world, internationalization within higher education no longer solely requires students to physically travel abroad. Rather, institutions can incorporate internationalization concepts at home and through their curriculum (Bruhn, 2017). Virtual exchanges have the flexibility to be built into a specific class or an entire program level and use internet-based tools and pedagogies to create cost-effective collaborative curriculums (Naicker et al., 2021).

For graduate students, the opportunity to engage in cross-cultural virtual exchange can be particularly appealing. Graduate students, like post-traditional undergraduate students, often simultaneously face additional significant personal, financial, and program-related barriers and stressors that prevent full participation in study abroad opportunities than undergraduate students (Nicklin et al., 2019; Witkowsky & Mendez, 2018). For these reasons, graduate students often prefer online learning environments that provide the necessary flexibility for students who cannot attend traditional face-to-face college courses, making virtual exchanges an opportune alternative to in person study abroad (Dresen et al., 2018; Peterka-Benton & Benton, 2019). Virtual exchanges can further enhance graduate student learning by supporting the development of qualities, attitudes and attributes which will inform students' intercultural competencies and sensitivities. Research has indicated that small-group online activities provide a space where culturally diverse graduate students are able to share their cultural and educational experiences confidently and effectively with their peers (Kumi-Yeboah et al., 2017). Thus, participating in a cross-cultural virtual exchange provides a beneficial introduction to internationalization for graduate students through opportunities to navigate the challenges and confrontations associated with the development of intercultural competencies and promote meaningful and empathetic interactions among learners, skills which will further enhance their future employability (Villar-Onrubia & Rajpal, 2016).

Developing Intercultural Competencies

One of the primary desired outcomes of virtual exchanges is for students to develop intercultural competencies through collaboration with their international peers. Culture is considered the behavior and norms found in societies (McCurdy et al., 2004) and intercultural competencies are the processes by which students navigate these systems in intercultural interactions (Leung et al., 2014). Specifically, intercultural competencies include a set of cognitive and behavioral skills, attitudes and characteristics that determine one's ability to communicate in intercultural situations effectively and appropriately (Swartz et al., 2020). Online collaborations through virtual exchange provide a space for students to actively engage in their learning as well as develop, transform, and assess their intercultural skills and knowledge through discussions and the exchange of ideas and knowledge with international peers (Arndt et al., 2021).

Challenges and Opportunities

While there are numerous benefits to virtual exchange programs, not all virtual exchanges are the same and program design and structure can impact the quality of students' learning outcomes. Mere exposure to culturally diverse peers does not in and of itself grow students' intercultural competencies and the influence of academic culture on virtual exchanges can impact students' expectations of collaboration (King Ramirez, 2020). Without the appropriate support from higher education institutions and educators, virtual exchanges run the risk of enforcing stereotypes or reducing their experience to superficial interpretations of cultural knowledge (O'Dowd, 2021). Academic culture of a specific institution, which is often informed by the regional or national cultural context, includes an institution's educational philosophy, governance, and approaches to teaching and learning and can impact students' collaboration experiences (King Ramirez, 2020). Institutional practices such as scheduling and assessment can impact project sustainability, the coordination of projects and international interactions, and overall goals of the exchange (Magen-Nagar & Shonfeld, 2018b). While research has found that virtual exchanges benefit students through sharing culturally diverse knowledge, academic culture and practices can create challenges due to different culture-specific perceptions of group work, approaches to communication, and developing a sense of interdependence and intersubjectivity within small online groups (Kumi-Yeboah et al., 2017). However, research has shown that the provision of a specific project or task to the group focusing on a global theme or issue leads to more engaged learning experiences (O'Dowd, 2021). This allows for a more collaborative learning experience in which students can take responsibility for learning from one another and establish positive, authentic interactions and relationships with peers from diverse cultures.

