Beyond borders: Building capacity and enhancing institutional resources for U.S.-Mexico virtual exchange initiatives

Caroline E. Martins¹, Samuel J. Martins² and Mary E. Risner³

Abstract

As the popularity of virtual exchange (VE) has increased worldwide in the wake of the COVID-19 pandemic, many higher education institutions are seeking the most efficient ways of building capacity for this practice. Using the context of VE implementations between the United States and Mexico as a case study, this research aimed to identify strategies for VE capacity-building that can be useful to institutions in a variety of contexts. The study included only instructors with experience implementing VE, the majority of whom had implemented VE multiple times, and used mixed methods data gathered via a questionnaire and focus groups. The findings identified specific examples of the types of resources that higher education institutions in the U.S. and Mexico may consider investing in, such as increased support for teaching with technology and different types of incentives for instructors’ continued VE engagement. Based on these findings, recommendations are made for strategies that universities worldwide can use to enhance the support they offer their VE instructors, including resource sharing with partner institutions and VE organizations.

Keywords: global education, curriculum internationalization, Latin America, COIL, digital literacy

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How to cite this article: Martins, C. E., Martins, S. J., & Risner, M. E. (2024). Beyond borders: Building capacity and enhancing institutional resources for U.S.-Mexico virtual exchange initiatives. Journal of Virtual Exchange, 7, 18–37, https://doi.org/10.21827/jve.7.41464

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1. Introduction

In recent years, virtual exchange (VE) has been increasing in popularity at higher education institutions worldwide, as it “can integrate authentic intercultural learning scenarios into a range of university subject areas” while also addressing some barriers associated with physical mobility programs (Garcés & O’Dowd, 2021, p. 286). According to O’Dowd (2018), VE is defined as “the engagement of groups of learners in extended periods of online intercultural interaction and collaboration with partners from other cultural contexts or geographical locations... under the guidance of educators” (p. 5). Another term that is commonly used for VE is Collaborative Online International Learning (COIL), which refers to a specific VE format that emphasizes cross-cultural collaboration between two or more classrooms (O’Dowd, 2018).

VE offers many benefits for students, such as building intercultural competence and technology skills (Garcés & O’Dowd, 2021), and many VE studies focus on the student experience and how it can be improved (Commander et al., 2022; Hackett et al., 2023). However, in order to promote VE capacity building and longevity, instructors must be supported by their institutions to engage in this activity, which requires of them a specific skillset and a significant time commitment (O’Dowd, 2013; O’Dowd, 2021). Multiple studies (Alami et al., 2022; The EVALUATE Group, 2019; Nissen & Kurek, 2020) have demonstrated that VE poses a diverse set of challenges for instructors, and according to the membership of COIL Connect for Virtual Exchange (n.d.), an international VE network of over three hundred institutions, the top two barriers to sustaining and increasing VE offerings at higher education institutions across the globe are “getting enough instructors involved” and “sustaining instructors’ engagement.” Yet, there is a dearth of information on how institutions can best support instructors in this endeavor, particularly from the perspective of instructors experienced in VE implementation.

The aim of this study was to provide a snapshot of both sides of the instructor experience during VE implementations occurring from January 2021 to October 2022 between two countries with widespread VE use and multiple examples of institutions with VE infrastructure in place. Specifically, this study sought to respond to the following questions:

1. What are the existing resources that U.S. and Mexican instructors have available at their institutions to support VE, and who are they available to?
2. What types of challenges are instructors from the U.S. and Mexico facing when they partner on a VE project together?
3. What institutional resources do U.S. and Mexican instructors think would be most beneficial to their joint VE collaborations?
2. Literature review

2.1. Institutional resources for VE

One institutional resource for VE that has been discussed in significant detail in the literature is professional development programming for faculty (Vinagre, 2016). Melchor-Couto and Jauregi (2016) also recommended the use of coaching following participation in VE training, one of the few studies to suggest using institutional resources in sequence. In addition, O’Dowd (2021) suggested institutional resources that can incentivize instructors’ VE engagement, in the form of financial and academic incentives, yet acknowledged that few institutions had put this into practice.

