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Exploring Students' World: Leveraging Funds of Knowledge Through Virtual Community Explorations

One essential part of teaching multilingual learners is leveraging their funds of knowledge, or students' dynamic knowledge and practices developed in their households and communities. However, it can be challenging to identify funds of knowledge, especially in a virtual environment. This case study examines a virtual internship experience where preservice teachers (PSTs) completed a Community Exploration project designed to enhance their knowledge of students' lives outside of school. PSTs identified important locations in the surrounding community, (virtually) visited these locations, and explored how to integrate possible funds of knowledge from these sites into their curriculum. Upon analyzing the Community Exploration projects, recordings of PSTs presenting their projects, and interviews with PSTs, we found that PSTs purposefully planned opportunities to discover students' viewpoints, which allowed them to identify concrete examples of funds of knowledge and make connections to curriculum. We also discuss various challenges and implications for teacher education.

Keywords: funds of knowledge, humanizing pedagogy, teacher education, virtual instruction

Curricula in K–12 education typically does not value or incorporate the rich lived experiences of culturally and linguistically diverse students (Salazar, 2013), who have throughout Western education's history been viewed as inherently having an educational deficit, lacking the knowledge and skills to succeed in schools because of their cultural, linguistic, and racial backgrounds (Espinoza et al., 2021; Flores, 2020; MacSwan, 2020; Reyes et al., 2016; Ruiz, 2010; Valencia, 2010). Consequently, educators miss out on making meaningful connections to learners' lives outside of school, which are crucial to providing equitable opportunities for students to access content and participate (de Jong et al., 2013; Moll, 2010). Remote learning during the COVID-19 pandemic made it even more difficult for teachers to build relationships with their students and to communicate with multilingual learners and families (Sayer & Braun, 2020), further complicating attempts to connect to students' lives outside of school. The pandemic, therefore, has further emphasized the pressing need for educators to understand students' realities beyond the classroom setting.

Asset-based and humanizing pedagogies can orient educators' attention to their students' lived experiences. Teachers who use humanizing approaches "recognize the sociohistorical and political context of their own lives and their students' lives" (Huerta, 2011, p. 39). They can then refocus instruction to incorporate students' background knowledge and prior experiences, intentionally positioning students

as active participants in the process of designing curriculum (Bartolomé, 1994; Huerta, 2011; Kidwell et al., 2021; Zisselsberger, 2016). As such, content regularly draws on students' viewpoints in addition to exposing students and their parents to learning possibilities in their own neighborhoods (Huerta, 2011; Salazar, 2013). One aspect of incorporating humanizing pedagogy is leveraging students' funds of knowledge, or the dynamic knowledge, skills, and practices developed in households and communities (de Jong et al., 2013; Moje et al., 2004; Moll et al., 1992).

Researchers have long advocated for curriculum and instruction to turn toward humanizing pedagogies (see Salazar, 2013) and to draw on students' funds of knowledge (see Hogg, 2011; Llopart & Esteban-Guitart, 2018; Rodriguez, 2013). Although prior research has examined how inservice teachers use humanizing pedagogies and leverage students' funds of knowledge (e.g., Salazar & Fránquiz, 2008), few studies have focused on preservice teachers (PSTs), especially in terms of how to prepare teachers of multilingual learners (Espinoza et al., 2021). Understanding students' funds of knowledge not only makes PSTs more informed about students' lives outside of school but also can disrupt deficit thinking (Saathoff, 2015). Therefore, more research is needed on how to prepare PSTs to conceptualize and mobilize funds of knowledge. Moreover, due to the COVID-19 pandemic, many PSTs have been attempting to learn about their students' backgrounds and experiences in a virtual environment where traditional methods, like home visits (González et al., 1995) and physically exploring students' communities (Espinoza et al., 2021), are not feasible. This study responds to the challenges of preparing PSTs to understand and leverage multilingual students' funds of knowledge during the pandemic by examining the question: how did a Community Exploration (CE) project support PSTs' understandings of multilingual students' funds of knowledge within a virtual environment?

