# *Virtual Pathways to Global Competence: Korean Pre-Service Teachers' Experience in a U.S. Online Practicum*

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***Abstract***

*This study investigates the experiences of 75 Korean pre-service teachers who participated in the Virtual Global Teacher Education Program (VGTEP), a U.S. based online practicum offered by a partner university during the 2020-2022 pandemic. The program featured an online orientation, lectures from university faculty and local school educators, collaborative lesson planning, e-picture book creation, and virtual teaching practice. Upon completion, participants voluntarily completed an anonymous program evaluation survey, which included both Likert-scale items and open-ended questions. Data were analyzed using Bronfenbrenner's ecological systems theory to examine how virtual learning environments shaped participants' experiences across multiple contextual levels. Findings indicate that participants described the VGTEP experience as providing opportunities to engage with cross-cultural perspectives and reflect on their professional development. The study highlights how virtual international practicums can create accessible pathways for global engagement in teacher education by reducing barriers related to travel, cost, and scheduling.*

***Keywords:*** *virtual practicum, global teacher education, cross-cultural learning, international partnership, ecological systems theory*

## Introduction

Advances in educational technology have expanded opportunities for teacher education programs to engage in international collaboration through virtual exchange initiatives (Chang & Weng, 2023; O'Dowd, 2018; O'Dowd et al., 2020). These digitally mediated environments enable pre-service teachers to interact across national boundaries and engage with diverse educational perspectives relevant to increasingly globalized classrooms (Gleason & Cherrez, 2021; Wahls et al., 2017). Although on-site practicum experiences remain the ideal model for immersive learning, virtual practicums have emerged as a meaningful avenue for global teacher preparation when traditional mobility is limited. Research shows that well-designed virtual experiences can foster authentic, interactive learning and professional growth (Forbes et al., 2023).

In South Korea, increasing multiculturalism has elevated the need for globally competent teachers (Oh & Nussli, 2021). In response, national policies such as Global Citizenship Education have emphasized international exposure and cross-cultural competence as essential components of

teacher preparation (Ministry of Education, 2016). To support these goals, the Virtual Global Teacher Education Program (VGTEP) was developed as a digital adaptation of an existing in-person practicum. Although initially launched during the COVID-19 pandemic, the program demonstrates continued relevance beyond crisis conditions. Many pre-service teachers still face financial, visa-related, and logistical barriers that limit access to international field experiences. Virtual practicums offer a scalable and equitable alternative that maintains opportunities for cross-cultural interaction, digital pedagogy practice, and exposure to diverse classroom environments.

Despite a growing body of research on virtual exchange and online teacher education, several gaps remain in the literature. Much of the existing research has focused on language learning contexts or general higher education settings rather than structured virtual practicum experiences within teacher education programs (Helm, 2015; O'Dowd, 2018). In addition, studies examining virtual teaching placements frequently focus on adaptations to online teaching and practicum experiences during COVID-19 school closures rather than intentionally designed international collaboration initiatives (König et al., 2020; Sepulveda-Escobar & Morrison, 2020). Consequently, limited research has examined how structured virtual international practicums function as cross-cultural learning environments for pre-service teachers, particularly from non-Western perspectives. While some studies have explored virtual teacher education programs using experimental or quasi-experimental approaches to examine instructional outcomes, a growing body of research also highlights the importance of examining participants' experiences within complex learning environments shaped by technological, institutional, and cultural contexts (Damşa et al., 2019; Ellis & Goodyear, 2019).

This study contributes to the literature on virtual global teacher education by examining Korean pre-service teachers' experiences within a structured U.S. based virtual practicum, providing insight into how cross-cultural learning unfolds within digitally mediated international teacher education environments.

Guided by Bronfenbrenner's Ecological Systems Theory, the study further explores how interactions across individual, relational, institutional, and sociocultural contexts shape participants' experiences in virtual learning environments. Examining these layered influences offers a more comprehensive understanding of how virtual international collaborations function within teacher education programs. In doing so, the study also highlights how virtual practicums may serve as a complementary approach to traditional international placements by expanding access to cross-cultural learning opportunities for pre-service teachers who may otherwise have limited opportunities to participate in global field experiences.

## Literature Review

### Virtual Practicums and Global Teacher Education

Virtual exchange has emerged as an important model for international collaboration in higher education. Often referred to as telecollaboration, virtual exchange connects students and educators across national boundaries through digitally mediated interaction (Helm, 2015; O'Dowd, 2018). These programs are increasingly used to support intercultural learning, collaborative problem solving, and global awareness among teacher candidates (Wahls et al., 2017). Unlike traditional study abroad experiences, virtual exchange enables institutions to provide international learning opportunities without the financial and logistical barriers associated with travel. Research suggests that carefully designed virtual exchanges can support meaningful intercultural

dialogue and professional learning opportunities comparable to those found in physical mobility programs (O'Dowd & Lewis, 2022; O'Dowd, 2018). For example, Üzüm et al. (2020) found that telecollaborative exchanges between teacher trainees in Turkey and the United States contributed to the development of intercultural communicative competence, fostering cultural awareness, critical reflection, and openness to engaging with learners from diverse backgrounds. Building on these developments, virtual practicums have emerged as one approach within teacher education that extends virtual exchange into structured field-based learning experiences, offering flexible alternatives to in-person placements when physical mobility is limited due to financial, logistical, or global health constraints (Brillantes et al., 2023; Bouchey et al., 2021). While authentic, on-site practicums remain the ideal setting for developing classroom teaching skills, emerging research indicates that well-structured virtual exchanges can provide valuable opportunities for professional learning. Participation in virtual practicums has been associated with opportunities for pre-service teachers to engage in intercultural collaboration, develop digital pedagogical skills, and reflect on teaching practices within global educational contexts (Chang & Weng, 2023; Gleason & Cherrez, 2021; Wahls et al., 2017). When intentionally designed, such programs can support active engagement, reflective inquiry, and authentic learning experiences in digitally mediated environments (Forbes et al., 2023).

