

# ***MULTILINGUAL COMMUNITIES ENGAGING IN DISTANCE LEARNING What Lessons Can Be Learned?***

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While distance education technology combines individual locations virtually, distance education communities are shaped by how participants share resources. Distance education communities are established over time through overlapping spheres of influence. Research is needed that considers how transnational families and students are either invited or discouraged from sharing their linguistic and cultural resources within distance education communities. This article describes the results of a 2-year qualitative study that examined distance education communities containing transnational multilingual elementary students and families. This article discusses factors that should be considered when supporting distance education programs.

## ***INTRODUCTION***

The advancement of distance education during the COVID pandemic has reshaped how many schools, communities, and university partners relate. Research has documented how school administrators, teachers, families, and students react to changing sociopolitical, cultural, and economic considerations (Barajas-López & Ishimaru, 2020). COVID has highlighted the need for research that examines the interrelationship of multilingual participants in distance education environments. While research has focused on the need for refugee students

and families to develop technology skills (Desjardins, 2021), few articles examine how distance learning defines relationships among multilingual, multicultural stakeholders. Relationships among stakeholders can determine outcomes such as the development of curriculum goals or how assessment tools are developed. By examining how parties relate to each other within distance education, researchers may find valuable resources and perspectives that may have been previously overlooked. In addition, examining the relationships between parties may lead to equity within educational communities (Croce, 2017). Research is

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needed to examine relationships between various multilingual, transnational stakeholders involved in distance education. In order to address this need, this article looks at the relationships surrounding the participants involved in an after-school distance learning tutoring program for multilingual elementary learners. The findings of this study suggest that there are multiple factors that educators should consider when developing distance education programs.

In distance education, students and teachers are often simultaneously located in individual spaces, such as their homes, yet reunited within a shared virtual space. Such duality necessitates examining overlapping spheres of influence, and it is important to investigate who has formal and informal power in these environments. In addition, researchers need to contextualize the differing cultural and linguistic resources of students, families, and teachers in virtual environments. This article presents findings from a 2-year qualitative study focusing on the stakeholders associated with an after-school distance learning program for multilingual students. Specifically, the study focused on the research question, “How do multilingual families, multilingual elementary students, preservice teachers, and university faculty negotiate relationships within distance learning educational environments?”

Researchers may find it challenging to clarify who has ownership of the language and actions that define virtual spaces. In order to address these challenges, this article approaches student, family, and teacher spaces as well as the common virtual space through the lens of spheres of influence defined by sets of boundaries (Bernstein, 1971). While examining these boundaries, we also noticed a series of boundary spanners (Safford et al., 2017). Boundary spanners cross boundaries, allowing for a redistribution of resources. These resources could be linguistic or cultural. Discussions centering on boundaries, boundary spanners, and language negotiation help to create a clearer picture as to what may occur within distance education. Recommendations are made on how to support dis-

tance education environments involving multilingual participants.

### ***STUDY CONTEXT***

The qualitative study described in this article focused on the actions and dialogue of multiple parties associated with a distance learning, multilingual elementary student tutoring program during the 2 years after the introduction of COVID-19. Since this study was situated in the United States, this article describes “multilingual students” as students who spoke languages other than English in their homes. While the multilingual student tutoring program existed as a physical presence at an east coast school for 5 years prior to COVID-19 lockdowns in the United States in the Spring of 2020, the study examined the communities formed as the program moved online in the summer of 2020. During the program, a university supervisor, one of the coauthors of this article, supervised preservice teachers as they met multilingual students and families in Zoom rooms to create educational classrooms. Each preservice teacher met with a multilingual student in a different Zoom room from the other preservice teachers and students.

To initiate the program, the university supervisor sent emails to the parents of multilingual students in grades kindergarten through fifth grade at an east coast school. The east coast school was the same school where the multilingual tutoring program had been housed for 5 years before the pandemic. The emails contained flyers documenting how families could sign their students up for the voluntary distance education tutoring program. After 7 months, the university also issued invitations to the program to the families of multilingual elementary students in three different counties. Most multilingual elementary student participants joined the program within its first two semesters and remained with it for over 2 years.

As the preservice teachers taught within the distance learning after-school program, they

were concurrently enrolled in a methods course focused on working with linguistically diverse learners.<sup>1</sup> The course required class time at the university (virtually) and placement hours with multilingual students (virtually). The preservice teachers each taught within the tutoring program for only one semester as new preservice teachers replaced exiting preservice teachers. The university supervisor remained the supervisor for the distance learning after-school program during the entire 2 years of the study. Table 1 provides a context for the linguistic and cultural backgrounds of the participants in the study.