Funds of Knowledge

González and colleagues (1995) wrote that the "prevailing notions of culture in schools center around observable and tangible surface markers: dances, food, folklore" (p. 456), a notion that seems to have persisted in the contemporary educational landscape (Llopart & Esteban-Guitart, 2018). Knowledge about larger cultural aspects related to students' lives, such as traditional music associated with a country or group, is important in understanding students' cultural backgrounds. However, Gutiérrez and Rogoff (2003) cautioned against overgeneralizing cultural traits, stating, "Equating culture with race, ethnicity, language preference, or national origin results in overly deterministic, static, weak, and uncomplicated understandings of both individuals and the community practices in which they participate" (p. 21). Students' funds of knowledge, or the more personalized practices and ways of knowing that students develop in their immediate communities outside of school, are therefore crucial sources of information that can lead to more effective teaching practices (Hogg, 2011).

Funds of knowledge have mainly been described as "historically accumulated and culturally developed bodies of knowledge and skills essential for household or individual functioning and well-being" (Moll et al., 1992, p. 133), a definition that closely relates funds of knowledge with the family unit (Llopart & Esteban-Guitart, 2018). Other researchers have broadened the definition to include students' interests more broadly (Hedges et al., 2011) and the ways of knowing that they develop from peer groups, communities, and popular culture (Moje et al., 2004). Furthermore, students' funds of knowledge expand through transnational experiences as they cross cultural and national boundaries (Dabach & Fones, 2016). Based on these varied definitions, we conceptualize students' funds of knowledge as including the inner workings of family life (e.g., cooking procedures, finances) (Moll et al., 1992). Additionally, we include aspects of students' lives, such as participation in community organizations (e.g., church), activities with friends (e.g., searching online for information about music groups) (Moje et al., 2004), and linguistic repertoires (Moll, 2010; Zisselsberger, 2016).

Preparing Teachers to Leverage Funds of Knowledge

Teacher preparation programs have an important task of supporting teachers as they learn to leverage students' rich experiences and knowledge in ways that make curriculum accessible and relevant (de Jong et al., 2013; Lucas & Villegas, 2013; Peercy et al., 2020; Short et al., 2018). According to Hogg (2011), "Funds of knowledge offers a conceptual framework for a key message for trainee teachers: first and foremost, know the learner" (p. 674). Prior research has examined how to prepare PSTs from various content areas to leverage funds of knowledge in their practice; in addition to learning various instructional strategies, multiple opportunities to practice humanizing pedagogies can encourage PSTs to affirm and draw on students' lived experiences (Espinoza et al., 2021; Turner & Drake, 2016; Whipp, 2013).

Research generally emphasizes that humanizing pedagogies should be integrated into PSTs' coursework and field experiences, but challenges persist in determining how to effectively incorporate funds of knowledge (López, 2017; Reyes et al., 2016). For example, Reyes and colleagues (2016) found that PSTs in the study could theoretically discuss funds of knowledge and knew its importance. However, pointing to direct examples of funds of knowledge was difficult for PSTs, and they "struggled to understand how to integrate these concepts into teaching strategies" (p. 28). Furthermore, McLaughlin and Barton (2013) found that PSTs used funds of knowledge as a "hook" to initially interest students but rarely drew on these ways of knowing to help students make meaning of content. Some PSTs in the study also maintained a deficit perspective despite preparation in theory and practice related to funds of knowledge.

Based on past research, it seems crucial for PSTs to not only learn about funds of knowledge on a theoretical level but also to practice communication and teaching techniques that elicit and promote students' funds of knowledge. As such, teacher education programs can incorporate opportunities for PSTs to interact with people from various cultural backgrounds and languages both within school/university settings and in community-based settings (Turner & Drake, 2016; Whipp, 2013). As part of PSTs' opportunities to practice humanizing pedagogies, teacher education programs may also use scaffolded assignments (e.g., planned interview questions for students, guided questions for classroom observations) (McLaughlin & Barton, 2013; Turner & Drake, 2016). In this study, we examine a project that provided PSTs guided opportunities to gather information about their students' ways of knowing and connect that information to their teaching practice.