Recent research has further examined the role of virtual teaching practicums in teacher preparation programs. During the COVID-19 pandemic, many teacher education institutions implemented online or hybrid field placements that allowed pre-service teachers to practice instructional strategies in digital learning environments (König et al., 2020; Sepulveda-Escobar & Morrison, 2020). Studies suggest that these experiences can support the development of digital pedagogy, reflective teaching practices, and adaptive instructional strategies when thoughtfully implemented (Forbes et al., 2023). Although virtual experiences cannot fully replicate the dynamics of in-person classrooms, they provide meaningful opportunities for teacher candidates to develop technological competence and engage in global collaboration skills that are increasingly essential in contemporary education (Brillantes et al., 2023).

Effective virtual practicum models are grounded in pedagogical approaches that promote sustained interaction, peer collaboration, and structured feedback. Research on online learning environments emphasizes the importance of active learning and dialogic engagement to approximate the interpersonal dynamics of face-to-face classrooms (Damşa et al., 2019; Ellis & Goodyear, 2019). Digital platforms such as Zoom and Google Classroom allow teacher candidates to participate in collaborative instructional design, peer discussion, and reflective dialogue, creating interactive learning environments that extend beyond traditional classroom boundaries.

Global competence has also become an essential component of contemporary teacher preparation. As classrooms become increasingly diverse and globally interconnected, teachers must be prepared to engage with multiple cultural perspectives and support inclusive learning environments. Virtual exchange experiences have been identified as promising approaches for developing intercultural awareness, cultural sensitivity, and global perspectives among teacher candidates (OECD, 2018; Oh & Nussli, 2021). Research indicates that participation in international virtual exchanges can support teachers' ability to navigate culturally diverse educational settings and reflect critically on their own pedagogical assumptions (Chang & Weng, 2023; Kyei-Blankson & Nur-Awaleh, 2018).

Additionally, virtual international experiences may expand access to global learning opportunities for students who might otherwise face barriers to international travel (Reid et al., 2023).

Symeonidis and Impedovo (2023) found that virtual exchange can expand student teachers' professional awareness beyond their immediate national contexts by increasing their knowledge of other teacher education systems, appreciation of cultural diversity, and openness to transnational collaboration. Similarly, Emir (2023) demonstrated that telecollaboration can provide a context in which pre-service teachers engage with culturally diverse interlocutors, potentially supporting the development of critical cultural awareness and encouraging participants to reflect on stereotypes and biases in multicultural teaching contexts. Although many of these studies have been conducted primarily in European or language-learning contexts, they illustrate how virtual exchange functions as cross-cultural learning environments in teacher education, providing a relevant context for examining programs such as the Virtual Global Teacher Education Program (VGTEP).

**Theoretical Framework: Bronfenbrenner's Ecological System Theory**

Bronfenbrenner's Ecological Systems Theory (1979) provides a useful framework for understanding how learning and development are shaped through interactions between individuals and their environments. The model conceptualizes human development as occurring within a set of nested systems including the microsystem, mesosystem, exosystem, macrosystem, and chronosystem that interact dynamically to influence individuals' experiences.

Bronfenbrenner's framework was selected for this study because the VGTEP operates across multiple contextual layers, including direct instructional interactions, institutional partnerships between universities, digital communication tools, and cross-cultural engagement between participants in different national contexts. In digitally mediated environments, interactions extend beyond immediate instructional settings to include institutional structures, technological infrastructures, and broader sociocultural influences (Arifeen, 2023; Damşa et al., 2019). From this ecological perspective, teacher learning is understood as a socially and culturally situated process rather than solely an individual experience (Kozleski & Waitoller, 2010). An ecological perspective allows examination of how interactions with mentors, peers, and broader institutional and cultural contexts shape learning within virtual international teacher education programs.

Recent scholarship has also highlighted the importance of contextual layers in shaping learning experiences in digital environments. Barab and Roth (2006) emphasize the situated nature of learning, suggesting that learners develop knowledge through interactions with tools, activities, and social contexts. Similarly, Arifeen (2022) demonstrates how individual, institutional, and national contexts interact to influence students' online learning experiences, particularly in transnational educational settings. These studies reinforce the relevance of an ecological perspective for examining how digital learning environments function across multiple levels of influence.

In the context of the Virtual Global Teacher Education Program, an ecological perspective allows us to understand how learning spaces evolve through the interactions of Korean pre-service teachers as learners, resources, and tools for both physical and digital environments. An ecological perspective on learner-constructed learning spaces highlights how these spaces are shaped through the interactions of learners with their environment, which includes digital tools and instructional designs (Damşa et al., 2019; Ellis & Goodyear, 2019). This perspective aligns with Bronfenbrenner's theory, reinforcing the idea that learning spaces are dynamic, co-constructed by both the learner and the surrounding educational context. Figure 1 represents the layered influences of Bronfenbrenner's Ecological System.