Through COIL Connect for Virtual Exchange (n.d.), it is now possible to see the types of resources, including incentives, currently being offered by institutions around the world in support of VE. However, instructor feedback on their effectiveness is limited in the literature. Rubin (2022a) has also pointed out the possibility for institutions to strategically collaborate on VE resources in the future, rather than each creating their own in-house. Thus, beginning to investigate the question of shared resources, which is yet untouched in the literature, was a key aim of this study.

2.2. Study context: VE between the U.S. and Mexico

As mentioned by King Ramírez (2022), there is limited representation of the Latin American experience in VE literature, despite the long history of this practice in the region (Rampazzo & Cunha, 2021). A recent study by Alami et al. (2022) also determined that challenges to VE implementation vary by world region. Therefore, this study sought to examine how challenges are affecting instructors from two different regions while working on the same VE project. The U.S. and Mexico were selected as the focus because in both countries, multiple higher education institutions have been implementing VE for over five years, with significant investment from governmental and non-governmental organizations (Cervantes Villagómez, 2022; SUNY COIL, n.d.). Therefore, U.S. and Mexican institutions are ideal locations to investigate existing and potential resources to support institutional capacity building for VE.

2.3. Post-colonial theory

Post-colonialism is complex and encompasses many different lines of thought. The following paragraphs describe how this theoretical perspective was applied in the specific context of this study;
however, it is important to note that there are many more aspects of post-colonialism that could be discussed.

The U.S. is considered part of the Global North, while Mexico is categorized as the Global South (Quiroga-Garza et al., 2022). Previous publications have highlighted the need to consider the power imbalances that exist within many VE initiatives, for both students and instructors (Helm et al., 2012; Jiménez Figarotti et al., 2022; Kastler & Lewis, 2021). Therefore, rather than focusing only on one side of the exchange or the other, this study requested the same information from both sides, to obtain as accurate an understanding as possible of the faculty collaboration and not leave out the Global South perspective, as is common in smaller-scale studies such as case studies (Glenn & Devereux, 2023). Importantly, post-colonial theory also focuses on how countries and societies are connected, which led this study to ask instructors to identify which of their institutional resources are made available to their VE partner as well (Azzi, 2018). However, since this study set out to test the perception that VE is automatically an equalizer, responses were still analyzed by country to identify possible differences in resource availability and power dynamics (Kastler & Lewis, 2021).

To provide value for instructors who participated, this study was conceived to identify areas where further investment in VE resources may be needed at institutions in the U.S. and Mexico, with the goal of providing ideas for the types of resources these institutions may consider investing in. Focus groups were also used to highlight and better understand “more local narratives” by giving instructors an opportunity to describe in detail the conditions for VE at each of their institutions (Azzi, 2018, p. 53).

3. Methods

This study used mixed methods, selected to enhance the reliability of the findings, to gather data from professors with experience implementing VE between the U.S. and Mexico (Ponce & Pagán-Maldonado, 2015). Mixed methods is a common approach in the VE field due to the particular complexities of this educational practice (Alami et al., 2022; The EVALUATE Group, 2019; King Ramírez, 2022). In this study, the mixed methods involved a two-part process consisting of a questionnaire with both multiple choice and open-ended questions, followed by focus groups. Prior to commencing the study, ethics approval was obtained from the institutional review board at the authors’ institution to utilize these data collection methods.
3.1. Instructor recruitment

Participation in this study was limited to university-level instructors who had implemented a class-to-class U.S.-Mexico VE project within the last year and a half. The time limit was imposed due to how rapidly circumstances affecting VE implementation change. Snowball sampling, where individuals participating in the study recommend others who are eligible and may be interested in participating, was used (Parker et al., 2019). However, rather than asking instructors who participated to share names with the researchers, the call for participants asked that VE coordinators share it with eligible instructors at their institutions and that eligible instructors receiving the message share it with their VE partners. In addition to contacting VE coordinators and eligible instructors via email, participants for this study were recruited via VE network and social media posts.