Methods

Context

This study was conducted at a large mid-Atlantic university which offers an MEd program in TESOL. As part of the program, PSTs completed year-long internships split into two semesters, one in elementary schools and the other in secondary schools. Our six focal participants completed their internships during the 2020–2021 school year. The districts in which they were placed were the largest in the state and 2 of the 25 largest in the nation; one serves over 135,000 students, 21% of whom are classified as "English language learners," and the other serves over 162,000 students, 18% of whom are classified as "ESOL."

For the duration of their internships, PSTs participated in a seminar course that prepared them to complete state licensure and certification requirements. The seminar course for this study was co-taught by the second and third authors and functioned as a space for PSTs to share ideas and concerns about their ongoing internships.

There were several small-scale assignments for the course, one of which was the CE project. During the CE project, PSTs were asked to gather information about the multilingual students at their placement schools, particularly in relation to students' languages and literacies inside and outside of school, as well as the resources and assets that students had within their communities. Based on this information, which we encouraged them to gather directly from students and school staff, each PST was asked to choose three locations within their school's neighborhood that are sources of students' funds of knowledge and reflect on how these locations could relate to their pedagogy. The PSTs assembled the information they had gathered and their reflections in Thinglink, a multimedia website that incorporates text, images, music, and videos within one digital space. PSTs then shared their Thinglink URLs with peers and instructors and presented them in the seminar course.

The CE projects provided opportunities for PSTs to demonstrate their understanding of their students' ways of knowing and make connections to state and district curricula. Though PSTs completed a version of the CE project prior to the pandemic, the first and second authors reimagined the assignment to better align with the unique teaching context of virtual instruction and address challenges related to building relationships with students. Rather than having students explore (in person) various locations within the community and their physical school buildings, they were encouraged to purposefully (and virtually) investigate places that were relevant to students' lives. Examining funds of knowledge was also a new component, and we very intentionally included this requirement to give the assignment a specific purpose for why they should "visit" locations in the students' communities.

Data Collection and Analysis

To respond to our research question, we conducted a qualitative case study (Merriam, 1998). Yin (2014) argued that research questions which seek to explain "how" a phenomenon occurs can be answered very strongly by case studies. The phenomenon we examined is PSTs' learning to understand their multilingual students' funds of knowledge. We defined the case as the CE project during the seminar course, bounding it by the duration of the internship at the placement schools. We consider this to be a unique case (Merriam, 1998), as the societal conditions brought about by the COVID-19 pandemic required PSTs to collect information about their students virtually with few feasible possibilities of doing so in person. This unique case can inform not only our understanding of virtual teacher preparation but also what is possible for teachers leveraging students' funds of knowledge under circumstances when other strategies, like home visits, are not possible or feasible.

To examine this unique case, we collected documents and video recordings pertinent to the CE projects for the fall semester of 2020 from six PSTs. First, we collected the Thinglinks that PSTs submitted as assignments for the seminar course. We also collected video recordings of PSTs presenting their CE projects and any discussion between the seminar instructors (the second and third authors) and the PSTs related to the projects. After the seminar course had finished, the first author interviewed the PSTs about their experiences and how they applied technology and concepts from the seminar to their instruction during their placements. This data allowed us as researchers to examine PSTs' understandings about their students' funds of knowledge at the time of the project.

We began analysis with open coding, first focusing on the PSTs' interviews to get an emic perspective of their experiences and learning. We then coded the CE Thinglinks and presentations. Open coding resulted in codes such as intentional conversations with students, student identity, and differentiating curriculum. After open coding, we organized our analysis through axial and thematic coding. We categorized codes related to students' lived experiences, including how PSTs described individual students' choices, interests, and identities. We also categorized codes related to community,

including how PSTs described students' participation in various groups in and out of school contexts and places around the school with learning potential. Finally, we identified main themes that responded to our research question, which guided our organization of the findings.

Findings

Our analysis revealed that during the virtual CE project, PSTs considered how to identify funds of knowledge; they purposefully planned opportunities to discover students' viewpoints. The project also supported PSTs in identifying concrete examples of funds of knowledge. Furthermore, the projects facilitated PSTs making connections between their multilingual learners' funds of knowledge and their curricula, which was prescribed by the state and school districts. We also discuss challenges related to PSTs' misconceptions about funds of knowledge that could be addressed through further support and research in teacher education.