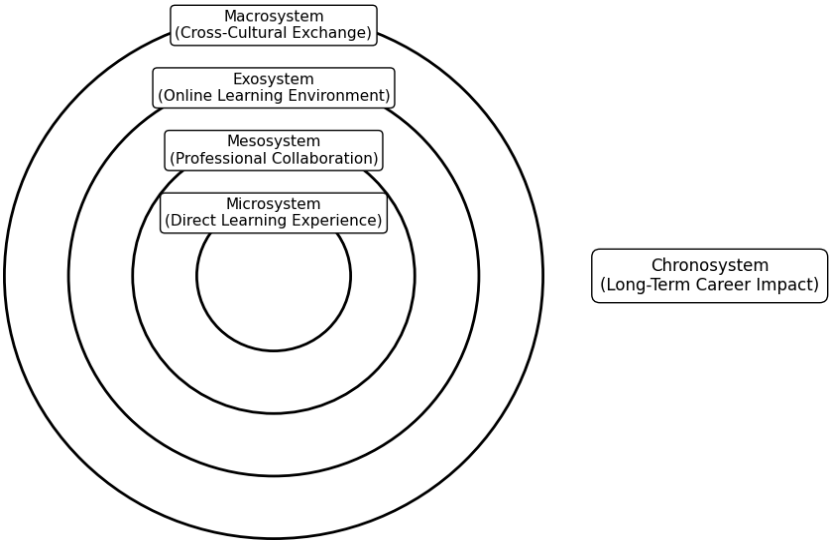



**Figure 1**. Bronfenbrenner's Ecological Systems Theory Applied to VGTEP

### *Microsystem*

The microsystem represents the most immediate environment influencing an individual's development, including direct interactions with people and learning contexts (Berk, 2018; Bronfenbrenner, 1994, 1979). In the VGTEP, this includes real-time engagement between Korean pre-service teachers, U.S. educators, elementary students, and digital tools such as Zoom and Google Classroom. These interactions form the core of the practicum experience, fostering pedagogical growth, intercultural communication, and adaptability in digital teaching spaces. Such direct exchanges serve as the foundation for shaping participants' emerging teaching identities and cross-cultural competence.

### *Mesosystem*

The mesosystem encompasses the connections among multiple microsystems (Berk, 2018; Bronfenbrenner, 1994, 1979), such as the links between participants' interactions with peers, faculty, and cooperating teachers across institutions. The VGTEP participants navigated relationships with both Korean and U.S. educators, facilitating cross-cultural dialogue and collaborative knowledge construction. These interconnected experiences allowed pre-service teachers to compare educational practices, reflect on their own pedagogical beliefs, and expand their perspectives on global teaching. In virtual settings, the mesosystem is especially critical, as it amplifies the influence of mediated communication on learning.

### *Exosystem*

The exosystem consists of structures that indirectly influence learners (Berk, 2018; Bronfenbrenner, 1994,1979), including institutional policies, program design, and technological infrastructures. In the VGTEP, elements such as curriculum structure, access to digital platforms, and national educational reforms shaped participants' opportunities for engagement. For instance, Korea's emphasis on Global Citizenship Education and the pivot to online formats during the

COVID-19 pandemic created enabling conditions for participation. These external forces, while not directly controlled by the learners, significantly impacted their virtual learning environment.

### *Macrosystem*

The macrosystem represents broader cultural ideologies, norms, and social values (Berk, 2018; Bronfenbrenner, 1994, 1979). Within the VGTEP, Korean pre-service teachers engaged with differing cultural expectations surrounding education, communication, and classroom dynamics. Exposure to U.S. schooling practices and multicultural pedagogy enabled participants to reconsider their own assumptions and values, fostering deeper global awareness and critical reflection. The macrosystem thus frames how participants interpret and integrate new cultural and educational experiences into their evolving professional worldview.

### *Chronosystem*

The chronosystem accounts for the role of time and transitions over the learner's developmental trajectory (Berk, 2018; Bronfenbrenner, 1994, 1979). Participation in the VGTEP occurred during a global crisis that disrupted conventional educational experiences, marking a significant moment of transformation. As participants adapted to virtual collaboration and international engagement, they acquired skills likely to influence their long-term professional identities. The lasting impact of the practicum experience such as increased confidence in using English, digital tools, and inclusive pedagogies reflects the chronosystem's role in shaping future educational practice.

Viewed through this ecological lens, the VGTEP emerges as a multidimensional experience that supports the professional growth of Korean pre-service teachers across individual, relational, institutional, and cultural levels. This framework grounds the present study's analysis and illuminates how virtual global practicums can contribute to equitable, future-ready teacher preparation.

## Methodology

### Participants

Ninety-three Korean pre-service teachers participated in the VGTEP from four teacher education universities in Korea between 2020 and 2022. Upon completion of the two-week program, 75 pre-service teachers voluntarily completed an anonymous program satisfaction survey, resulting in a response rate of approximately 80.6 percent.