At the start of the study, the different parties were initially brought together in various ways. The university supervisor assigned one or two preservice teachers to work with one or two multilingual elementary students. A preservice teacher was assigned more than one student if multiple family members wanted to participate in the Zoom sessions. For example, preservice teacher K described her teaching situation in the following way:

With him being in fifth grade, I can tell that his (sibling) looks up to him. They tend to work very well together and feed off of one another. Even if her brother is doing more work/talking, having his sister there to observe what he is doing also helps her to learn. (Written interview response, August 2020)

This statement demonstrates that while a preservice teacher may have been assigned to work with one elementary student in a family, distance education teaching environments in the study quickly evolved to include multiple elementary students in a family. This change suggests that teaching within distance education environments has the potential to be focused on families as opposed to individual students. Multiple siblings in a family are not included in the student totals listed in Table 1 since siblings did not always consistently participate in teaching sessions.

To inform families how to reach the Zoom classrooms, the university supervisor provided the families' email addresses to the preservice teachers. Preservice teachers created individ-

**TABLE 1**

*Demographic Information Related to the Distance Learning After-School Program*

Length of distance learning after school program	<ul style="list-style-type: none"> <li>• Two years</li> </ul>
Number of preservice teachers in distance learning after-school program	<ul style="list-style-type: none"> <li>• 69</li> </ul> <p><i>(Note: Preservice teachers were only allowed to stay with the program while enrolled in a university course with the professor, and this required preservice teacher turnover each semester.)</i></p>
Number of students in the distance learning after-school program	<ul style="list-style-type: none"> <li>• 34</li> </ul> <p><i>(Note: Most students remained with the program across the two years, so there was little student turnover.)</i></p>
The linguistic diversity of student population in distance learning after-school program	<ul style="list-style-type: none"> <li>• 100% of students labeled as English language learners by their school districts</li> </ul>
Racial/ethnicity diversity of students participating in the distance learning after-school program	<ul style="list-style-type: none"> <li>• Latinx = 26</li> <li>• Korean = 4</li> <li>• Mixed race = 2</li> <li>• Indian = 1</li> <li>• Afro-Latina = 1</li> </ul>
Socioeconomic context of the students attending distance learning school program	<ul style="list-style-type: none"> <li>• Their school district qualified 79% of students in distance learning after-school programs to receive free and reduced lunch</li> <li>• 79% of students in distance learning after-school programs attended a title one school</li> </ul>

ual Zoom invitations for family members to activate for students. The preservice teachers emailed Zoom addresses to the parents each week. Since the Zoom invitations were directed through the university's online security system, only registered participants could enter the Zoom links. During class time for 1 hour each week, students and preservice teachers met at the Zoom address created by the preservice teacher. Family members activated the virtual classroom each week by clicking on the Zoom link, allowing the elementary students to meet with their preservice teacher using audio and visual. Preservice teachers utilized various resources in the Zoom sessions, such as the written chat bar option, interactive online whiteboards, online videos, and virtual books checked out of libraries. While the preservice teachers initially only communicated with family members by email, the university supervisor spoke with family members by

phone and through additional interviews. As discussed later, the communication paths evolved among parties as the study progressed.

This study draws on the analysis of recorded teaching sessions, preservice teacher interviews, and elementary student family member interviews. Table 2 summarizes the types of data collected during the study. Each teaching session was recorded on Zoom and sent by the preservice teacher to the university supervisor. The researchers took observational notes as they analyzed each teaching session. Preservice teachers were also asked to respond in writing to written interview questions. At the start of the study, one set of preservice teachers was asked to complete the written interviews. A different set of teachers was asked to respond to the same interview questions at the end of the study. Table 3 displays the written interview questions asked of preservice teachers. In addition, family members

**TABLE 2***Data Collection*

<i>Data Source</i>	<i>Artifacts</i>
Recorded Zoom teaching sessions	<ul style="list-style-type: none"> <li>• Observation of 230 hours of teaching sessions in distance learning after-school program</li> <li>• Observation of 240 hours of teacher training within university courses across two years</li> </ul>
Undergraduate/graduate interviews	<ul style="list-style-type: none"> <li>• 22 written responses to interview questions</li> </ul>
Parent interviews	<ul style="list-style-type: none"> <li>• 5 interviews</li> </ul>

**TABLE 3***Preservice Teacher Interview Questions*

1. What do you notice about what student(s) do and say when you work with them online?
2. What do you notice about what parents, family members, and siblings do and say when you are working with your focus student(s) online?
3. What do you notice about what you do and say when you work with your students online?
4. What do you notice about how your students and their families negotiate languages other than English as well as English during your teaching sessions online?
5. What do you notice about how you negotiate English and languages other than English during your teaching sessions online?
6. Do you notice anything specific about what you, your students, or their families do or say you feel is directly related to the virtual learning environment?