Identifying Students' Experiences

During the CE project, the PSTs identified their multilingual learners' funds of knowledge in various ways depending on their teaching context. Many PSTs described their approach to identifying funds of knowledge, which included having intentional conversations with their students/mentor teachers, surveying students directly through different platforms, and observing and taking notes about learners during instruction and interactions with classmates.

One of the PSTs, Cole, mentioned a variety of approaches and tools that he used to gather information about students' lives outside of the classroom (all names are pseudonyms). He described how he used the information gathered in an effort to create a "virtual community" during online instruction, when many of his students were reluctant participants (i.e., cameras off, mics muted). For example, he discussed surveying students:

In the beginning of the year, I just took Google surveys asking about interests . . . I still refer to those surveys throughout the year. But after I got information about students, I then created a Nearpod where students matched the name of the student to a fact about that person. And that was fun. I remember after that, people then started talking . . . Some of them were having conversations in Spanish, which is totally fine. But it just finally broke the bubble. (Interview with Cole)

Cole conceptualized a classroom community as a space where it was important not only for him to get to know the students' lived experiences but also where students could make connections and build relationships with one another. He utilized Google Forms and Nearpod as means for drawing out students' interests, and he created opportunities for students to show what they learned about each other. In addition to explicitly eliciting information about students, Cole also opened up space in class for conversations in Spanish, validating his students' multilingual repertoires. All of these approaches, according to Cole, helped him overcome the challenge he was facing with fostering student participation in virtual instruction. Later in the interview, he also described having intentional conversations with students:

I like the [CE] because I asked students their opinions of where they like to hang out. I also asked them what their schedule is. I found out a lot of students have jobs, and not your typical teenager jobs, [but those] like in the middle of the night working at [company name] warehouses or doing construction. A lot of them work with cars. (Interview with Cole)

Cole stated that the CE project encouraged him to ask students more intentional questions, and through these conversations, he was surprised to learn about where students worked.

Another PST, Alex, also discussed an affordance of the CE project and emphasized another challenging aspect of virtual instruction. Because of the pandemic, Alex was living in another state during the majority of her internship. She described:

The Thinglink [project] was helpful to me, especially since I wasn't living here. Getting to kind of understand the community without actually being there was interesting and made me feel a little bit more a part of the school. And it was a gateway into understanding my students. (Interview with Alex)

The CE project prompted Alex to become more knowledgeable about the community she was teaching in even though she could not be physically present. Through the project, she felt a connection to the school and to the students. Later in the interview, she also described her approach for further getting to know students' funds of knowledge:

It was an ongoing, and still is an ongoing, learning experience for me about taking notes from what my students tell me. And what I noticed that [*sic*] they're interested in or struggling with. So just organizationally speaking, that was important[,] figuring out that I needed to have a notepad next to me . . . I needed to be writing down [observations] that would help me with future lessons. (Interview with Alex)

Not only did Alex emphasize the importance of continually learning about students but also foregrounded how she documented this information to use in the future. Alex found a technique that helped her record the details that she learned—taking notes during class time that she could leverage in future planning and instruction. In these ways, Alex uncovered students' experiences and viewpoints.

The PSTs in this study faced several challenges during virtual instruction, including how to encourage student participation and create a community even when class participants were in disparate locations. They identified strategies, such as surveys and intentional (at times spontaneous) conversations, that illuminated their multilingual learners' funds of knowledge and reconceptualized for themselves what a "community" even meant in online environments. In their goals of creating classroom community and learning about students' lived experiences, PSTs pointed to affordances of the CE project, which supported them in choosing questions to discuss with students and tools to guide their identification of funds of knowledge.