### The VGTEP Program Overview

The Virtual Global Teacher Education Program (VGTEP) is a two-week online practicum developed through a partnership between a South Korean teacher education institution and a U.S. partner university. Originally implemented during the COVID-19 pandemic (2020-2022) as a digital adaptation of an existing in-person international practicum, the program was designed to maintain meaningful cross-cultural field experience when physical travel was not feasible. The program was structured around five core components: (1) an online orientation introducing participants to

the program structure, U.S. educational contexts, and partner institutions; (2) lectures by U.S. university faculty and local school teachers on topics related to multicultural education, inclusive pedagogy, and U.S. classroom practice; (3) lesson planning in which Korean pre-service teachers developed and received feedback from U.S. partner teachers; (4) e-picture book creation as a cross-cultural pedagogical project; and (5) synchronous virtual lesson implementation with U.S. elementary students by using lessons developed by pre-service teachers via Zoom. Lessons were conducted in English, and participants communicated with U.S. partners through platforms including Zoom, Google Classroom, email, and mobile messaging applications. The program ran from 8:00-10:00 a.m. Eastern Time (10:00 p.m.-12:00 a.m. Korean Standard Time) to accommodate time zone differences between the two countries.

**Data Collection**

Data for this study were collected through a structured online survey administered via Qualtrics following the completion of the VGTEP. The survey consisted of both quantitative and qualitative components and assessed participant perceptions of program design, instructional delivery, technological integration, cross-cultural engagement, and professional growth. It included Likert-scale items to measure satisfaction levels and open-ended questions to elicit in-depth reflections. Participation was voluntary and anonymous to promote honest and unbiased responses. The study was reviewed by the Institutional Review Board (IRB) and determined to be exempt. Table 1 presents the VGTEP program completion survey items used to assess participants' perceptions of program design, instruction, technology use, and cross-cultural learning. All items were rated on a 5-point Likert scale (1 = very dissatisfied to 5 = very satisfied).

**Table 1.** VGTEP Survey Items Organized by Ecological System

| Category | Microsystem | Mesosystem | Exosystem | Macrosystem | Chronosystem |
|---|---|---|---|---|---|
| **Program Evaluation** | Faculty/teacher presentation<br>Overall Activities<br>Assessment & feedback<br>Online teaching<br>Communication with U.S. partner | Communication (U.S. partner) | Overall Theme & Organization<br>Technology use<br>Assignments | | |
| **Self-Reflection** | Usable Information & Materials<br>Needs/interests met | Encouraged assertiveness<br>Cooperative opportunities | Suitable for experience level | Expanded global understanding<br>Improved diversity awareness | Career helpfulness<br>English motivation |

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| | | | | | |
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This study is designed as a post-program evaluation rather than an experimental intervention study. The data capture participants' reflections and satisfaction following completion of the program. Consequently, the analysis focuses on participants perceived experiences and professional insights rather than causal measurement of learning outcomes.

**Data Analysis**

Quantitative data were analyzed using descriptive statistics, with percentage distributions used to report satisfaction levels across various program components. Because the survey functioned as a post-program evaluation instrument, inferential statistical tests were not conducted. Qualitative responses were analyzed thematically to identify recurring patterns and meaningful insights. These qualitative themes were used to complement and contextualize the quantitative findings, offering a more comprehensive understanding of participants' experiences. Bronfenbrenner's ecological systems theory served as the analytical framework for interpreting the data within multilayered contextual environments.

## Results

Findings are organized according to the five levels of Bronfenbrenner's Ecological Systems Theory (1979) to examine the multi-layered influence of the learning environment on the VGTEP experience for Korean pre-service teachers: (1) Microsystem, captures the immediate, personal experiences of participants, such as instructional quality, activities, and feedback; (2) Mesosystem, which focuses on interactions between participants and their peers, U.S. faculty, and

partner teachers, emphasizing collaborative and communicative aspects; (3) Exosystem, encompasses institutional and technological elements that support or constrain the VGTEP experience, such as program design, tools, and resources; (4) Macrosystem, reflects broader cultural and educational understandings gained through cross-cultural engagement and exposure to global education; and (5) Chronosystem, which considers the long-term impact of the VGTEP on participants' professional growth and future career aspirations.

The table 2 presents participants' satisfaction ratings for various program elements, grouped by ecological system. Each survey item is mapped to its corresponding system to illustrate how participants engaged with the VGTEP at multiple contextual levels from direct interactions to anticipated long-term impacts.

**Table 2**. Participant Ratings of VGTEP Survey Items Across Ecological Systems

| Survey Item | Very Satisfied (%) | Satisfied (%) | Neutral (%) | Dissatisfied (%) | Very Dissatisfied (%) |
|---|---|---|---|---|---|
| **Microsystem: Direct Learning Experience** | | | | | |
| Overall presentation by U.S. faculty, principals, and teachers | 72 | 22.67 | 2.67 | 0 | 0 |
| Activities in general | 65.33 | 28 | 2.67 | 0 | 0 |
| Assessment/Feedback | 64 | 25.33 | 9.33 | 1.33 | 0 |
| Online Teaching Practice | 73.33 | 20 | 2.67 | 1.33 | 0 |
| Communication with U.S. partners via email or app | 68 | 24 | 5.33 | 0 | 0 |
| VGTEP provided information I can use in my work | 76 | 20 | 1.33 | 0 | 0 |
| VGTEP provided materials I can use* | 54.67 | 9.33 | 0 | 0 | 0 |
| VGTEP met my interest/needs | 73.33 | 22.67 | 2.67 | 0 | 0 |
| **Mesosystem: Expanding Professional Networking and Collaboration** | | | | | |
| Communication with U.S. students and teachers via email or app | 68 | 24 | 5.33 | 0 | 0 |
| VGTEP encouraged me to participate assertively** | 46.67 | 12 | 1.33 | 0 | 0 |
| VGTEP provided opportunities to co-operate with other people | 76 | 16 | 4 | 0 | 0 |
| **Exosystem: Online Learning Experience** | | | | | |
| The overall program of the VGTEP | 72 | 26.67 | 1.33 | 0 | 0 |
| The overall organization of the VGTEP | 64 | 26.67 | 5.33 | 0 | 0 |
| Technology Use: Google Classroom, Zoom, Email, Messenger app | 70.67 | 25.33 | 2.67 | 0 | 0 |