3.2. Questionnaire

Instructors accepted the invitation to participate in this study via Qualtrics, where they then completed an online questionnaire intended to gather background information on their experience with VE, the resources available at their institutions, and details on their most recent VE projects. One qualitative and 17 quantitative questions were used and made available in both Spanish and English (see the appendix). Instructors were asked to indicate which resources were available at their institutions, either to them and their partners or just to them, using options based on recommendations found in the literature (The EVALUATE Group, 2019; Garcés & O’Dowd, 2021; O’Dowd, 2021). A Likert scale of 0-10, with 0 being not challenging at all and 10 being extremely challenging, sought to capture the magnitude of the challenges experienced by the instructors during their most recent VE implementations (see the appendix). The challenges listed for this question were primarily based on the findings of the EVALUATE Group (2019) and King Ramírez (2020). Instructors were also asked to indicate who their VE partner was for their most recent project for response comparison.

3.3. Focus groups

From September to October 2022, all instructors who completed the questionnaire were invited to attend one-hour-long focus groups held via Zoom. In addition to seeking more details on the institutional resources that instructors would find most useful, focus group responses were used to check the accuracy of the data gathered through the questionnaire and their interpretations. The five questions for the focus groups were designed based on the research questions and are listed in Table 1.
Table 1. Questions used during focus groups with instructors from the U.S. and Mexico

<table>
<thead>
<tr>
<th>Focus group questions</th>
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<tbody>
<tr>
<td>1. Please briefly describe the most recent virtual exchange project you completed.</td>
</tr>
<tr>
<td>2. What institutional resources, either from your institution or your partner’s, did</td>
</tr>
<tr>
<td>you find most useful during your most recent virtual exchange project?</td>
</tr>
<tr>
<td>3. Were there any challenges you encountered while planning or running your most recent</td>
</tr>
<tr>
<td>virtual exchange that remain unresolved? If none, what was the biggest challenge you</td>
</tr>
<tr>
<td>encountered?</td>
</tr>
<tr>
<td>4. Could additional institutional resources potentially help you resolve the problems</td>
</tr>
<tr>
<td>described in the previous question? If so, what types of resources?</td>
</tr>
<tr>
<td>5. Are there any other institutional resources or incentives that your institution</td>
</tr>
<tr>
<td>does not currently offer and that you think would be useful to professors implementing</td>
</tr>
<tr>
<td>virtual exchange?</td>
</tr>
</tbody>
</table>

To ensure that language barriers would not pose an issue and that both members of a VE partnership would not attend the same focus group, potentially impacting the reliability of the information shared, instructors from Mexico were invited to focus groups in Spanish and U.S. instructors to ones in English. Four focus groups total were held via Zoom, and an additional focus group was converted to a Zoom interview due to low attendance. The two focus groups for instructors from Mexico had five and three participants, respectively, and the two for U.S. instructors had three attendees each. The focus groups and interview were recorded via Zoom, and each instructor was asked in turn for their response to each question during the focus groups, to ensure that everyone would have an opportunity to speak if desired.

3.4. Data analysis

All completed questionnaire responses were included in the data, even if an instructor did not attend a focus group. The data from the 11-point Likert scale was interpreted using the median, as recommended by McLeod (2019). The challenges with the two highest medians indicated by Mexican instructors were compared with those reported by U.S. instructors to produce the results. When possible, instructors’ responses were also compared with their VE partners’ data, as was the case for four pairs of participants. The qualitative data from the questionnaire, gathered through an open-ended question on what instructors’ motivation was for developing their most recent VE projects, was coded by hand using conventional content analysis (Hsieh & Shannon, 2005).

The focus group and interview recordings were transcribed, and the data was coded using nVivo 12 plus, primarily using directed content analysis based on the categories for challenges and resources that had been listed in the questionnaire (Hsieh & Shannon, 2005). Qualitative data that did not fit within these codes was coded using conventional content analysis (Hsieh & Shannon, 2005). Data
was coded into major topic areas (e.g., academic culture, time management, faculty incentives) and refined with sub-codes, if needed. For example, academic culture included differences at both the institutional level, such as curriculum flexibility, and the class level, such as whether the course was offered online or in person. After coding, the percentages of the conversations spent discussing the coded challenges and resources in the focus groups was compared by country.