Concrete Examples of Funds of Knowledge

As PSTs collected information about multilingual learners' funds of knowledge, they identified concrete examples to potentially draw upon. PSTs who used the approaches we discussed in the previous section identified specific life experiences as well as knowledge of discrete places that could inform and shape instruction. As such, most PSTs began conceptualizing students' lives outside of the classroom as rich sources for understanding the world. For example, Cole (quoted in the previous section) identified his high school students' knowledge from their jobs, which he expounded on in his CE project presentation:

This is my first fund of knowledge, jobs and income . . . I think a lot of the students work at jobs like [company name] warehouses in the middle of the night. Or they're doing construction because this helps support their family . . . And some of them can work up to 1am. And then they'll have to wake up and go to school around 6 to 7am . . . if they are already in the workforce . . . we

should utilize that and integrate that into our classrooms . . . And showing them that they have unique experiences and they've built these skills from their experiences, whether that's in work or just immigrating to another culture. They've acquired various skills and we should help them recognize that potential. (CE presentation, Cole)

In addition to highlighting students' tangible work experiences, Cole also made meaningful connections between his students' skills and practical applications in the job market. Beyond their work experiences, Cole showed a deeper understanding of how those experiences more broadly inform students' lives. For example, another common experience that he identified for his students was navigating the immigration process into the United States. Through the CE project, Cole had opportunities to more fully examine concrete examples of his students' funds of knowledge and reflect on their cross-cultural and professional ways of knowing.

Another PST, Lee, described a conversation she had with her multilingual elementary students about the languages they spoke, which evolved into a later lesson on languages and tradition. She described the progression of her collection of knowledge about her students:

We had Arabic-speaking students. We also had French-speaking students, and Spanish-speaking students. We talked a little bit about our own first languages. And we said hello in different languages . . . We designed [a lesson based on the district's prescribed curriculum] as the way to talk about traditions . . . I shared photos and talked about Chinese New Year . . . And they were so hooked with learning Mandarin, how to say their own Chinese zodiac. So we didn't get that much time [to talk] about their traditions. We do [*sic*] have two or three students volunteering, saying that I would like to share my tradition. And I would like to tell you about how I learned to read in Spanish. And I remember, a student told us that she felt sorry that she could not read very well in Spanish. And she hoped to improve that. (Interview with Lee)

During their initial conversation, Lee and her students discussed their linguistic backgrounds at a relatively surface level, describing what languages her students spoke and basic phrases for communication in those languages. Such a conversation provided opportunities for Lee to bond with her students over their shared linguistic funds of knowledge. As Lee and her mentor teacher shared more about their own linguistic and cultural viewpoints, they appealed to their multilingual learners' interests and skills in exploring new languages and cultural traditions. Such reflections on Lee and her mentor's part spurred several students to share their personal language histories and aspirations for developing their linguistic repertoires.

Although Lee acknowledged that she did not plan on her students exhibiting so much interest in the subject and had not allotted enough time to explore both her own linguistic and cultural background and her students', she recognized that the next step for her pedagogical development was to provide more time to focus on her students' sharing about their linguistic repertoires and traditions. This moment reflects findings similar to other studies, where many of the PSTs' efforts to identify concrete examples of their multilingual learners' funds of knowledge were not always planned or consistent even when prompted by the CE project (Espinoza et al., 2021; Reyes et al., 2016), but they continued finding ways to incorporate opportunities for students to share their interests and experiences.

Other PSTs also identified locations related to students' funds of knowledge that were either well known to their students or were places in the local community with learning potential. For example, Lyn, highlighted a local hiking trail and stream within easy walking distance of many of her students as well as

a local “big box” store that her students shopped at with their families. She recorded herself describing these locations within her CE ThingLink:

Students can access the Paint Branch trail just a half a mile from [their] apartment building. With its diversity of plant and animal life, this is a wonderful fund of knowledge for many different science topics, including plants, the water cycle, ecosystems, and habitats. When talking to the students about what they love most in their community, there was [*sic*] a resounding love for Costco . . . When asking the students why they love Costco so much, they said they enjoy tasting the samples, having snacks[,] and seeing all the toys. Additionally, they enjoy seeing their classmates. (Lyn’s recording, CE ThingLink)

Like many of the PSTs, Lyn tapped into one concrete place that her students had named during her direct surveying, Costco, which served as an inadvertent gathering point for students and their families as they shopped. Lyn also identified her students’ potential interest in local natural areas and the resources in the hiking trail near a large apartment building that fed into the school. Although it seemed like students may not have already known about this trail, Lyn identified the potential opportunities for learning. As such, Lyn not only drew on students’ viewpoints but also reflected on ways to expose students and expand their learning possibilities within their own neighborhood (Huerta, 2011; Salazar, 2013).

