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“Any Other Thoughts?”: Establishing Third Space in a Family-School-University STEM Partnership to Center Voices of Parents and Teachers

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ABSTRACT

Research practice partnerships (RPPs) that include parents and teachers as cocreators of educational programs provide opportunities to build equitable partnerships yet require university partners to intentionally develop spaces for coconstruction and synergistic interactions. RPPs built within a *third space* can foster engagement of all partners in the coconstruction of knowledge and practices while assuming roles and navigating partnership work through informal and formal communication. We define a third space as a hybrid, intangible space where inter- and intracultural pedagogies are constructed and shared identity is created from historical and cultural contexts of all partners. This study explored how university partners centered teacher and parent voices in the codesign and piloting phase of a culturally relevant preschool robotics program and facilitated codevelopment within a third space. Through in-depth qualitative coding, we analyzed 6 months of early partnership exchanges to identify how we, as university partners, facilitated discourse and what roles parents and teachers assumed within our third space. Results found that university partners frequently invited participation among partners and used revoicing strategies, and parents and teachers adopted roles as educators and advisors to the program design and implementation. Implications for RPPs include considering how both facilitator-discourse moves and collaborative spaces in which parents and teachers are central to partnership conversations and decisions contribute to successful outcomes.

Historically, RPPs have been formed between practitioners and researchers with the ultimate goal of educational improvement for children in grades K–12 (Penuel & Hill, 2019) by bridging the gap between research and practice (Bryk, 2015). Recent efforts to advance computer science education in preK–12 have leveraged RPPs as an especially promising model to guide the work (McGill et al., 2021). Successful RPPs value the diverse and complementary knowledge and experiences of all partners, establish routines for sensemaking and collaboration, and use evidence to guide decisions (Penuel et al., 2020).

As we consider the diverse educational contexts of young children and the growing need for RPPs that center on the early years, more partnerships are warranted that span school, home, and community spaces. Further, there is a critical need for early childhood educators and Black, Indigenous, and people of color (BIPOC) families to be partners in culturally responsive educational initiatives where they can share their perspectives and influence positive changes (Kayser et al., 2021). School-home connections and fluid educational opportunities across settings are particularly important in early

childhood (e.g., McWayne et al., 2022). Also, centering the voices of parents and teachers should be prioritized in RPPs, as it supports them in becoming coleaders of initiatives, ultimately disrupting historical power differences (E. Henrick et al., 2019) and increasing sustainability. Because traditionally produced academic research commonly isolates researchers into working within an echo chamber, we argue that our inclusive approach to researching and working alongside parents and teachers can create new opportunities for supporting implementation, thus, improving the research process and outcomes.

Much has to happen to ensure that RPPs are making intentional connections between educational theory, research, and practice. In this study, we investigate some of the strategies we used in our RPP interactions and activities in great detail. The purpose of this study was to explore how we, as university partners, centered teacher and parent voices in the codesign and piloting phase of a culturally relevant preschool robotics program and facilitated codevelopment in a third space. We conceptualize the third space as a hybrid, intangible space where inter- and intracultural pedagogies are constructed and partnership identity is created from the historical and cultural contexts of all partners (Laughlin, 2021). In this sense, the third space exists within spoken or physical environments (both formal and informal) and recognizes the multiple realities that emerge (Bhabha, 1994; Gupta, 2013, 2015; Kincheloe & Steinberg, 2008; Stevenson, 2015). In their recent review of RPPs, Arce-Trigatti et al. (2023) called for research that uses in-depth analysis and specific examples to evidence how RPP approaches and structures can be responsive to the needs of community practitioners. We contend that one such RPP framework includes the third space. Third space is vital to the sustainability of RPPs because it is where the practices, hierarchies, roles, norms, and expectations of the lived experiences of partners intersect and sometimes collide (Brown & Allen, 2021). In our study, we sought to partner with parents and teachers who are generally not well represented in the coproduction of education research efforts. Because of this lack of representation, ensuring their meaningful participation, on top of all the other tasks one must do to facilitate an RPP, was a priority.