4. Results

To answer the three questions posed in this study, the results from the questionnaire and focus groups are presented below.

4.1. Participants

Twelve completed questionnaire responses were received from the U.S. and 18 from Mexico (n=30). From the U.S., 11 instructors were from public institutions, and one was from a private institution. From Mexico, 9 instructors were from public institutions and 9 from private. In total, the U.S. instructors represented ten different institutions and the Mexican instructors 13. The questionnaire responses revealed that 26 of the instructors’ most recent VE projects had been offered at the undergraduate level, three at the graduate level, and one that was a mixture of both. The most common project lengths reported were 5-6 weeks (13 instructors), followed by 3-4 weeks (7 instructors). The rest of the instructors’ projects had varied in length from 1-2 weeks to more than 8 weeks. The subject areas of the instructors’ most recent VE projects spanned 7 different areas, which included social sciences, languages, business, education, health and life sciences, art, and law.

The questionnaire results demonstrated that all but one of the instructors had been teaching for more than seven years and the majority (21 instructors) were newer to online teaching (Table 2). Twenty-three instructors had implemented VE more than once, the majority of whom (14 instructors) had implemented VE three or more times (Table 2). Results from the questionnaire and focus groups also revealed that two instructors from Mexico served as their department or institutional VE coordinator, in addition to their role as faculty. Despite this trend toward being more experienced with VE, five instructors reported that they had never taken a VE training, all of whom were from Mexico (Table 2).
Table 2. The most common responses to questions on instructors’ experience from the questionnaire, shown as a percentage of all 30 instructors

<table>
<thead>
<tr>
<th>Instructor experience</th>
<th>Most common response</th>
<th>Second most common response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of VE projects implemented</td>
<td>More than 2 (77%)</td>
<td>1 (23%)</td>
</tr>
<tr>
<td>Years teaching</td>
<td>More than 7 years (97%)</td>
<td>4-7 years (3%)</td>
</tr>
<tr>
<td>Years teaching online</td>
<td>1-4 years (70%)</td>
<td>More than 4 years (30%)</td>
</tr>
<tr>
<td>VE trainings taken</td>
<td>1 or more (83%)</td>
<td>0 (17%)</td>
</tr>
</tbody>
</table>

4.2. Existing institutional resources

Figure 1 shows the existing institutional resources that the U.S. and Mexican instructors had available to them and which of these resources were also available to their VE partners. While these responses were mainly gathered via the questionnaire, two responses from U.S. instructors were updated based on comments made during the focus groups, when they mentioned making use of financial resources from their institutions that had not been indicated in the questionnaire.
Figure 1. Existing institutional resource access, reported as a percentage of instructors from the U.S. (A) and Mexico (B) who responded to the questionnaire
*VE = Virtual Exchange **Questionnaire responses updated based on focus group comments
When compared by country, the instructors’ responses tended to vary in terms of their existing institutional resources. The exception to this was financial incentives, which were available to very few (roughly 1 in 5) instructors on both sides (Figure 1). Taking the resources marked “available to me” and “available to me and partner” together, the two most commonly available resources reported by U.S. instructors in the questionnaire were IT staff, followed by instructional design staff (Figure 1A). Using the same method of analysis, Mexican instructors most frequently had access to a VE coordinator, followed by a tie between international office staff and VE training (Figure 1B). On the U.S. side, for any one resource, less than 20% of instructors indicated that their institutions made the resource available for their VE partners as well (Figure 1A). For Mexican instructors, it was more common to have resources that were available to both sides of the partnership, particularly VE coordinators and international office staff (Figure 1B).