The examples of student funds of knowledge that many PSTs chose for the CE project were concrete and specific, often rooted in students’ lived experiences. Following the guidelines of the assignment, most of the PSTs who completed the CE project worked towards understanding the learners’ points of view. Such a focus on student-based knowledge avoids potential pitfalls of overgeneralizing students’ experiences based mainly on race or country of origin (Gutiérrez & Rogoff, 2003). Several of the PSTs were surprised about students’ responses to their surveys and intentional discussions (e.g., Cole was surprised that his students worked at warehouses, and Lee was surprised about students’ interests in learning additional languages). Their surprise indicated that they indeed identified concrete and specific funds of knowledge centered on students’ viewpoints and personal experiences, a task that can be challenging for PSTs (Reyes et al., 2016).

Connecting Community and Curriculum

Part of the CE project asked the PSTs to discuss how they would leverage students’ funds of knowledge in their teaching. Although some of the connections to curriculum were vague, the PSTs also made important, specific connections between their multilingual learners’ funds of knowledge and the content they teach, opening up possibilities for expert knowledge to come from community contexts in addition to school. Through their CE projects, PSTs made connections to their daily instructional goals and personalized (or reflected on how to potentially personalize) curriculum based on students’ experiences within communities outside of school.

Lyn (quoted in the previous section) and Alex both discovered that Costco was a common place their multilingual learners frequented with families, and they connected Costco to their daily instruction:

Figure 1
Alex's CE Project

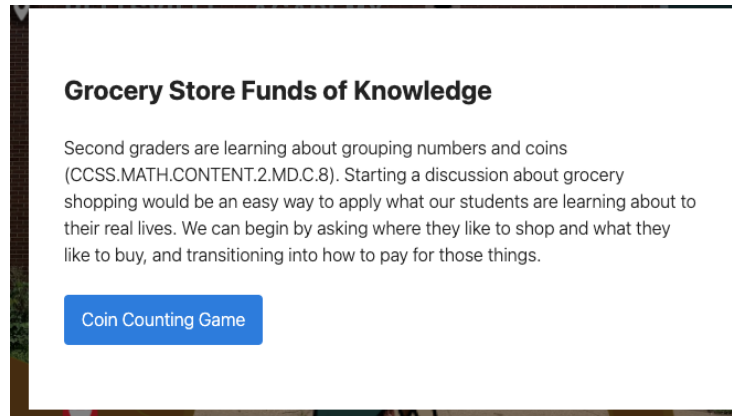
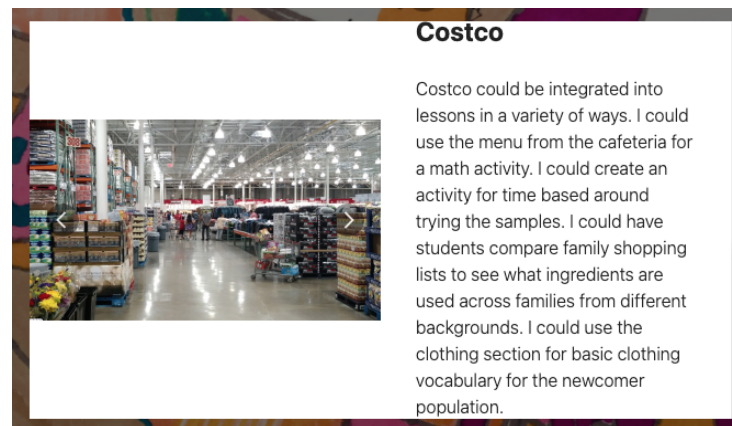


Figure 2
Lyn's CE Project



Lyn connected her instructional goals to multiple forms of knowledge that students would learn from their out-of-school experiences shopping. At Costco, students could choose clothing, eat meals in the food court, and get samples of grocery items, which were all practices corresponding with topics covered in her class content (e.g., the concept of telling time and commonly taught vocabulary terms). Alex associated students' ways of knowing to Common Core Standards, focusing on "grouping numbers and coins." Both PSTs' CE project examples demonstrated how they not only recognized the students' rich knowledge gained from the seemingly simple daily chore of grocery shopping but also centered the students' experiences in their instruction. Through the CE project, Lyn and Alex made their multilingual learners an important part of the curriculum design process (Zisselsberger, 2016).