| Survey Item | Very Satisfied (%) | Satisfied (%) | Neutral (%) | Dissatisfied (%) | Very Dissatisfied (%) |
|---|---|---|---|---|---|
| Assignments: e-book, lesson plan, cross-cultural project, E-portfolio | 64 | 32 | 2.67 | 0 | 0 |
| VGTEP is suitable for my level of experience | 56 | 29.33 | 9.33 | 0 | 0 |
| **Macrosystem: Cross-Cultural Exchange** | | | | | |
| VGTEP expanded my understanding of global education, U.S. education system, and cross-cultural topics | 84 | 14.67 | 0 | 0 | 0 |
| VGTEP helped me better understand diversity, different school systems, and American culture | 77.33 | 21.33 | 1.33 | 0 | 0 |
| **Chronosystem: Supporting Long-Term Career Impact** | | | | | |
| VGTEP will be helpful in my career | 74.67 | 13.33 | 1.33 | 0 | 0 |
| Motivation to study English | 84 | 16 | 0 | 0 | 0 |

*Note.* Percentages represent the proportion of respondents selecting each response category. Participation in individual survey items was optional; therefore, the number of responses varies slightly across items. n = 48 for item marked with an asterisk, n = 45 for item marked with double asterisks.

Across survey items, participants reported generally high levels of satisfaction with several aspects of the VGTEP program, categorized into the five levels of Bronfenbrenner's Ecological Systems Theory. At the Microsystem level, participants reported strong satisfaction with direct interactions, such as the overall presentation by U.S. faculty (72% very satisfied), teaching activities (65.33%), and online teaching practice (73.33%). Within the Mesosystem, communication and collaboration stood out, with 76% of participants very satisfied with the opportunities to cooperate with others, though slightly lower ratings were observed in assertiveness encouragement (46.67%). The Exosystem results revealed satisfaction with institutional supports and digital tools, such as the overall VGTEP program design (72%) and use of technologies like Zoom and Google Classroom (70.67%). At the Macrosystem level, items related to cross-cultural learning received the highest average percentage of "Very Satisfied" responses (80.67%), with many participants indicating that the VGTEP expanded their understanding of global education, cultural diversity, and the U.S. education system.

Lastly, within the Chronosystem dimension, participants reflected on the potential longer-term relevance of the program. Many participants reported satisfaction with items related to future professional relevance, with 84% indicating increased motivation to study English and 74.67% noting that participation in the VGTEP could be beneficial for their future careers. These responses indicate generally positive perceptions of several components of the VGTEP experience.

**Comparison of Satisfaction Across Ecological Systems**

Analysis of participants' satisfaction ratings using Bronfenbrenner's Ecological Systems Theory highlights variation in how different aspects of the VGTEP experience were perceived across ecological contexts. The Macrosystem received the highest average "Very Satisfied" rating at 80.67%, indicating that participants expressed particularly strong satisfaction with the cross-cultural, global education, and diversity-related components of the program. The Chronosystem followed closely at 79.34%, suggesting that many participants perceived the experience as potentially relevant to their future professional interests, including career considerations and motivation to study English.

These patterns reflect how participants evaluated different dimensions of the VGTEP experience across ecological systems rather than measuring learning outcomes or program effectiveness. Figure 2 displays the average percentage of participants who selected "Very Satisfied" across the five ecological systems.