**TABLE 4***Family Interview Questions*

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1. How do you and \_\_\_\_ read together in English or (Insert language other than English)? For example, shopping lists, texts, recipes, et cetera.
  2. How do you and \_\_\_\_ write together in English or (Insert language other than English)? For example, shopping lists, texts, recipes, et cetera.
  3. How have you seen \_\_\_\_ change as a reader or writer over time?
  4. Do you think that the teachers who work with \_\_\_\_\_ should do anything differently?
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**TABLE 5***Data Analysis Pathway*

<i>Stage</i>	<i>Actions</i>	<i>Time Frame</i>	<i>Purpose</i>
Stage 1	<ul style="list-style-type: none"> <li>• Familiarize ourselves with the data</li> <li>• Generate initial codes</li> </ul>	<ul style="list-style-type: none"> <li>• May 2020–December 2020</li> </ul>	<ul style="list-style-type: none"> <li>• As data continued to be collected, we created initial coding systems throughout this time period. The intention was to continue to familiarize ourselves with the data and revisit the codes (Braun &amp; Clark, 2006).</li> </ul>
Stage 2	<ul style="list-style-type: none"> <li>• Continuously revisit data</li> <li>• Revise initial codes</li> </ul>	<ul style="list-style-type: none"> <li>• January 2021–May 2021</li> </ul>	<ul style="list-style-type: none"> <li>• As Braun and Clark (2006) indicate, after collecting an initial data set, we continued to familiarize ourselves as data collection evolved. Our code revisions were based on the initial framework and the recognition that codes may need to be discarded or revised over time.</li> </ul>
Stage 3	<ul style="list-style-type: none"> <li>• Continuously revisit data</li> <li>• Revise initial codes</li> <li>• Search for themes</li> </ul>	<ul style="list-style-type: none"> <li>• June 2021–December 2021</li> </ul>	<ul style="list-style-type: none"> <li>• While we continued to note data analysis within its current ongoing status, we began to examine whether initial coding generated at the start of the study helped us over time (Braun &amp; Clark, 2006).</li> </ul>
Stage 4	<ul style="list-style-type: none"> <li>• Review themes</li> <li>• Defining and naming the themes</li> <li>• Produce reporting</li> </ul>	<ul style="list-style-type: none"> <li>• January 2022–May 2022</li> </ul>	<ul style="list-style-type: none"> <li>• Based on the longitudinal aspect of data analysis, creating codes within the data collection period and as we started to step back from data collection was essential. Codes that appeared to be upheld short term may not have occurred long term (Braun &amp; Clark, 2006).</li> </ul>

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were interviewed. A total of five families volunteered to take part in interviews via Zoom. Table 4 displays the written interview questions asked of family members.

### ***DATA ANALYSIS***

To observe whether patterns shifted or were upheld over time, the longitudinal study described in this article encompassed 2 years of data collection. Based on the types of analy-

sis tools best suited for investigating these types of environments, data analysis began with an induction approach that generated themes (Braun & Clark, 2012). Such an approach has been used to great effect by other researchers within the field of distance learning (Yaraş & Gündüzalp, 2021). To ensure the validity of findings, it was essential to engage in both ongoing data analysis as well as analysis of data across time. Table 5 presents the four stages of data analysis, including actions, purposes, and time frame.

## **THEORETICAL FRAMEWORKS**

### ***Ecosystems and Boundary Spanners***

Within ecosystems, some boundaries can allow or deny individuals entry into a social group (Bernstein, 1971). Boundaries can allow for discontinuity of actions or inactions amongst and between social groups (Akkerman & Bakker, 2011). Since schools, communities, and universities are often comprised of individuals from diverse cultural and linguistic backgrounds (López et al., 2019), interactions among multiple actors may redefine boundaries and boundary crossing (Akkerman, & Bakker, 2011; Ashforth et al., 2000). Boundary spanners reach across stakeholders (Safford et al., 2017). The idea of boundary spanners will later be revisited as a way to situate the actions and dialogue of some parties within the ecosystem of the distance learning after-school program.

Drawing on Epstein's (1995) model of overlapping spheres of influence, we began to understand how the parties related to each other in ways that defined the distance education after-school program over 2 years. Leonard (2011) describes partnerships surrounding school communities as deliberate associations (voluntary or involuntary) involving the interchanging of knowledge, goods, or service with an intended impact of benefiting students. This article presents some elements that defined spheres of influence and some of the parties who served as boundary spanners. Analyzing this information may allow educators and policymakers to understand what may transpire in distance educational communities, influencing future actions and dialogues of all stakeholders.

### ***Language Negotiation and Translanguaging***

Transnationalism describes how individuals develop identities as they cross borders (Petron & Greybeck, 2014). Transnationalism shapes the identities of many immigrant, migrant, and refugee students and families (King & Rambow, 2012). Since distance edu-

cation involves participants from not just local but also global communities, educators must consider the role of transnationalism in forming distance educational communities. Since transnationalism involves negotiating both linguistic and cultural resources, it is critical to examine language and cultural brokering in educational communities (López et al., 2019). Language negotiation within classrooms involves affirming or denying the identities of individuals (García et al., 2017; Moll, 2019; Rios-Aguilar et al., 2019). Translanguaging is a term that has been described as communication across languages within a multisensory, multimodality experience (Li, 2018). Translanguaging may influence boundaries between parties. As classrooms expand through distance education, it is critical to investigate how language and culture define classroom communities as teachers build on the resources of students and families.