Alex further focused on students' families and discussed their professions in her CE project presentation:

The agricultural park . . . They recruit people from all around the world to come work there, so their kids inevitably wind up at [my school] . . . It includes animal husbandry . . . the horticulture laboratory and research library . . . It would be really cool to take kids on a field trip there . . . Having those parent connections would be great. But even if we can't, just being able to talk to our kids about what their parents do, and applying that to, say, science. Or even asking one of the

parents to come speak to the kids about what they do would be really interesting. (CE presentation, Alex)

Alex described a location in the community where many parents work that would also have abundant affordances for student learning. Although Alex's connection to curriculum was vague since she only mentioned "science" broadly, recognizing and valuing parents' professional experiences centered community knowledge as a valuable source of learning. Understanding where parents work and incorporating those careers into class content would make a relevant and meaningful connection to the community's ways of knowing and would make parents and other community members a source of expert knowledge.

As evidenced by these examples, the CE projects helped PSTs reflect on how to bring students' ways of knowing directly into the classroom and/or how to take learning outside of the classroom and into meaningful community spaces. The PSTs drew on students' personal experiences, like shopping trips, as well as community resources, like family professional knowledge. Through the projects, PSTs showed their developing appreciation for community spaces, and they reflected on how to potentially mobilize community ways of knowing. As such, the project guided PSTs to begin conceptualizing community members as sources of expert knowledge, which the PSTs also related to the prescribed curricula.

Challenges

Although all focal PSTs completed the CE project, some encountered difficulties when it came to conceptually understanding funds of knowledge and how to identify and leverage them in an effective manner for the benefit of their students. In some cases, the PSTs focused almost exclusively on places in the community with learning potential for students and their families even though the students did not necessarily have connections to these places (e.g., libraries, museums). For example, one of the PSTs, Leticia, lived in the same community as her students. Rather than drawing from her students' lived experiences, she selected her favorite places in the community (e.g., a center for the arts), overlooking the fact that her experiences were likely much different than those of her kindergarten students.

In a similar manner, other PSTs also selected places that they found appealing rather than relying on their students' and/or mentor teachers' feedback. For example, Lee selected H Mart, stating in her CE presentation, "It's one of my favorite grocery stores and [city name] is always my grocery store destination. The reason why I picked H Mart is because, for me, when I first moved to this area, it was a great representation of ethnic diversity." Similarly, Talia selected a restaurant that serves Uzbek food, stating during her CE presentation, "I found a wonderful Uzbek restaurant . . . highly recommend if you ever go there. Uzbekistan is one of the countries in Central Asia. It used to be part of the Soviet Union. People speak Russian there."

In these two excerpts, it appears as if Lee and Talia's selections related more to their own funds of knowledge from experiences in multicultural/multilingual spaces rather than those of their students. In several examples like these within the CE projects, PSTs had a narrower focus and prioritized traditional academic spaces and locations that they favored rather than drawing on their students' understandings and lived experiences.

Discussion and Implications

The pandemic made it especially challenging for PSTs to build relationships with students and make connections between students' lives and their curriculum partially because they were teaching in a virtual environment, where informal, individual conversations with students were not feasible and where students often had their cameras off and mics muted. The CE project was designed to support PSTs in centering multilingual learners' experiences in their (virtual) instruction. Through the project, the PSTs identified important locations in the surrounding community, (virtually) visited these locations, and explored how to integrate possible funds of knowledge from these sites into their curriculum, a process which afforded them several important opportunities to learn about their students. Our findings revealed that using places in the local community as a starting point supported PSTs' identification of concrete funds of knowledge, but the most effective projects with the most learning potential for PSTs began and ended with students in mind.