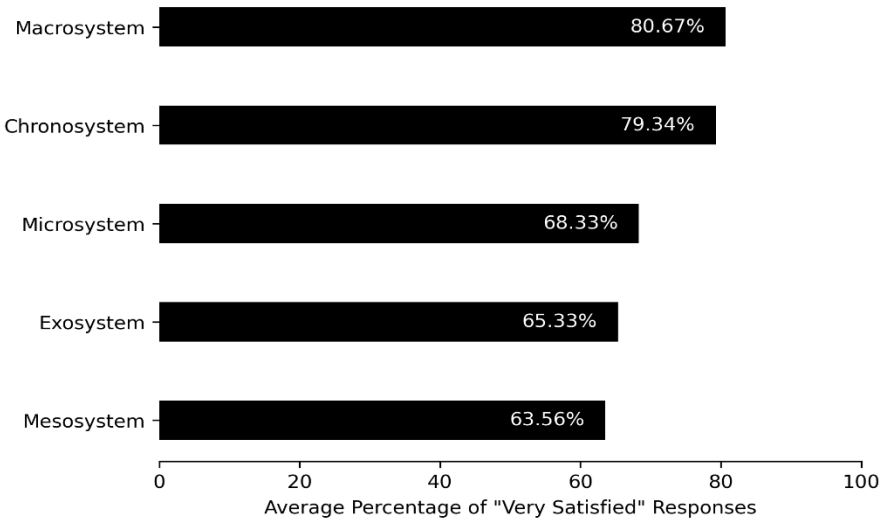



**Figure 2.** Average Percentage of "Very Satisfied" Responses Across Ecological Systems

In contrast, ratings were more moderate for the Microsystem (68.33%) and Exosystem (65.33%), which represent participants' immediate experiences with activities, teaching, and technology. The lower Exosystem score may indicate perceived limitations in institutional support structures or challenges related to program organization, scheduling, or technological consistency. Although these factors may not have been directly experienced, they likely had a meaningful impact on the overall learning environment. While still positive, these scores suggest room for enhancement in program delivery and logistical support. The Mesosystem received the lowest average rating at 63.56%, pointing to a potential area for improvement in collaborative experiences and participant interactions with peers and U.S. counterparts. This may reflect challenges in virtual cross-cultural communication or limited assertiveness in participation.

Overall, the comparison highlights how participants reported particularly positive perceptions of the program's global and cross-cultural components, while also identifying areas that may benefit from additional support, particularly in interpersonal collaboration and communication within online environments.

**Qualitative Results: Thematic Analysis of Open-Ended Responses**

A thematic analysis of the open-ended responses identified six themes reflecting key aspects of participants' experiences in the VGTEP program. These themes correspond to different ecological levels of Bronfenbrenner's framework. Table 3 summarizes the themes and their associated ecological systems.

**Table 3**. Thematic Analysis of Qualitative Responses by Ecological Systems

| Theme | Key Insight | Ecological System(s) |
|---|---|---|
| Active Learning | Valued experiential tasks like lesson demos and discussions | Microsystem, Mesosystem |
| Faculty and Peer Support | Supportive learning atmosphere fostered engagement | Microsystem, Mesosystem |
| Virtual Practicum Benefits | Online format was cost-effective and accessible | Exosystem, Microsystem |
| Scheduling Issues | Time zones and academic calendars created challenges | Exosystem |
| Cross-Cultural Exchange | Broadened global perspectives through collaboration | Mesosystem, Macrosystem |
| Skill Development | Improved teaching practice, confidence, and English proficiency | Chronosystem, Microsystem |

Participants expressed deep appreciation for the opportunity to engage in cross-cultural exchanges, emphasizing that interacting with U.S. educators and students was an enriching experience. Many participants noted that they gained valuable insights into different teaching practices and educational systems, with one respondent stating, *"It was great to have an exchange between Korea and the U.S. I learned so much in just two weeks and would love to visit in person next year if given the chance."*

The interactive aspects of the program, such as student-led moderation and collaborative lesson demonstrations, were highlighted as particularly impactful. One participant shared, *"It was an incredible experience to communicate with my partner in English and actually teach a class. I feel that my English skills improved a lot, and I even saved all the videos from the sessions!"* Another reflected on the meaningful role of engaging with U.S. teachers, stating, *"Partnering with current teachers in the U.S. and presenting at the symposium was a truly significant experience."*

Despite the overwhelmingly positive feedback, some challenges were noted, particularly regarding the scheduling of the program. Several participants expressed that the timing coincided with their exam period, making full participation difficult. However, they acknowledged that accommodating different academic schedules across countries was a challenge beyond the program's control. One respondent mentioned, *"It was unfortunate that the program overlapped with final exams, but I understand that it was inevitable."*

The program was scheduled from 8:00-10:00 a.m. Eastern U.S. time, which corresponded to 10:00 p.m.-12:00 a.m. in the Korea time zone. Some participants found the late session times

difficult due to time zone differences, but most recognized that efforts were made to find the best possible solution. One participant commented, *"It was a bit difficult to concentrate due to the late-night timing, but I believe the best possible schedule was arranged considering the time difference."*

On a more positive note, many participants praised the program's structure and the welcoming atmosphere created by faculty members. One participant expressed gratitude by saying, *"The professors were always kind and created an open environment where I felt comfortable participating. I truly appreciate their efforts."* Another participant stated, *"There were absolutely no downsides to this program. The professors were wonderful, and my peers were amazing."*

This integrated analysis, grounded in Bronfenbrenner's ecological theory, provides a comprehensive view of how the program's multiple layers affect participants. Overall, participants reported generally high levels of satisfaction with the VGTEP experience across all ecological system levels. Participants particularly expressed positive perceptions regarding the program's cross-cultural exchange components, opportunities to engage with global education perspectives, and its perceived relevance to their future professional interests. At the same time, survey responses suggested areas that may warrant further consideration, including supporting more assertive participation and ensuring that program activities align with participants' varying levels of prior experience.

## Conclusions

This study examined Korean pre-service teachers' experiences participating in the Virtual Global Teacher Education Program (VGTEP), a virtual international practicum developed through collaboration between Korean and U.S. teacher education institutions. Using Bronfenbrenner's Ecological Systems Theory as an analytic lens, the findings illustrate how participants described their experiences across multiple contextual levels. At the microsystem level, participants expressed positive perceptions of instructional activities, interactions with U.S. educators, and the use of digital teaching platforms. Mesosystem findings highlighted the role of collaborative interaction and cross-cultural communication, although some responses suggested opportunities to further support active participation. At the exosystem level, participants described the program structure, assignments, and digital infrastructure as supporting their engagement in the virtual practicum. Macrosystem responses reflected participants' perceptions of gaining exposure to global education perspectives and cross-cultural understanding. Finally, chronosystem responses indicated that participants viewed the experience as potentially relevant to their future professional interests.