Theoretical Underpinnings: Online Collaborative Learning

To promote valuable cross-cultural interactions among students, it is important to implement a high-quality program that creates opportunities for students to become masters of their own digital spaces through both synchronous and asynchronous learning experiences with their peers (Magen-Nagar & Shonfeld, 2018b). The current study developed a five-week course rooted in meaningful intercultural collaboration and framed by the online collaborative learning (OCL) theory. Grounded in constructivist and collaborative learning theories, OCL refers to student-centric instructional practices that encourage students to be active participants in their own learning, and work together in collaborative tasks (Magen-Nagar & Shonfeld, 2018a;

Naicker et al., 2021). Like constructivist and collaborative learning theories, OCL recognizes that knowledge is created to fit reality, and that cognitive processes and learning are impacted by socialization, interaction, and collaboration (Harasim, 2017; Vuopala et al., 2017). However, OCL builds upon these previous learning theories to include the new spaces and intellectual, social, economic, and cultural mindsets created by online digital technologies (Harasim, 2017).

As educational systems expand their teaching and learning online, OCL is a means to alleviate student loneliness in virtual learning settings through an environment that enhances student interaction and socialization irrespective of their physical or geographic location (Magen-Nagar & Shonfeld, 2018a; Vuopala et al., 2017). This in turn allows students to assume control over their own learning, drive and create new knowledge through meaning-making and information sharing, and develop problem-solving and self-reflection skills, while simultaneously becoming more comfortable with technology (Kumi-Yeboah et al., 2017; Magen-Nagar & Shonfeld, 2018a; Naicker et al., 2021). As it relates to the purpose of this research work, the examination of a virtual exchange learning opportunity for U.S. and Irish graduate education students, the OCL framework provides a lens that supports and encourages collaborative tasks within the online learning environment, creating opportunity for rich dialogue and engagement with class peers.

Research Methods

We chose to employ qualitative research methods for this project as the study's purpose was to explore a virtual exchange for students enrolled in Irish and U.S. graduate education programs. As such, a qualitative approach was deemed suitable as the focus of the project was to examine the student experiences using a five-week online collaboration.

Ethical Considerations

The current study was approved by both universities' human research ethics committee. Students participating in the exchange were then provided with study information and consent forms to be interviewed and recorded. Only those who consented to be interviewed and recorded were interviewed. All transcripts have been anonymized and all school and participant information were removed.

Design

This study was structured through an embedded single case study approach (Yin, 2014). A case study approach is to be used when one needs to “develop an in-depth understanding of a single case or explore an issue or problem using the case as a specific illustration” (Creswell & Poth, 2018, p. 96). While a multiple case study approach could have been argued for this project if we explored the Irish and U.S. students as separate cases within a single virtual exchange experience occurring in the spring 2021 term, we instead opted to view this research through an embedded single case study design to account for methodological nationalism (Shahjahan & Kezar, 2013). Specifically, the case was defined as the virtual exchange experience, where we subsequently explored the differing experiences from the two courses included within the virtual exchange. We adhered to key features of the case study design—including multiple sources of information to explore the cases, as well as maintaining awareness of the specific boundedness of the virtual exchange for U.S. and Irish graduate education students during the 2020–2021 academic year (Stake, 1995).

Sample & Setting

The virtual exchange included 25 students—nine U.S. students (four women and five men) and 16 Irish students (all women). All students were enrolled in graduate education coursework; the U.S. students were enrolled in an educational leadership doctoral program and the Irish students were completing educational psychology doctoral degrees. The courses included for the virtual exchange focused on data analysis and the use and application of data within educational settings. All 25 students participated in the collaborative group project and virtual exchange evaluation. Six students volunteered to participate in the optional student interviews—three U.S. students (two women and one man) and three Irish students. All Irish students were full-time students, completing mandatory full-time work placements in school psychology in addition to completing their coursework. Conversely, all but one U.S. student had full-time jobs in either the K-12 or higher education setting.