## **FINDINGS**

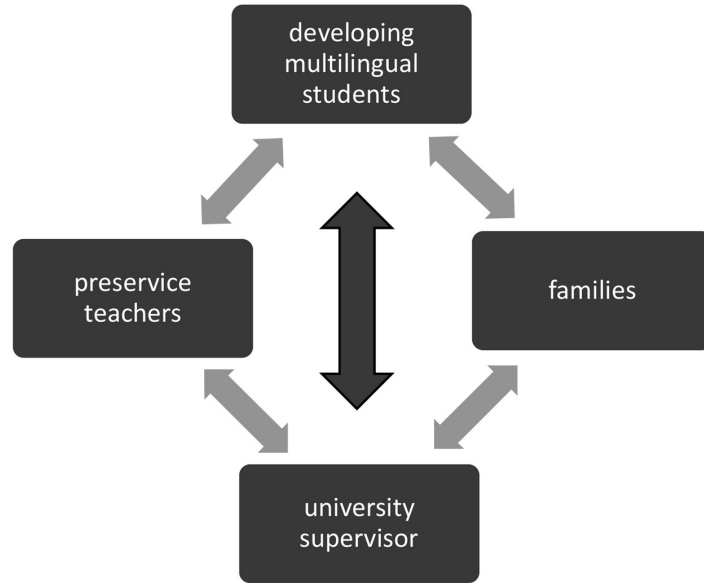
### ***Distance Learning and Ecosystems***

Figure 1 presents a visual representation of the flow of actions and dialogue at the beginning of the study. For example, at the start of distance education, all actions and dialogue produced by the preservice teachers either flowed back and forth with students or back and forth with the university supervisor. Communication with parents was mostly limited to briefly saying hello at the start of a Zoom teaching session or exchanging a few words by email to indicate how to activate the Zoom link. In contrast, at the start of the study, the university supervisor regularly asked students and families for their opinions and ideas about how they viewed the distance education after-school program. This information was then shared with the preservice teachers. Within this model, each group exists in its ecosystem with clearly defined boundaries.

Figure 2 shows how the flow of actions and dialogue changed over time. A paradigm shift occurred as families, preservice teachers, and

**FIGURE 1**

*Flow of Actions and Dialogue at the Start of the Study*



**FIGURE 2**

*Flow of Actions and Dialogue by the End of the Study*

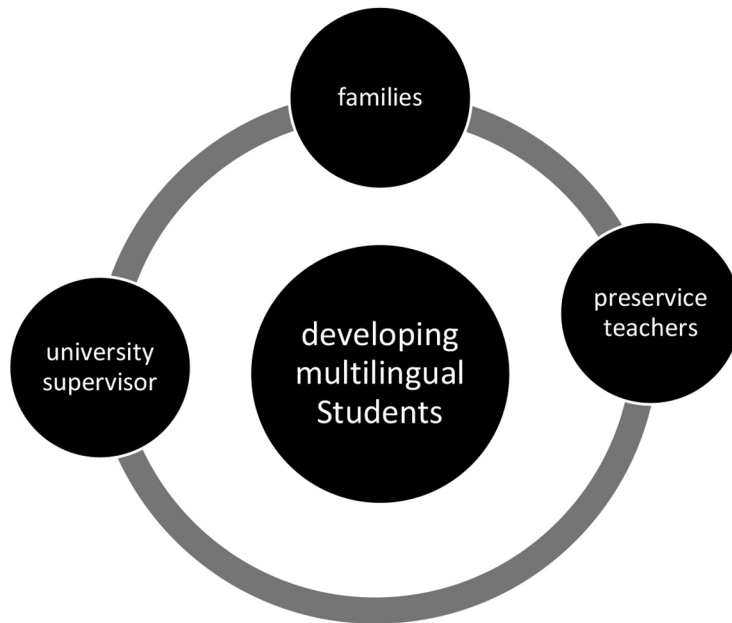
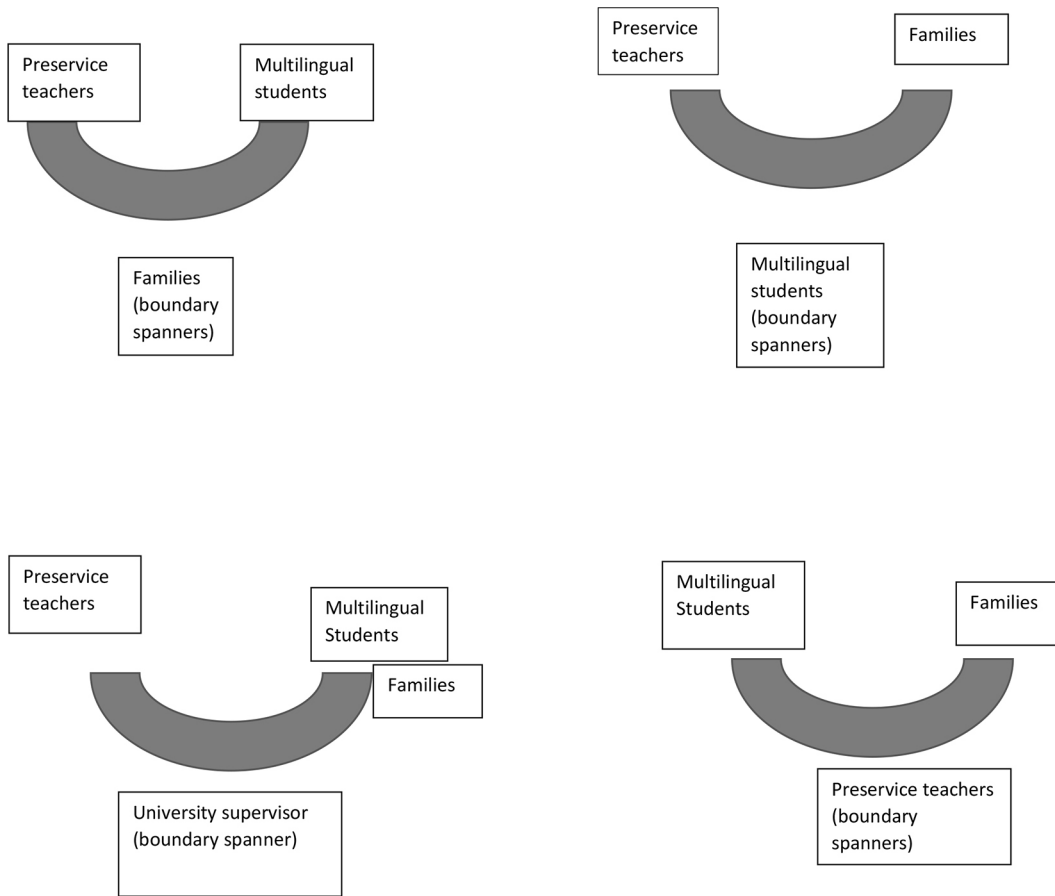