Overall, the findings provide insight into how Korean pre-service teachers perceived participation in a digitally mediated international practicum. Rather than evaluating program effectiveness, the study contributes to understanding how virtual international collaborations are experienced within teacher education and how such environments may expand opportunities for cross-cultural engagement.

## Discussion

The findings of this study provide insight into how Korean pre-service teachers described their experiences participating in a virtual international practicum. Participants reported generally positive perceptions of multiple aspects of the VGTEP experience, including opportunities for cross-cultural interaction, collaboration with international educators, and engagement with digital

learning environments. These responses suggest that virtual field practicums may offer a context in which teacher candidates can interact with international partners and explore global educational perspectives.

One notable aspect of the VGTEP experience involved participants' engagement with cross-cultural exchange. Through interactions with U.S. faculty, teachers, and peers, participants described opportunities to learn about different educational practices and cultural perspectives. Such interactions align with previous research suggesting that virtual exchanges can create spaces for intercultural dialogue and professional reflection among teacher candidates (Wahls et al., 2017). Although virtual environments differ from traditional field placements, they may still support exposure to diverse educational contexts.

The findings also highlight the accessibility of virtual practicum models. Because participation does not require international travel, such programs may provide opportunities for students who face financial, scheduling, or mobility constraints that limit participation in traditional study abroad experiences. Participants in this study described the virtual format as allowing them to engage in practicum activities while balancing their existing academic commitments. These perceptions suggest that digitally mediated international experiences may broaden access to global learning opportunities within teacher education programs.

Participants also reported engagement with digital communication and instructional tools commonly used in contemporary educational environments. Platforms such as Zoom, Google Classroom, and mobile communication applications facilitated collaboration, lesson planning, and instructional interaction during the program. Exposure to these tools may help teacher candidates become familiar with forms of technology-supported teaching and communication that are increasingly relevant in global education contexts.

Finally, the implementation of VGTEP during the COVID-19 pandemic illustrates how virtual exchange models can sustain international collaboration during periods when travel-based programs are disrupted. As Bouchey et al. (2021) note, institutions that had previously integrated online and hybrid infrastructures were better positioned to maintain educational continuity during global disruptions. In this context, virtual practicums may represent one approach through which international engagement can continue despite logistical or global constraints.

## Implications and Future Directions

Participants' generally positive satisfaction ratings suggest that the VGTEP experience was perceived as a meaningful form of international collaboration in teacher education. At the same time, several considerations may inform future program development. For instance, participant engagement may be further supported through the incorporation of interactive elements such as guided discussion tools, immersive simulations, or gamified learning activities. In addition, differentiated instructional approaches that account for participants' varying levels of prior experience may help support diverse learning needs within virtual practicum environments.

Future implementations may also explore the use of emerging communication technologies, such as AI-supported translation tools or virtual reality enhanced learning environments, to strengthen cross-cultural interaction between participants and U.S. educators. Longitudinal research may provide additional insight into how participants perceive the relevance of virtual practicum experiences over time in relation to their professional development and teaching practices. Prior research notes that while online teaching practicums can provide opportunities for engaging with digital teaching practices, they may not fully replicate aspects of classroom management or

hands-on instructional experience (Brillantes et al., 2023). This indicates that hybrid models combining virtual exchanges with mentorship or in-person field experiences may provide additional avenues for supporting teacher preparation.

Overall, the VGTEP experience illustrates how virtual practicum models can expand opportunities for international engagement in teacher education, particularly when traditional mobility is limited by financial, logistical, or global circumstances. Rather than replacing traditional field experiences, virtual practicums may serve as complementary approaches that broaden access to cross-cultural collaboration and international learning within teacher education programs.

## Limitations

Several limitations should be acknowledged when interpreting the findings of this study. First, the analysis relies on post-program evaluation data rather than pre and post assessments of learning outcomes. Consequently, the findings reflect participants' perceptions of their experiences within the virtual practicum rather than direct measures of instructional effectiveness or learning gains. Future research may incorporate longitudinal or quasi-experimental approaches to examine how participation in virtual international practicums relates to participants' pedagogical perspectives, intercultural engagement, and digital teaching practices over time.

Second, the VGTEP program examined in this study represents a primarily one-directional international exchange in which Korean pre-service teachers engaged with U.S. educators and classrooms. Future studies may explore more reciprocal virtual practicum models in which teacher candidates from multiple countries participate as collaborative partners, potentially offering additional perspectives on cross-cultural teacher education and global professional learning.

## References

Arifeen, S. R. (2023). Ecological aspects of online learning in higher education: A qualitative multi-level exploration in a developing country. *Education and Information Technologies*, *28*, 8195-8217. https://doi.org/10.1007/s10639-022-11507-5

Barab, S. A., & Roth, W. M. (2006). Curriculum-based ecosystems: Supporting knowing from an ecological perspective. *Educational Researcher, 35*(5), 3-13.

Berk, L. E. (2018). *Development through the lifespan* (7th ed.). Pearson.

Bouchey, B., Gratz, E., & Kurland, S. (2021). Remote student support during COVID-19: Perspectives of chief online officers in higher education. *Online Learning, 25*(1), 28-40.