4.3. Challenges

Both the questionnaire and focus groups included questions on what challenges the instructors faced during their most recent VE projects. In the questionnaire, instructors were asked to rate on a Likert scale how challenging certain aspects of their most recent VE projects were, with 0 being not challenging at all and 10 being extremely challenging, and in the focus groups they were asked to describe their most significant or unresolved challenges. To compare the most salient challenges indicated through these methods, Figure 2 shows the challenges with the two highest medians indicated by instructors from each country on the Likert scale and the two challenges that occupied the highest percentages of the focus group conversations when divided by country.
Despite the majority of the instructors in this study being experienced both with implementing VE and teaching in general, they still reported significant challenges during their VE implementations. Of the 11 instructors who had implemented their most recent VE project 3 or more times, 8 marked at least one challenge as 5 or above on the Likert scale of 0-10 in the questionnaire (data not shown). Instructors’ comments illuminated the multifaceted nature of each of these challenges, which often encompassed issues affecting both instructors and students. For example, one instructor from the U.S. recommended “...not [to] assume that students are digital natives,” while another mentioned, “I wish I would also have a little bit of training myself [so] that I know how to integrate YouTube, etc.” When describing issues with time management, a Mexican instructor pointed out that “incluso también los horarios de las sesiones, nosotros estamos muy abiertos, por ejemplo, modificarlas, y
en Estados Unidos es casi imposible que se modifiquen” (even the session times, too, we are very open, for example, to modifying them, and in the U.S., it is almost impossible to modify them).

In Figure 3, the Likert scale responses from four U.S. instructors are compared with those of their Mexican VE partners. These eight instructors were the only ones where the partners from both sides of the same VE project participated in this study, thus allowing their responses about the challenges they faced during their most recent VE implementations to be directly compared.

**Figure 3. Responses from virtual exchange pairs when both rated on a scale of 0 to 10 how challenging certain aspects of their most recent virtual exchange projects were.**

*nr = One or both of the partners did not respond

Even within the same partnership, these instructors demonstrated that challenges are experienced differently on either side (Figure 3). Out of all the responses on how challenging certain aspects of their VE projects were from these four pairs who participated in the questionnaire, one pair rated student resistance the same, and another pair rated academic culture the same. Otherwise, the ratings were different for every item within each pair. Instructors’ comments during the focus groups also evidenced differing institutional expectations at their institutions versus their partners’, indicating the different contexts affecting each of them. For instance, one U.S. instructor commented: “There’s a lot of pressure on my partner to do certain things to meet certain objectives in the COIL.” Moreover,
two instructors from Mexico explained that their institutions value VE projects in English more than those in Spanish, which then limits how many instructors are able and willing to engage with VE. There were no comments from U.S. instructors about them or others from their institutions being limited by language when implementing or deciding whether to implement a VE.

4.4. Institutional resources recommended by instructors

During the focus groups, instructors were asked what resources they thought had been or would be most useful to professors implementing VE projects at their institutions. As shown in Table 3, the most discussed institutional resources across the two focus groups with Mexican instructors were incentives (27.87% of the conversations) and for U.S. instructors, technology resources (13.22% of the conversations).

<table>
<thead>
<tr>
<th>Institutional Resources</th>
<th>United States (%)</th>
<th>Mexico (%)</th>
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<tbody>
<tr>
<td>Technology Resources</td>
<td>13.22</td>
<td>4.59</td>
</tr>
<tr>
<td>VE Training</td>
<td>12.4</td>
<td>10.61</td>
</tr>
<tr>
<td>VE Support Staff</td>
<td>11.46</td>
<td>13.49</td>
</tr>
<tr>
<td>Faculty Incentives</td>
<td>10.27</td>
<td>27.87</td>
</tr>
<tr>
<td>Institutional Recognition for VE</td>
<td>8.69</td>
<td>19.27</td>
</tr>
<tr>
<td>Language Classes</td>
<td>0</td>
<td>1.32</td>
</tr>
</tbody>
</table>