FIGURE 3

*The Boundary Spanners Within Distance Education*

the university supervisor entered a new ecosystem orbiting the students. This article examines some of the reasons why this change took place. When examining the data across 2 years, patterns emerged. Some specific individuals created pathways across stakeholders. These individuals, labeled as boundary spanners, communicated ideas across parties related to what was valued as learning, ways of providing feedback, and assessing success. These individuals facilitated the reshaping of ecosystems. Boundary spanners included multilingual families, multilingual students, university faculty, and preservice teachers. Figure 3 situates the boundary spanners among the

different parties. What follows is a discussion of some key observations that came to define the role of these boundary spanners. The results of this discussion may help inform how other educators and families view their actions and dialogue within distance education.

### ***Family Members as Boundary Spanners***

Family members redefined boundaries between other families and the university supervisor. As the tutoring program began its shift to distance learning in the summer of 2020 away from physical locations at an east

coast school, the university supervisor contacted the families of the students who spoke a language other than English at home by email and phone. She helped introduce these initial families to their first interactions with online learning. As families developed new understandings during the summer within the distance learning program, they shared that they had begun to talk with other families who were connected to the east coast school but not yet enrolled in the distance learning after-school program. Families served as boundary spanners who communicated confidence and trust in the intentions of the university supervisor. Families who had previously withheld their students from distance learning during the initial closure of schools in the spring of 2020 began to hear about the experiences of families participating in the distance learning after-school program. As the fall 2020 semester began, teachers noticed that more families were inquiring about enrolling their students in the distance education after-school program. As family members shared the resource of trust and confidence, they reshaped boundaries.

As the distance learning program progressed, family members also helped shift what was valued as knowledge by preservice teachers. As teaching sessions occurred through distance learning, family members frequently walked in and out of the computer frames. The university supervisor encouraged family members to join teaching sessions. The university supervisor encouraged preservice teachers to communicate directly with families during distance learning sessions. After interacting with families over time, preservice teachers began to design learning environments built on the strengths and resources of families in their homes and communities. For example, preservice teachers frequently asked elementary students to go into their physical environments and bring objects back to the computer screen. Family members and students would frequently return together with the objects and have discussions. During other instances, the university supervisor encour-

aged preservice teachers to prompt elementary students to ask questions of the family members. These questions included seeing examples of writing in the home, asking how families told stories, or how students helped family members when they were at work. Family members and students often shared answers with the preservice teachers. The student's family members served as boundary spanners who helped to reshape what was considered learning. Preservice teachers could then build lesson objectives around these new ideas. Once family members observed the preservice teachers asking questions and showing interest in the lives of the families, family members began to share more ways to build on students' strengths. Family members became boundary spanners by providing insights into students, allowing preservice teachers to build on students' strengths during instruction.