Background of the family-school-university partnership

Our family-school-university partnership began over 5 years ago when Harper (Author 3) started working with a university STEM hub with the goal of increasing opportunities for STEM education in the region. Initial partnership activities focused on facilitating a major course project with graduate-level preservice teachers from early childhood, elementary, and special education programs. This project supported preservice teachers in learning about STEM resources in children's communities, designing an integrated STEM lesson that leveraged children's community and cultural experiences, and sharing that lesson at a family STEM event hosted by a local preschool or elementary school (for more details, see Caudle et al., 2021). Across the years, relationships were strengthened between Harper, the Title I Instructional Coach, and the principal of the participating preschool. Partnership activities expanded to include other events, such as those during the U.S. annual Read Across America Day. In 2021, Caudle and Quinn (Authors 1 and 2) joined the partnership, along with many other university partners, school faculty, families, and community partners, to begin the codevelopment and piloting of a culturally relevant robotics program for preschoolers.

Partners and setting

At the time of this study, our school and community partners included six pre-K teachers, two educational assistants (referred to as teachers in our work), two principals, seven parent leaders, one Title I instructional coach, and one after-school director. University partners included three faculty members (PI and Co-PIs) in STEM and early childhood education, a faculty advisor in computer science, one postdoctoral researcher, four graduate assistants, and five undergraduate assistants. The two partnering schools came from the same public school district and existed in communities near the university, which is located in an urban area (metro-area population ~ 771,000) of the southeastern

United States. These two schools serve predominantly Black and/or Latine children and families. After receiving funding from the National Science Foundation Computer Science for All program, we were able to shift partnership activities to a formal RPP where teachers, and community partners became independent contractors with the university. All pre-K teachers from participating schools were invited to join the partnership, and interested parents were identified and recruited with help from school principals and a nonprofit organization that serves Latine communities in the area.

Codevelopment

Early efforts were made by the university partners to create spaces where all RPP members could engage in collaborative program design and reflection. In the summer, university and community partners met and shared insights across multiple meetings held both virtually and in-person. During these meetings, teachers and parents engaged with materials that could be used at school or home and shared insights about what the activities might look like in their context, given their deep understanding of the children. In separate meetings across the fall, parents and teachers met with university partners to continue coconstructing the program. Throughout the project, informal communication (i.e., texts, emails, phone calls, virtual meetings) played an important role in revealing how the curriculum was functioning, including areas of refinement.

Conceptual framework

When rooted in sound educational theory, curriculum can bridge theory and pedagogical practice by guiding what is taught and how. Yet, the process of linking theory to practice through curriculum is far from straightforward. Positioning teachers (or parents and caregivers; Milner-Bolotin & Marotto, 2018) as mere implementers of curriculum fails to acknowledge the full complexities of the relational and social factors at work in the classroom (or home), leaving practice disconnected from theory (Craig, 2006). Alternatively, RPPs provide a promising model for linking theory to practice through curricular development and reform by connecting researchers and school stakeholders directly (Gupta, 2015). However, this approach is not without its challenges. Tensions among different cultural worlds of researchers and practitioners can collide, and social, structural, and physical inequities surface tensions among collaborators (Coburn & Penuel, 2016; Wallerstein & Duran, 2010). Further, BIPOC partners are particularly vulnerable to exploitation when partnerships seek to address diversity, inclusion, and equity-directed goals (Mercer-Mapstone et al., 2021).

Consequently, researchers have taken up various theories to understand RPPs through socio-historical, -cultural, and -political perspectives. For instance, Penuel et al. (2015) drew on cultural-historical activity theory to explore how boundary crossing (i.e., “transitions and interactions across different sites of practice,” p. 188) enabled joint work in RPPs, including researchers and school districts. Further, over the last decade, third space theory has provided a guiding basis for developing and studying school-university partnerships in teacher education (Beck, 2020; Gupta, 2020; Zeichner, 2010). Accordingly, we conditioned this tradition of attending to sociohistorical, -cultural, and -political elements in seeking to understand how RPPs function to bridge theory and practice.