The exchange included two institutions of higher education—a large private university in the mid-Atlantic area of the U.S. and a large public research institution in the Republic of Ireland. For both institutions, the courses with the embedded virtual exchange program were housed within the respective education departments. The virtual exchange experience lasted approximately five weeks, occurring in the middle of the spring 2021 term. Due to the difference in time zones, the exchange was structured as an asynchronous experience. Additionally, as the two institutions had different learning management systems (LMS), we created a central website to house all resources, videos, and directions to ensure learning materials were accessible for all participating students. Although the virtual exchange was scheduled to occur as a remote learning experience, due to the COVID-19 pandemic, both courses also had to transition the entire course to an online format. The virtual exchange consisted of three parts: a one-week module where students create video introductions via the FlipGrid platform; a three-week collaboration where the group was divided into four smaller groups and required to complete a group presentation; and a one-week module to reflect and evaluate the virtual exchange experience. For the group project, students were assigned fictional student scenarios. Within each scenario, a student enrolled in the Irish K-12 system is looking to enroll in a U.S. postsecondary institution. Using the Growing Up in Ireland survey (Murphy et al., 2019), the group must identify the specific survey questions associated with the scenario's student profile. Based on their preferences and needs, the groups were then asked to use the National Center for Education Statistics' College Navigator Tool to construct five potential postsecondary options. The intention behind the project was for students to engage with both Irish and American educational tools and collaborate on constructing postsecondary pathways, based on scenario content and group decision.

Data Collection

We collected several sources of data to gain a deeper understanding of the participants included within this research project, including interviews, student evaluations, and project artifacts (Stake, 1995; Yin, 2014). We all took field notes throughout the virtual exchange experience and assisted in the collection of interviews and student group artifact evaluation. One key source of data was semi-structured interviews. Interviews lasted approximately 40 minutes, with questions related to the perception of virtual exchanges, their experience within the online collaboration, and the role of international peer collaboration in their graduate education experience. Interviews occurred following the completion of the group collaboration and were audio recorded. In addition to the interviews, students' evaluation responses were included

within the data review. The evaluation questions focused on perceived strengths and weaknesses of the online collaboration, areas for potential improvement, and overall takeaways from the experience.

Data Analysis

With our interest in exploring students' international virtual exchange experience and comparing the perceptions of the U.S. and Irish students, this case study was analyzed using a cross-case analytical approach (Khan & VanWynsberghe, 2008; Yin, 2014). It was essential that we did not analyze the findings just superficially (i.e., only demographic or geographic differences), but instead explored how student responses and social interactions within the online collaboration were informed by "larger forces, structures, and histories" (Vavrus & Barlett, 2006, p. 97). More specifically, interviews were transcribed verbatim, read for accuracy, and reviewed several times to ensure that we had an intimate understanding of student experiences in advance of formal qualitative coding (Yin, 2014). The coding process began with open coding with additional iterations occurring and a formal codebook was created. The use of the codebook also assisted in the review of the open-ended questions included within the students' project evaluations. Additionally, review of project artifacts further supported the analysis, as we compared quality of student work to project rubrics. We assessed the group projects separately and reviewed our evaluations and notes as a group.

Trustworthiness

Trustworthiness was considered and maintained throughout the data collection and analysis of this project. Trustworthiness was guided by Lincoln and Guba's (1985) guidelines, with credibility, confirmability, dependability, and transferability considered in the study design. To ensure confirmability, the researchers continuously acknowledged their roles, not only as researchers, but as course instructors. Throughout the project, it was essential that our reflections on the project were collected, and we remained conscious of the importance to reduce researcher bias throughout the process. By thoughtfully connecting this project to the literature and constructing detailed and meaningful decisions to the study's design ensured the project's dependability. Also, although student experiences and perceptions related to their participation in a specific virtual exchange learning experience, there is transferability as there is an increased interest and use of virtual exchanges and online student collaborations within the higher education environment, including due to the in-person travel restrictions occurring due to the COVID-19 pandemic. With a case study approach, several data sources are used to explore the specific unit being examined. As such, triangulation occurred by exploring interviews, student evaluations, and course artifacts (Yin, 2014).