Families also guided language negotiations. Family members were observed speaking languages other than English to children during virtual sessions involving preservice teachers and the university supervisor. Preservice teacher N shared her observations of this phenomenon:

The student and family will bounce back and forth between English and Spanish throughout the session. I would say the student uses about 70% English and 30% Spanish each lesson. If the mother has a question Spanish communication is used but the father uses primarily English in the discussion. (Written interview response, May 2022)

As the children witnessed these exchanges, they viewed how preservice teachers reacted to verbal engagements with family members. The student's family members served as boundary spanners. These interactions with family members allowed preservice teachers to expand their perceptions of how ideas should be communicated. Since family members were required to help end the virtual connection for the distance learning sessions each week, they provided insight into what was happening in the background as the teaching session was

occurring and what would occur after the session ended. For example, one student finished a teaching session and was asked by the preservice teacher to bring the computer to his mother. The mother was cooking in the kitchen. The preservice teacher asked the student in English to ask his mom what she was cooking. The student asked his mom in Spanish what she was cooking. The mother responded to the student in Spanish, who then reported the response to the preservice teacher in English. The university supervisor, who was also present in the session, asked the elementary student to open up the refrigerator and read some of the food labels. The student identified some items in English and Spanish. The university supervisor asked the student if he wanted to include some of this writing in a drawing he had worked on during the previous distance education session. The elementary student responded that he did. He wrote on his drawing using the counter next to his mother. He moved between talking to his mother in Spanish, creating his writing in English and Spanish, and talking to the preservice teacher in English. At one point, the elementary student did not know how to spell a word, the university supervisor asked if he wanted to spell the word in English or Spanish. The student decided on Spanish. The preservice teacher then guided the student to use the strategy of sounding out a word to try to spell it. The student asked his mother in Spanish to help him with the sounds in the word. Within this scenario, the mother acted as a boundary spanner, helping to negotiate language during distance learning. Over the 2 years of the study, examples such as this were frequently observed as families helped shape how preservice teachers assessed students' language development. When developing multilingual students use their linguistic repertoires as resources, they are described as translanguaging (García et al., 2017). Family members may provide rich linguistic resources that support students as they translanguage within distance learning environments.

### ***Multilingual Elementary Students as Boundary Spanners***

Multilingual elementary students helped bridge the understanding of linguistic and cultural resources between preservice teachers and their families. Within the first few months of distance learning, preservice teachers initially would engage in questioning designed to draw the students' home life into instruction. After a few months, students spontaneously brought these resources into the learning sessions. For example, during one session in the summer of 2020, a teacher asked the student to find items in the house that demonstrated the concept of "big," "bigger," and "biggest." The student left the camera frame and went looking for the items. She returned to the camera frame to display the items that she found. After discussing with the teacher, the student decided to seek out an additional item in the house. She asked her mother, who was doing dishes in the background, where the item was. The mother came over to notice how the student engaged with the teacher and the household items. A year later, this same student would spontaneously pull her sister into the camera frame to help the student demonstrate with blankets the setting in a wordless picture book used by the teacher. As students began to explore the boundaries between home and school life, they connected families and preservice teachers.

Multilingual elementary students also contributed to language negotiations. For example, at the end of one distance learning session, a family member entered the computer frame at the end of a teaching session. The university supervisor, who was present in the session with the student and the preservice teacher, asked the elementary student to explain to the parent what the student and teacher had been working on together. The student talked directly to the parent in English, while the parent responded directly to the student in Korean. The student then navigated between Korean and English when directing the conversation to either the university supervisor, preservice teacher or his parent. The student

acted as a boundary spanner by allowing the parent, preservice teachers, and university supervisor to view how the student experienced language. Multilingual students became boundary spanners as they negotiated language among parties during distance education sessions.

### ***University Supervisors as Boundary Spanners***

The university supervisor also acted as a boundary spanner between families, preservice teachers, and students. The university course provided an environment where she could encourage preservice teachers to draw on the resources of families and students. Both in virtual university class sessions with the preservice teachers and during teaching sessions with students, families, and preservice teachers, the university supervisor modeled using critical thinking as a curriculum objective. As preservice teachers developed a sense of the critical thinking involved in a lesson, they developed flexibility with materials and outcomes during the distance learning sessions. Once the preservice teachers were clear on the critical thinking goals for lesson plans, they could encourage students to seek resources in their homes and share ideas and perspectives. They were not tied to predetermined materials or examples. Previously this article presented the example of the elementary student whose preservice teacher asked to secure items in her house representing big, bigger, and biggest. Before this teaching session, the preservice teacher talked with the university supervisor regarding curriculum goals. The university supervisor guided the preservice teacher to focus on a critical thinking objective. The preservice teacher selected “compare and contrast” as a critical thinking objective. The teacher was then able to employ the language of big, bigger, and biggest during the lesson to guide the student to compare and contrast. By focusing on a critical thinking objective during instruction, the preservice teacher could ask open-ended

questions that allowed the student to connect to the critical thinking skill and draw on the student’s resources. As the student sought resources in her environment, the preservice teacher could evaluate whether the elementary student’s actions demonstrated the critical thinking skill of compare and contrast. The university supervisor helped span the boundary between the students’ cultural resources and how the preservice teachers assessed learning. Another preservice teacher reemphasized this point by stating,