Brillantes, C. J. A., Sarona, J. M., Buslon, J. B., & Alieto, E. O. (2023). Prepared for the traditional, trained in the virtual: Impact of online teaching practicum on student teachers' readiness. In V. P. H. Pham et al. (Eds.), *Proceedings of AsiaCALL 2022* (Advances in Social Science, Education and Humanities Research, Vol. 744, pp. 115-132). Atlantis Press. https://doi.org/10.2991/978-2-38476-042-8_11

Bronfenbrenner, U. (1994). Ecological models of human development. In T. Husen & T. N.
Postlethwaite (Eds.), *International encyclopedia of education* (2nd ed., Vol. 3, pp. 1643-1647). Pergamon Press/Elsevier Science.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press. https://doi.org/10.2307/j.ctv26071r6

Chang, P., & Weng, S. (2023). Developing teacher candidates' global teaching competence through virtual exchange. *Asia-Pacific Journal of Teacher Education, 51*(5), 458-479.

Damşa, C., Nerland, M., & Andreadakis, Z. E. (2019). An ecological perspective on learner-constructed learning spaces. *British Journal of Educational Technology*, *50*(5), 2075-2089. https://doi.org/10.1111/bjet.12855

Ellis, R., & Goodyear, P. (2019). *The education ecology of universities: Integrating learning, strategy, and technology*. Routledge.

Emir, Ö. (2023). Raising critical cultural awareness through telecollaboration: insights for preservice teacher education. *Computer Assisted Language Learning, 36*(3), 288-311. https://doi.org/10.1080/09588221.2021.1916538

Gleason, B., & Cherrez, N. J. (2021). Design thinking approach to global collaboration and empowered learning: Virtual exchange as innovation in a teacher education course. *TechTrends, 65*(3), 348-358. https://doi.org/10.1007/s11528-020-00573-6

Helm, F. (2015). The practices and challenges of telecollaboration in higher education in Europe. *Language Learning & Technology, 19*(2), 197-217. https://doi.org/10.64152/10125/44424

Forbes, D., Gedera, D., Brown, C., Hartnett, M., & Datt, A. (2023). Practical learning in hybrid environments: Can remote learning be active, authentic, and real?, *Distance Education*, *44*(2), 362-379. http://doi.org/10.1080/01587919.2023.2198487

König, J., Jäger-Biela, D. J., & Glutsch, N. (2020). Adapting to online teaching during COVID-19 school closure: Teacher education and teacher competence effects among early career teachers in Germany. *European Journal of Teacher Education*, *43*(4), 608-622. https://doi.org/10.1080/02619768.2020.1809650

Kozleski, E. B., & Waitoller, F. R. (2010). Teacher learning for inclusive education: Understanding teaching as a cultural and political practice. *International Journal of Inclusive Education, 14*(7), 655-666.

Kyei-Blankson, L., & Nur-Awaleh, M. (2018). Shifting teacher cultural awareness and teaching through study abroad experiences. *International Journal of Multidisciplinary Perspectives in Higher Education, 3*(1), 31-44. https://doi.org/10.5281/zenodo.2525_829

Ministry of Education. (2016). *2016 education policy plans: Happy education for all, creative talents shape the future*. Sejong, South Korea.

O'Dowd, R., Sauro, S., & Spector-Cohen, E. (2020). The role of pedagogical mentoring in virtual exchange. *TESOL Quarterly*, *54*(1), 146–172. https://doi.org/10.1002/tesq.543

O'Dowd, R. (2018). From telecollaboration to virtual exchange: State-of-the-art and the role of UNICollaboration in moving forward. *Journal of Virtual Exchange*,1,1-23. https://doi.org/10.14705/rpnet.2018.jve.1

OECD. (2018). *Teaching for global competence in a rapidly changing World*. OECD Publishing. https://doi.org/10.1787/9789264289024

Oh, K., & Nussli, N. (2021). Does short-term international immersion have a sustainable impact on teachers' cultural competence? Follow-up interviews eight years after a teaching experience in South Korea. *Journal of the Scholarship of Teaching and Learning, 21*(3), 49–70. https://doi.org/10.14434/josotl.v21i3.31178

Reid, K., Butler, D. L., Comfort, C., & Potter, A. D. (2023). Virtual internships in open and distance learning contexts: Improving access, participation, and success for underrepresented students, *Distance Education*, *44*(2), 267-283, DOI: 10.1080/01587919. 2023.2209029

Sepulveda-Escobar, P., & Morrison, A. (2020). Online teaching placement during the COVID-19 pandemic in Chile: Challenges and opportunities. *European Journal of Teacher Education*, *43*(4), 587-607. https://doi.org/10.1080/02619768.2020.1820981

Symeonidis, V., & Impedovo, M. A. (2023) Where internationalisation and digitalisation intersect: designing a virtual exchange to enhance student teachers' professional awareness as European teachers. *European Journal of Teacher Education, 46*(5), 821-839. https://doi.org/10.1080/02619768.2023.2243644

Üzüm, B., Akayoglu, S., & Yazan, B. (2020) Using telecollaboration to promote intercultural competence in teacher training classrooms in Turkey and the USA. *ReCALL*, *32*(2), 162-177. https://doi.org/10.1017/S0958344019000235

Wahls, N., Méndez-Betancor, A., Brierley, M., Ariza Pinzón, V., Matsunaga, Y., Bocanegra, N., & Burns Vidaurrázaga, M. (2017). Collaborative learning in global online education using virtual international exchanges. *Journal of Studies in International Education, 21*(3), 233–254. https://doi.org/10.1177/1028315317706374

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