Positionality

Noting our positionality, as well as ethical considerations addressed in the collection and analysis of this research is important to share with the reader. As noted by Marshall and Rossmann (2014), the overall quality of qualitative research depends on the positionality of the researchers. All authors had prior higher education and instruction experience, allowing us to integrate our previous postsecondary and teaching experience to support the needs of students within the two specific institutions, as well as a collective group participating in the international online student collaboration. We all actively participated in the development, implementation, and research investigation related to the virtual exchange experience. More specifically, we

served as the course instructors for their respective courses involved in this collaborative virtual exchange and each author assisted in the overall collection of student data throughout the virtual exchange experience. As this was the first virtual exchange experience for all authors, we maintained ongoing conversation through the entirety of this project to ensure that our perspectives were equally included in data source identified, interview protocol question development, and data analysis. Although the virtual experience project was in development prior to the COVID-19 pandemic, the pandemic intensified our interest and overall exploration of virtual exchange use for graduate students. Committed to the online collaborative learning lens, we engaged in our own online collaboration in the creation and implementation of the virtual exchange in advance of students' participation in the online collaborative learning experience.

Findings

As previously noted, global learning is an important element of students' postsecondary education; however, graduate students often have numerous personal and professional commitments that hinder their ability to participate in in-person international learning opportunities. Virtual exchanges provide a unique experience to engage in global learning by providing collaboration with international peers through a fully online setting. There is currently limited research on graduate students participating in virtual exchanges. Findings presented in this section explore the specific virtual exchange with U.S. and Irish graduate education students and how their experiences contribute to their overall graduate education, connecting to the research questions related to peer and international collaboration, as well as the use of online collaborative tools.

Unequal Expectations, Commitment, and Contribution

In the creation of the virtual exchange, we attempted to create activities that were interesting and applicable to both the Irish and U.S. students. While the activities addressed content from both groups, differences were inevitable. Specifically, Irish students were engaged in mandatory, full-time, in-person educational psychology placements and their virtual exchange was linked to their advanced quantitative coursework. Conversely, U.S. students were educational leaders employed as administrators in the P-20 educational environment and their virtual exchange was linked to a data management and accountability course. Additionally, due to the other work included in the two courses, the virtual exchange activities contributed to different percentages of the students' overall grades. These factors created perceived unequal experiences between the Irish and U.S. students that subsequently accounted for the different expectations and perceived overall commitment to the virtual exchange experience. As noted by one Irish student:

It did appear that this module was more relevant to our counterparts in the U.S. university and perhaps clearer as to the purpose and link with their learning objectivity. There was also a mismatch I feel between the two universities in terms of the weight placed on the assignment and project.

Another Irish student supported the perceived challenges in participating in the virtual exchange with the numerous other expectations of the course outside of the international learning opportunity:

I felt confused and overwhelmed through the project... I then began to feel guilty as the students in the U.S. were eager to schedule online meetings and spend time on the project... I think it might have been bad timing but during those two weeks [of the group project] I had meetings, work, and lectures scheduled every evening after a day on placement.

Although the U.S. students had full-time employment as well, the U.S. students were often flexible in supporting the Irish students and their concern of additional work from their full-day internship placements. For one student, he chalked it up to the push-and-pull created in any type of group project, where flexibility of group members was needed for the group's overall success:

I guess not being able to kind of get together to finish something... Even when you're in a [in-person] group, you know, somebody is doing one piece and you're doing the other and you're all putting it together. I, it really is the same concept, you know, in the beginning I thought it wouldn't be very difficult, but... it is doable. I mean, look what we were able to create with people in another time zone.

This virtual exchange of Irish and U.S. graduate education students highlights how different courses, academic programs, and how the virtual exchange is organized within their overall grade greatly impacts graduate student experiences within the online international learning opportunity. While course evaluations showed the overall value and positive contribution of the virtual exchange experience on the development of their global learning, their responsibilities outside of the virtual exchange, at times, complicated their overall contribution to the group work.

The Role of International Peer Collaboration in Graduate Education

Despite the outside personal and professional obligations, all members of the virtual exchange found value in participating in the online international learning opportunity. While the collaboration, at times, highlighted cultural differences, the Irish and U.S. students came together to engage in group work and connect with new international peers. One U.S. student noted: "We learned so much about each other... this was a great exercise in working with foreign colleagues, who will be great references and friends to have," supporting an Irish student's experience: "It was nice to meet other students from the U.S. and hear about their experiences and fields."