Something that I feel is directly related to the learning environment is the students having the ability to move around their home/bedroom and have access to various objects or resources. There are often times when my students are playing with small toys or something similar during the lesson. Sometimes I am able to connect the object in their hand to the lesson. For example, one student was playing with a sock, and we used it to talk about patterns on the sock. Through this virtual learning environment, I have learned how to be more flexible and incorporate things from the students’ home life into the lesson. (Written interview, May 2022)

Most preservice teachers did not start each semester with this perspective. The university supervisor acted as a boundary-spanner by expanding the idea of what learning could be during distance education.

When joining distance education teaching sessions, the university supervisor acted as a boundary spanner between elementary students and preservice teachers. During these sessions, the university supervisor expressed curiosity about the students’ surroundings. During teaching sessions with the elementary students and preservice teachers, the university supervisor did not discourage elementary students who engaged in teaching sessions from locations such as under the bed, walking through the house, or in the family restaurant. The university supervisor asked questions about the elementary students’ locations, such as whether there were toys under the bed or what types of print

could be found in the family restaurant. Initially, preservice teachers expressed disapproval of elementary students who positioned the camera so that it displayed anything other than a wall in the background. The preservice teachers also initially expressed discomfort with movement in the background or the entrance of family members into the frame. In discussions with the preservice teachers during university course time (virtual), the university supervisors verbally expressed delight that the students felt comfortable enough to let the preservice teachers see their worlds. Instead of viewing background movement or the presence of families as a deficit, the university supervisor encouraged preservice teachers to view these occasions as rich opportunities to draw on the resources of the students.

The university supervisor also acted as a boundary-spanner during language negotiations by modeling that she valued translanguaging. For example, during one teaching session, a kindergartner talked to the teacher in English and Spanish during the lesson. When the mother entered the frame to ask the student what was happening during the teaching session, the student began talking exclusively to the mother in Spanish. The university supervisor who was present in the teaching session began speaking to the parent and elementary students in Spanish. She asked the student what he wanted to write, and he said his response aloud in Spanish. The university faculty member asked the mother to ask her son to sound out what he wanted to write. This request was a strategy the preservice teacher employed during the English teaching session. The university supervisor was now modeling for the preservice teacher that it was okay to ask the parent to use the strategy in Spanish. When preservice teachers are encouraged to value translanguaging, they may value and support the multiple linguistic resources students may use during distance education.

### ***Preservice Teachers as Boundary Spanners***

As the study progressed, preservice teachers communicated that they valued the resources in students' homes as part of the curriculum. This acknowledgment influenced students' actions by encouraging them to share more. In addition, family members may have been encouraged to share more by witnessing these actions by the preservice teachers. As preservice teacher M indicated, "I have noticed that I am more relaxed and easygoing when working with the students over the computer. If we were in a classroom setting, I think I would feel these interactions were a bit chaotic, but in this environment, it works well" (Written interview response, May 2022). As the study progressed, preservice teachers, students, families, and the university supervisor continued to redefine what a distance education classroom should look like.

Preservice teachers demonstrated that they were trying to draw on students' language resources even if they did not fluently read, write or speak the languages spoken in a student's home. For example, preservice teacher B stated in her written interview,

When I hear my student communicating with his mom, they speak fluently in Spanish. I do not hear much or any English when they talk. When I use Spanish, I can see my student appreciates me trying. I am not fluent in Spanish, so I think it helps bring the stress level of our sessions down when my student can see I am trying to learn just like he is. I know I make mistakes and he never corrects me, just listens and tries his best to answer. I show him the same respect he shows me. (Written interview response, August 2020)

This example demonstrates a preservice teacher sharing what she valued as learning. The preservice teacher is describing how she learned over time to attempt to draw on a student's linguistic strengths even though they may not share the same strengths. The student and preservice teacher shared a common value that developing bilingually was an asset.

The preservice teachers also demonstrated that they valued multimodality within communication. As preservice teacher R explained, “Using hand gesturing, pointing, and writing in the chat bar is a great way to navigate language. Prompts like ‘Show me with your hands’ or ‘Tell me what you see’ help give the student a basis for speaking” (written interview, May 2022). Over time, the statement, “Show me” was frequently observed being used by preservice teachers. Time and space were required for students to think about their responses and to demonstrate reactions. For example, a student jumped out of frame as he demonstrated how a monarch butterfly develops. Preservice teacher X exclaimed, “Oh no. I am not seeing what you are doing. Can you show me what you are doing now?” (Teaching session observation, April 22, 2022). The elementary student then verbalized the actions he was engaging in outside the camera frame as he reentered the frame. These examples demonstrate how preservice teachers became boundary spanners that shared what might be valued as communication across parties.