Third space theory traces its roots to postcolonial theory and Bhabha’s (2004) *The Location of Culture*. Postcolonial theory “bears witness to the unequal and uneven forces of cultural representation involved in the contest for political and social authority within the modern world” (Bhabha, 2004, p. 245). In an educational context, for example, postcolonial criticisms make explicit the taken-for-granted assumptions and values within curricula that are aligned with the “west” (i.e., the Euro-American, English-speaking world; Gupta, 2015). Such criticism reveals a form of colonial oppression in which a particular set of values and beliefs are imposed on culturally diverse children. Bhabha warns, however, that this “lopsided world order” need not be “a *given* to be taken for granted” (Choudhury, 2016, p. 183). Instead, he allows for “newness” to enter the world via hybrid cultural spaces. Through synergistic dialogue (Kincheloe & Steinberg,

Table 1. Third space conceptual framework.

Ideal Third Space	Threats	Mitigation Strategies
<i>Lack of hierarchy (power is dispersed and then shared); collaboration is embraced</i>	Differing perspectives on collaboration Lack of real dialogue, structures, relationships, etc.	Resist deficit views by learning from one another Create mutual respect by working side-by-side as the norm
<i>New knowledge created through coconstructing and reconciling different types of knowledge</i>	Theory and practice divide Community stakeholders and knowledge are othered	Resist deficit views of knowledge generated through practice Invite community stakeholders into dialogues
<i>Each stakeholder plays a necessary role and spans boundaries</i>	Differences not easily reconciled because it requires a willingness to reflect and be a learner	Each role includes a boundary crosser (e.g., a university partner who becomes part of school community and culture)

2008), culturally diverse discourses and epistemologies are shared and negotiated across fluid boundaries. In other words, “west” and “east” or “colonizers” and “colonized” are not positioned as opposing binaries, but as cultures that are ever changing. As such, a gray area emerges in which something new can transpire (Bhabha, 2004; Booker & Goldman, 2016; Choudhury, 2016; Gupta, 2015; Stevenson, 2015). This gray area of cultural hybridity is conceptualized as a *third space*: a hybrid, intangible space where inter- and intracultural values, practices, and so forth, are constructed and where partnership identity is created from the historical and cultural contexts of all partners (Laughlin, 2021).

In this sense, a third space exists within the discourses and environments (both formal and informal) in which culture and power are recognized and renegotiated. Third space contributes to the sustainability of RPPs because these spaces are where the practices, hierarchies, roles, norms, and expectations of the lived experiences of partners can intersect and sometimes collide (Brown & Allen, 2021; Gupta, 2020). Given the overlap in school-university and research-practice partnerships, we can expect that some of these tensions will also arise in RPPs. Laughlin (2021) described how these tensions threaten the transformational potential of third space and ways in which tensions can be mitigated. We have organized these three threats and mitigation approaches into a conceptual framework that guided analyses (see Table 1).