Overall, the virtual exchange not only allowed the graduate students to engage in a collaborative group experience, it created the opportunity for the graduate students—current and future practitioners in the education field—to expand their network through this online learning collaboration. As one U.S. student noted, "I think we're all excited about a new experience and because it's not the same old group work...everybody was so hands-on and excited and looking at new information. So, I feel like it sparked everyone to be very involved." Collaboration not only created the ability to work with new peers but discuss their educational goals and work. For example, one Irish student noted, "I really enjoyed it, I was interested in ... learning about our lives... And so yeah, like, I suppose that was really good to kind of learn that and, and just see how, how their education system is different."

Technology Use

Technology use was an integral part of the virtual exchange, as online tools would provide the opportunity for students to access virtual exchange readings and assignments, as well as communicate and interact with their international peers. As previously noted, the two institutions included in this virtual exchange did not have the same learning management systems (LMS). To create equitable access to virtual exchange materials, a Google Site was created where all virtual exchange resources and directions were located. Although we allowed students to use technology to best meet their needs, a “recommended technology” page was also included in the Google Site with suggested tech tools (and tutorials) that supported the communicating and collaborating with their international peers during the development of their group projects.

Overall, students used a wide array of technology to prepare and present their virtual exchange group presentations. The submitted group projects showed diversity in the technology used to showcase group findings. As students were required to create a presentation to be accessed asynchronously by the other student groups, it appeared that each group chose different audio and video recording technology when recording their presentations. As one of the male U.S. students noted, “I was pleasantly surprised that everybody... as well as the people in [the Republic of] Ireland were familiar [with technology]. So that was what we use for most of the collaboration, both for the, the, the face-to-face meeting, as well as, um, collaborating on the presentation.” Having students comfortable with technology use in advance of the virtual exchange allowed for less review of specific tech tools.

Although synchronous interactions were, in theory, necessary for peers to prepare and assign tasks for the group presentations, students—due to their numerous personal and professional obligations, most preferred technology that allowed for asynchronous collaboration. One Irish student stressed the use of asynchronous tools to provide flexibility in group communication and project development: “The only thing that was hard was the time difference, because obviously our evenings were their mornings, and we were extremely constrained with time that we could give because we were in placements and couldn't do it during our day. So then we kind of needed them to be kind of flexible, and we were available too.” Supporting this stance, another Irish student noted, “And it was easy from my perspective, that didn't require a lot of work for me to push to make my presentation, which was good for me, because I wouldn't have had the time to give to something big... because we did not have to be online, same time to edit... We used [Google Slides] ... which again, kind of helps that we are all collaborating on the one thing.”

While differences existed in other included themes between the U.S. and Irish students, findings revealed that both U.S. and Irish students understood and were confident in their technology use and how they could use technology to communicate and collaborate with their peers. Overall, the graduate students included in this virtual exchange preferred and saw the value in asynchronous technology to allow flexibility in peer collaboration, while still being able to complete their other personal and professional tasks.

Discussion

This study focused on student experiences participating in a virtual learning exchange, which ran online for five weeks during the spring 2021 academic year. Participating students were graduate students from two education departments in the U.S. and the Republic of Ireland.

One key theme identified was related to barriers to participation in the virtual exchange. Firstly, while there were similar themes and learning goals within the included virtual exchange courses, there were also differences in course expectations and assignments that the U.S. and Irish students were taking, which may have contributed to perceptions of inequity in terms of commitment and contribution. For the Irish students, other mandatory program requirements served as barriers to participation in the online exchange and were seen as more relevant to their professional training. Insofar as possible, ensuring an alignment between the virtual exchange content and activities and the courses offering a virtual exchange may be important for the student experience (O'Dowd, 2021). Secondly, students enjoyed the opportunity to expand their networks and learn about a different education system. This reflects findings of previous research and highlights the potential for online exchanges when physical, in-person exchanges are not a viable option (Arndt et al., 2021; O'Dowd & Dooly, 2020). Thirdly, technology was used successfully to facilitate interaction and collaboration between the two groups and to produce output. Tools that allowed students to work together asynchronously were important due to time differences, and these gave students the flexibility to participate in their group project alongside other demands. As this initiative took place in spring 2021, around a year into the COVID-19 pandemic, students from both institutions had been learning online during much of the preceding year; this may have facilitated their use of the tools introduced through the exchange.