### **CONCLUSIONS AND SUGGESTIONS**

While distance education technology combines individual locations virtually, distance education communities are shaped by how participants draw on each other’s resources. Educators and policymakers should consider how transnational families and students are either invited to or discouraged from sharing their linguistic and cultural resources within distance education communities. Distance education involves the establishment over time of sets of boundaries between parties. Elements such as language and culture create boundaries that keep individuals within or outside ecosystems. The findings discussed in this article suggest that educators should consider how actions and dialogue are positioned within different ecosystems. As educators examine what actions or lack of actions establish boundaries between participants, it may be useful to look

for boundary spanners. In the case of our study, boundary spanners allowed for the negotiation of language and what was valued as learning. Within the ecosystem described in this article, students, family members, preservice teachers, and the university supervisor all served as boundary spanners at different times. Our study contextualized how boundary spanners significantly contributed to the values, actions, and discourse of the ecosystems.

It is recommended that decision-makers look to boundary spanners within distance learning communities in order to potentially shift ecosystems. While inhabiting different geographical and physical locations, each teacher, multilingual student, family member, or university supervisor brought resources to a virtual community. After examining the boundary spanners in this study, it was discovered that several resources were brought across boundaries. For example, distance education communities may benefit from expanding the physical range of locations for students during teaching sessions. Positioning a student’s computer camera in family restaurants, kitchens, and front steps creates rich environments to draw on students’ knowledge frameworks. Distance education involves engagements that are physically occurring behind teachers and students while they simultaneously create a common distance education community. This creates the potential to bring more assets to the distance learning experience. Family members can participate in these sessions by describing regularly occurring family patterns, such as how they communicate or what they value. Distance education provides opportunities for students to share how the flow of language occurs naturally in their homes. As preservice teachers and university supervisors demonstrated that they valued translanguaging, multilingual students and families may be encouraged to draw on the full range of their linguistic repertoire. In addition, boundary spanners demonstrated multimodality in communication, suggesting that students should be encouraged to use a range of physical actions, written chat bar options, or interactive online

whiteboards to support the communication of ideas.

As curriculum-makers consider how to assess learning within distance education, it is important to recognize that distance learning embodies classroom environments that are continually redefining boundaries. Focusing on critical thinking objectives during instruction may allow teachers to draw on multilingual students' linguistic and cultural resources and family resources. If critical thinking becomes a goal within teaching sessions, as opposed to focusing on the use of particular materials or examples, distance education has the potential to more fully build on the resources of each participant. It is particularly important to examine how individuals can facilitate relationships that support multilingual elementary students in distance learning environments. Policymakers should consider involving families, teachers, and university faculty in discussions about goals for distance education.

### ***LIMITATIONS AND SUGGESTIONS FOR POTENTIAL STUDIES***

Future studies may encounter different sets of boundaries between parties. For example, some ecosystems may find teachers, administrators, or families who do not have the same goals for students. In the case of the study described in this article, boundary spanners presented concrete examples of how individuals may contribute to learning environments structured on students' linguistic and cultural strengths. Other learning environments may not contain participants with cohesive views of language and culture. In these situations, it may be difficult to find boundary spanners who are easy to observe as they share resources. If parties perceive a lack of support, the boundary spanners may cross borders in ways that are not visible to all stakeholders. Researchers may need to spend more time gaining participants' trust and observing actions over a longer term.

It is also essential to recognize that there are a variety of factors that may keep individuals from entering distance education communities. The participants in this study had access to technology that supports distance education. Some families were allowed to borrow laptops that were purchased by the school districts through grants. Other learning environments may struggle to provide the technology necessary to support distance learning. This may provide a barrier preventing individuals from entering into distance learning. In addition, within the university study, the university supervisor had the technical and language skills needed to guide each multilingual family through the use of technology for educational purposes. She dedicated time to teaching families how to use the written chat bar option, close a teaching session by hitting the "end" button, or remove audio by hitting the "mute" button. All of these functions are presented with English words that can provide a barrier to entering other online communities.

It is unknown whether the participants in the study continued their actions once a boundary spanner was removed from the ecosystem. After preservice teachers left the distance learning after-school program, it is unknown what types of actions and dialogue they engaged in when not presented with a university supervisor as a border spanner. Future research may seek to follow these preservice teachers as they help build distance education communities with families outside of the presence of a university supervisor. There is a question as to whether teachers and families benefit from having a community liaison act as a border spanner between parties within distance education programs. Overall, it is suggested that future research examine a wide range of borders and border spanners within distance education communities involving multilingual learners and families.

### ***NOTE***

1. Preservice teachers teaching in the summer of 2020 had already completed the university

course in the spring of 2020. The university supervisor met individually with each of these preservice teachers each week to provide ongoing support during the summer of 2020. All preservice teachers participating from August 2020 until May 2022 were concurrently enrolled in the university course.

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