Several U.S. instructors indicated interest in more training on using technology tools, and one commented, “…some kinds of institutional supports either in terms of [technology] training or just in terms of platforms that could be accessed commonly – could help resolve those problems.” Instructors from both the U.S. and Mexico gave examples of particularly helpful technology resources, such as the availability of IT staff as this statement from a Mexican instructor suggested: “dentro de los requisitos del programa [COIL], tienen que ver todo el tiempo una persona de tecnología disponible para resolver cualquier problema” (within the [COIL] program requirements, there always has to be an IT person available to resolve any problems). Many types of incentives were also brought up, particularly by Mexican instructors, such as partner visits, counting VE implementation toward tenure and promotion, and professional development funding or stipends. One instructor from Mexico stated, “Yo en lo personal creo que no debemos hacer COIL por el dinero ni por una compensación, pero definitivamente ver una manera de retribuir al profesor que hace COIL es muy
importante” (Personally I do not believe that we should do COIL for the money or compensation, but having a way to reward professors who do COIL is definitely very important). An instructor from the U.S. mentioned, “I’ve done one COIL for four semesters in a row, and we’re completely changing it after this semester, and it would be nice to go and visit and sit down face to face and work on something with someone.”

5. Discussion

According to Garcés and O’Dowd (2021), many institutions do not yet have a robust support structure in place for VE activities, which was also evidenced in this study. As an example, only 20% of the instructors reported having financial incentives available at their institution for VE (Figure 1), which according to O’Dowd (2021) is an important resource to account for the extra time and effort that this practice demands. Contrary to common assumptions about Global South institutions’ lack of resources and infrastructure to support study abroad and VE programs, however, the Mexican instructors’ institutions seemed to have significant VE-specific investment in comparison to the U.S. institutions represented in this study (Figure 1) (Glenn & Devereaux, 2023). For instance, nearly 90% of Mexican instructors indicated that there was a VE coordinator at their institutions, and over 75% had VE training available (Figure 1).

Regarding the types of challenges faced during their most recent VE projects, instructors’ responses were somewhat consistent across the two types of data – quantitative and qualitative – but greatly differed by country in both the questionnaire and focus group results shown in Figure 2, aligning with previous studies showing that VE challenges vary by country and region (Alami et al., 2022; Jiménez Figarotti et al., 2022). Examining these results from a postcolonial lens, language differences, one of the most discussed challenges during the focus groups with Mexican instructors, stood out as an issue that seems to be burdening VE instructors and participants in Mexico more than those in the U.S. (Figure 2). This finding corroborates that of Alami et al. (2022), who also discovered in the qualitative section of their study that language skills presented a “unique challenge” for multiple Global South regions, specifically South America and the Middle East (p. 69). As Rubin (2022a) pointed out, more VE projects are now being developed between countries in the Global South and in languages other than English; however, if VE collaborations between Global North and South countries like the U.S. and Mexico are to continue, strategies leading to more equitable language use should be adopted.
Aligning with the findings of the EVALUATE Group (2019), whose study demonstrated that the complex nature of VE requires multiple types of resources to be successful, this study illustrated the need for institutional support to address the varied challenges confronted by even instructors who have significant VE experience. Professional development for VE has already been discussed in the literature as a key resource (Rubin, 2022b; Vinagre, 2016), which was corroborated in this study by the high number of instructors who had taken one or more VE trainings. As one U.S. instructor explained, “the training... kind of removed the fear” going into their first VE implementation. However, this study showed that many different institutional resources are still required once instructors are past their initial VE training and first implementation or two.

When instructors reported on resource availability in the questionnaire, they demonstrated how rarely resources are shared between their institutions, despite VE being a collaborative endeavor. Rubin (2022b) warned that equity issues can arise when two partnering instructors are not receiving similar support for their efforts. Despite the lack of VE training at their home institutions, all U.S. instructors had taken at least one VE training, indicating they were able to access this resource either through partner institutions or VE organizations. This resource sharing did not seem to be reciprocated, however, as the questionnaire results demonstrated that Mexican institutions were much more likely to make their resources available to partners than U.S. institutions, with a few exceptions that were discussed during the focus groups and interview.