Identifying locations and further exploring and interpreting information about their selected spaces also helped PSTs discover concrete examples of students' experiences and ways of knowing. However, it was crucial for PSTs to collect information about their students' lives outside of school directly from their students and/or their mentor teachers about their students. Provided that the PSTs took this important step, the CE projects helped the PSTs to validate multilingual learners' funds of knowledge and allowed them to reflect on how to mobilize learners' viewpoints and experiences in specific ways related to curriculum. Selecting locations that students directly identified as important to them afforded PSTs opportunities to make their multilingual learners part of their curriculum design process (Zisselsberger, 2016). For example, centering lessons around groceries that students and their families actually purchased from stores in their neighborhood could validate and mobilize students' day-to-day practices (e.g., Lyn and Alex's connections between Costco and content), more so than a worksheet with an abstract list of food items. Connecting curriculum to multilingual learners' interests and experiences helped the PSTs reflect on how to potentially engage students and allow students to draw on their rich knowledge bases throughout the learning process (Espinoza et al., 2021; McLaughlin & Barton, 2013).

On the other hand, in instances when PSTs did not gather robust information from their students' viewpoints, there was no direct connection between the students, the selected locations, or the content, which reinforced teacher-centered curriculum. In fact, when PSTs focused mainly on their own preconceived notions and points of view related to their students' community, the CE project as crafted by PSTs demonstrated a direct contradiction of the idea of mobilizing funds of knowledge since the projects strayed from students' actual experiences. Therefore, even though the CE project described how PSTs could go about understanding students' experiences, one overarching misconception about funds of knowledge was evident—some PSTs defined funds of knowledge by drawing upon places in the community that *they believed* had learning potential (e.g., libraries) rather than acknowledging and leveraging places where the *students or their parents themselves* already frequented. This conclusion further reinforces that PSTs' approaches to collecting information about students and their family is a critical aspect of mobilizing multilingual learners' funds of knowledge, and teacher educators should provide further support for PSTs to discover students' viewpoints and de-center their own perspectives.

This study has implications for teacher education programs. The instructions of the CE project encouraged PSTs to talk to mentor teachers and students and explore the following questions: "What are some places that serve as resources to the community? What are some places where students like to spend time outside of school? What are places where students have part-time jobs?" The assignment also provided PSTs with a list of possible locations to consider. However, it seemed that some PSTs either did not have opportunities to discuss with students or did not know how to identify students' experiences.

Assignments like the CE project can therefore provide more specific suggestions to PSTs for how to collect this valuable information (e.g., PSTs collectively creating survey questions) (McLaughlin & Barton, 2013; Turner & Drake, 2016). Additionally, it may be helpful for PSTs to first reflect on their *own* funds of knowledge before discussing with students, parents, and teachers, so that perhaps they can more clearly conceptualize their students' funds of knowledge as centering the *students'* perceptions. More research could provide further insight into the specific supports PSTs need to more fully understand funds of knowledge.

A second implication for teachers and teacher education programs is that learning about students' experiences and their community can happen regardless of constraints like time restrictions and lack of opportunities to be physically present in the same space. Virtual instruction can cause many extenuating circumstances, like how Alex was not living in the same state as her school and Cole's students often turned off cameras. However, encouraging teachers to intentionally ask about students' lived experiences, collect that information in various forms so as not to privilege one mode or medium of communication, and virtually explore neighborhood locations that are important to multilingual learners can have many affordances for teachers. Even within face-to-face instruction, teachers can conduct virtual "home visits" with platforms like Zoom or Google Meets, or they can use other digital tools to survey students and families (e.g., collaborative boards on Nearpod or Padlet). Approaches like these, which can be related to explicit assignments within teacher preparation programs similar to the CE project, can help promote humanizing pedagogies by purposefully identifying and mobilizing students' funds of knowledge. Centering students' funds of knowledge remains critical to the work of educators of multilingual learners, and the fields of educational research and teacher education would each benefit from further research on how to support educators in weaving the lived experiences of their students with curricular content.

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