This project was guided by Online Collaborative Learning theory. The virtual exchange integrated instructional practices that encourage students to work together in collaborative tasks, promoting interaction, positive mutual dependency, and group process (Magen-Nagar & Shonfeld, 2018a) and promoted the use of online technology to explore and discuss different cultural viewpoints (Vuopala et al., 2017). Our findings highlighted the ways OCL created an online learning space that enhanced students' ability to interact with their international peers and provided a lens that encouraged collaborative tasks within the online learning environment.

Several implications can be identified for both future research and practice. As previously noted, virtual exchange is an increasingly popular option for students to gain global learning skills and collaborate with international peers (Garces & O'Dowd, 2020). While global learning opportunities within the postsecondary environment are often focused on undergraduate students, there is great benefit for graduate students to also participate in these unique learning experiences (Dresen et al., 2019; Witkowsky & Mendez, 2018). As such, additional research to explore the successful use of virtual exchanges, including within graduate coursework is warranted. Related, institutions should not only focus on the development of virtual exchanges for undergraduate students but instead establish virtual exchanges for all student levels. As we transition to a post-COVID-19 lockdown world, it is essential to investigate and further establish effective practices for integrating virtual exchange experiences within the postsecondary classroom for both undergraduate and graduate student groups.

That said, it is important for there to be institutional support of the virtual exchange initiative. To ensure successful virtual exchange experiences, institutions must foster relationships with international colleagues and institutions (King Ramirez, 2020; O'Dowd, 2021). This relationship development can support not only future virtual exchange collaborations, but also future research work as well. This was evident in the authors' own experience of online collaboration to develop this exchange. Both institutions were supportive of the introduction and piloting of this program and invested in the growth of virtual exchange opportunities within their respective education departments. Additionally, as virtual exchange relies on the successful integration of website development, learning management systems

(LMS), and appropriate use and applicable training for specific technology applications and tools, institutions need to support the development of virtual exchange experiences through institutional IT and instructional design teams. While there are best practices for developing a virtual exchange experience (i.e., COIL framework), it will be vital for institutions to also identify best practices specific to their faculty and instructor needs.

Limitations

There are several limitations to note on this project. This project was planned and developed in advance of the COVID-19 pandemic. However, this project occurred during the spring 2021 semester—a time that still was impacted by the COVID-19 pandemic. While the virtual exchange was still able to occur due to its online structure, the institutions' courses were also now functioning as fully online course options during the spring 2021 semester. While this created minimal impact, it should be noted as the original intention for the collaboration included synchronous in-person sessions within the students' home institutions. Additionally, while all students participated in the project evaluations, only six students opted to participate in the optional student interviews detailing their experiences of the virtual exchange collaboration. Additional participation in the interviews could have yielded additional information about the virtual exchange experience. Lastly, as noted in the findings, there was varied commitment of the students' due to various academic and professional obligations. While this can occur in any group scenario, future virtual exchange planning will better address students understanding the project's time commitment and requirements.

Conclusion

The purpose of this study was to examine a virtual exchange learning opportunity for U.S. and Irish graduate education students. Specifically, this study explored students' perceptions and experiences of participating in a virtual exchange occurring in the spring 2021 semester. The creation of a successful embedded virtual exchange required online collaborative learning from both the instructor-researchers from the two institutions as well as the participating students- especially as each group faced differences in assessment and course content outside of the exchange. Findings highlighted the need for diverse and robust tech options to support student engagement and the value of international peer collaboration. While there were varied levels of commitment and unequal expectations and contributions of the graduate students, students described the importance and significance of the unique learning experience. There is great benefit to incorporating virtual exchanges into postsecondary coursework and provides global learning opportunities that are more flexible and accessible than traditional study abroad experiences.

Declarations

The authors declare no conflict of interests for this study.

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The authors received approval from the institutional review boards of St. John's University and University College Dublin for this study.

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