In the literature, the main resource that has been recommended to be shared between institutions has been faculty professional development offerings, so that instructors can have their own VE experience with peers from abroad before implementing the practice in their classes (Rubin, 2022b; Vinagre, 2016). In this study, several other types of shared resources were mentioned, particularly during the focus groups. For instance, a Mexican instructor explained that their partner’s VE coordinator “tuvo la maravillosa idea de diseñar un diploma que lleva los logos de las tres instituciones” (had the marvelous idea of designing a diploma with the three institutions’ logos), which all students who completed the VE could use to prove their participation. This type of resource can be used to help instructors address the issue of student resistance, as it motivates students to participate in the VE, and it does not typically require high investment to produce such a resource. In contrast, the interviewee stated that they received in-person VE training and funding to travel to and present at multiple international conferences from their partner’s institution, which is a more significant financial investment. Given these examples coupled with the data in Figure 1, it is apparent that the possibility for institutions to share more than just VE training opportunities exists and can contribute to the success of VE partnerships.
To move toward a more balanced power dynamic, institutions on both sides of a VE should be sharing resources with their partners, as suggested by Jiménez Figarotti et al. (2021), and ideally sharing resources strategically to help complement those of their partners. As described above, there are many types of VE resources that can be shared, and not all require significant financial investment. Therefore, from a postcolonial perspective it is concerning to see that so few U.S. instructors in this study reported having institutional resources available to share with their partners, while there seemed to be much greater effort being put forth by the Mexican instructors’ institutions in this regard (Figure 1). In a future study, it would be useful to further investigate the factors that may be behind this result and involve a greater number of U.S. instructors, to determine whether the present study has provided an accurate depiction of the typical U.S.-Mexico VE collaboration in this respect.

6. Conclusion

The aim of this study was to better understand the types of challenges that instructors face when implementing Mexico-U.S. VE projects and the institutional resources that could help address those challenges. Therefore, building on other studies' recommendations as to the types of resources that institutions should invest in to grow VE initiatives (Alami et al., 2022; The EVALUATE Group, 2019; Garcés & O’Dowd, 2021), this study gathered specific examples of the types of resources that may be of particular use to institutions in Mexico and the U.S. through the resource codes that were defined. In the process of gathering this information, several strategies for institutional capacity-building for VE were identified that could be useful to institutions in the U.S. and Mexico and beyond.

To address instructors’ need for increased resources that are specific to VE, institutions can turn to resource sharing as a way to quickly increase their capacity to support instructors. As evidenced in this study, even developing resources that do not require significant financial investment, such as certificates of recognition for students, that can be shared with partner institutions, can go a long way toward addressing some of the challenges faced by instructors. This would allow for two-way resource-sharing regardless of institutions’ financial means, a strategy in alignment with the tenets of postcolonial theory and recommended by Jiménez Figarotti et al. (2021) to support more equitable VE partnerships. There are also a growing number of national and international organizations offering VE resources for higher education instructors (Lenkaitis, 2022). Multiple instructors in this study said they had taken advantage of resources offered through such organizations to supplement the VE support offered at their institutions.
In the context of this study, the existing institutional resources that were most often made available to partners were VE coordinators and international office staff, followed by VE training. As demonstrated by the questionnaire results in Figure 1, shared resource availability likely differs both within and between countries. Therefore, institutions with a desire to build capacity for VE initiatives are encouraged to conduct a needs assessment among their instructors who have experience implementing VE and the institutional partners they work most closely with, to identify how available resources could be shared and which remaining resource gaps cause the greatest need. The needs assessment could utilize some of the questionnaire and focus group questions from this study to identify which institutional resources instructors are aware of and making use of, the challenges that are most prevalent during their VE implementations, and the resources they think would be helpful in the future. By investigating the VE implementation experience on both sides, institutions will be better able to identify resource gaps and opportunities for resource sharing that can foster equity and strengthen institutional relationships. They will also be better able to counsel and support their own instructors in navigating different institutional contexts in respectful and productive ways.

To better understand the barriers that prevent instructors from continuing with VE, it would be useful to develop a future study centering around instructors who have stopped engaging with VE after a few implementations. There may have been some instructors in this study who would fall within this category, but explicit questions on instructors’ future VE plans were not included in the questionnaire or focus groups. Additionally, while this study evidenced the differing experiences that VE instructors have within the same country, it would need to be carried out at a larger scale to thoroughly explore and capture the breadth of VE instructor experiences across a representative sample of U.S. and Mexican institutions (research universities, community colleges, liberal arts colleges, etc.). A larger-scale study could also intentionally recruit instructors with a range of VE experience levels to understand whether certain challenges become more or less salient during an instructor’s journey implementing VE semester over semester. Finally, further investigation into the impact of resource sharing and how it is being carried out amongst different partnerships worldwide could further illuminate its potential for addressing inequalities and promoting VE longevity.

7. Acknowledgment

The authors would like to thank Prof. Paloma Rodriguez and Dr. Ofelia Cervantes Villagómez for their review of and feedback on the manuscript.
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Appendix: Online Questionnaire for U.S. and Mexican Instructors on Institutional Resources and Recent Virtual Exchange Experience

1. What type of position do you currently hold?
   a. Tenured professor
   b. Tenure-track professor
   c. Clinical professor
   d. Adjunct professor
   e. Other __________

2. For how many years have you been teaching?
   a. Less than 1 year
   b. 1-2 years
   c. 2-4 years
   d. 4-7 years
   e. More than 7 years

3. How many years have you taught online courses?
   a. Less than 1 year
   b. 1-2 years
   c. 2-4 years
   d. 4-7 years
   e. More than 7 years

4. How many virtual exchange (VE) projects have you done, including the one you did within the last year and a half? Please count repeating the same virtual exchange project as separate instances (e.g., if you ran the same project twice, you would choose “2”)  
   a. 1
   b. 2
   c. 3
   d. More than 3

5. How many trainings on virtual exchange have you taken?
   a. 0
   b. 1
   c. 2
   d. More than 2

6. Which of the following resources is available to support VE at your institution and who is it available to, to your knowledge? (Check the box under one of the categories for each resource.)
<table>
<thead>
<tr>
<th></th>
<th>Available to me</th>
<th>Available to me and my partner</th>
<th>Not available</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional design staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT staff</td>
<td></td>
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<tr>
<td>International office staff</td>
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<tr>
<td>Virtual exchange coordinator</td>
<td></td>
<td></td>
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<tr>
<td>Financial incentives for VE instructors</td>
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<tr>
<td>VE training</td>
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<tr>
<td>Other _________</td>
<td></td>
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</tbody>
</table>

7. What subject area was your most recent virtual exchange course in (e.g. biology, art, history, etc.)?

8. How many times have you run this specific virtual exchange project?
   a. 1 time
   b. 2 times
   c. 3 times
   d. More than 3 times

9. Who participated in your most recent virtual exchange course?
   a. Undergraduate students
   b. Graduate students
   c. Both undergraduate and graduate students
   d. Other _____________

10. How long was your virtual exchange?
    a. 1-2 weeks
    b. 3-4 weeks
    c. 5-6 weeks
    d. 7-8 weeks
    e. More than 8 weeks

11. What was your motivation for developing this virtual exchange project?
12. How much time have you spent in your VE partner’s country, counting all your visits together?
   - a. Never been there
   - b. Up to 2 weeks
   - c. 2 weeks to 2 months
   - d. 2 to 6 months
   - e. 6 months to 1 year
   - f. More than 1 year

13. How challenging did you find the below aspects of your most recent virtual exchange project? Please rate on a scale of 0-10, with 0 being not challenging at all and 10 being extremely challenging.

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Rating (0-10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology access (Such as not having fast Internet access at home)</td>
<td></td>
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<tr>
<td>Technology skills (Such as not being familiar with an online platform)</td>
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<tr>
<td>Student resistance (Students do not want to participate in the VE)</td>
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<tr>
<td>Time management (Coordinating your availability with your partner and making time to work on the VE)</td>
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<tr>
<td>Task design (Developing VE activities that fit with your curriculum)</td>
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<tr>
<td>Intercultural issues (Cultural misunderstandings between you and your partner)</td>
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</tr>
<tr>
<td>Language differences</td>
<td></td>
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<tr>
<td>Academic culture differences (Differences in academic expectations due to culture, such as level of student participation in class)</td>
<td></td>
</tr>
<tr>
<td>Other, if any</td>
<td></td>
</tr>
</tbody>
</table>

Note: Original questionnaire consisted of 18 questions, including the ones listed above