Firstly, in an ideal third space, power is dispersed among partners as they collaborate (Laughlin, 2021). Shifting power dynamics is a critical feature of RPPs and requires strategies to ensure all partners have a voice. As Laughlin’s review suggests, these strategies should challenge deficit views of partnership members, facilitate mutual respect, and provide structure for communication and collaboration. Accordingly, we explored relationships between the facilitation strategies used toward these ends and the distribution of power among partners (i.e., “participation”). Secondly, ideal third spaces facilitate new knowledge coconstruction through a reconciliation process. Connectedly, in RPPs, research is featured as the leading activity in the coconstruction of new knowledge for the purpose of educational improvement and transformation (Farrell et al., 2021). Centering research, however, threatens to perpetuate the theory-practice divide and marginalize knowledge of community partners. Thus, creating an ideal third space within an RPP requires broader views in which practice, experience, and community expertise are valued as forms of research (Laughlin, 2021). We sought to understand the ways in which teachers and parents acted as coresearchers in the generation of new knowledge for a curricular program (i.e., “perspective”). Finally, each stakeholder plays a necessary role that spans boundaries in an ideal third space (Laughlin, 2021). The diversity of expertise serves as an asset by facilitating educational improvement and transformational efforts from multiple perspectives. Yet, such collaborations require a willingness to respect and learn from others’ expertise. Through long-term collaboration (Farrell et al., 2019, partners evolve as boundary crossers, bridging expertise across different areas and experiences (Laughlin, 2021). We aimed to identify the distinct “expert” and “learner” roles of different partners to identify how the sharing of expertise facilitated boundary crossing (i.e., “positionality”).

Literature review

Participation that lacks hierarchy and embraces responsive relationships

More research is needed to identify how equitable relationships in RPPs form and function as partnerships progress (Vetter et al., 2022). E. C. Henrick et al. (2017) illustrated how building trust and cultivating relationships is the first dimension of effective RPPs and should be prioritized throughout all partnership activities. Henrick et al. described how all partners should regularly work together, engage in routines and norms of interaction that foster collaborative decision-making, protect against power imbalances, and recognize and respect diverse forms of expertise. Equity-focused RPPs that develop equitable relationships work intentionally to reveal, discuss, and overcome power differences while creating a shared vision (E. Henrick et al., 2019). Authentic relationship building is critical in resolving tensions that arise and can lead to lasting relationships that are built from shared experiences (e.g., having young children, living with restrictions due to the COVID-19 pandemic), many of which do not directly relate to the goals of the RPP (Brown & Allen, 2021). Knowledge building within RPPs is not constrained to time and space but ebbs and flows through formal and informal communication. Brown and Allen found that consistent communication patterns and movement toward the use of culturally sensitive practices and culturally responsive resources contributed to the formation of responsive relationships and collaboration during the first years of a partnership.

Positionality that encourages boundary crossing

How researchers and community partners develop and enact their RPP goals impacts the roles and responsibilities each partner assumes. Recent research suggests that defined roles improve the effectiveness of partnerships (Farrell et al., 2019; Sjölund et al., 2022). Through a systematic review of recent RPP studies, Sjölund et al. identified the roles researchers and practitioners adopted across three partnership processes (inquiry, design, and dissemination). These roles are particularly important to explore as they informed the development of initial codes for data analysis in our study, as discussed later. Researchers in Sjölund et al.'s study were found to be expert inquirers, coinquirers, inquiry facilitators, design leaders, design advisors, disseminators, content disseminators, and facilitators. Practitioners shared only one role with the researchers (coinquirers) and took on other roles as inquiry translators, inquirers, designer pilots, design validators, translators, teaching disseminators, and knowledge sharers. The authors argued that identifying roles can support RPPs in moving to more democratized and equitable collaboration. Sjölund et al. pointed out how some partnerships begin with defined roles that include predetermined tasks while others begin with active collaboration about the division of these tasks. This collaboration should involve role negotiation, which is best conceptualized as the process of defining and redefining roles (Farrell et al., 2019). Some research suggests role negotiation is not only necessary in the early stages of a partnership but is critical to its health and sustainability (Farrell et al., 2019; Rosenquist et al., 2015); this is understandable considering the evolving nature of RPPs. Further, counternormative roles (e.g., parents or teachers facilitating or leading initiatives) contribute to the navigation and negotiation of differences in power dynamics (Coburn & Penuel, 2016; Penuel & Hill, 2019).

Within a comprehensive case study of a long-term RPP, Farrell et al. (2019) found that role negotiation was a main component of leadership meetings and resulted in the reorganization of roles and partnership functionality. In Farrell et al.'s study, role negotiation was essential due to the multilayered nature of their partnership (e.g., providing professional development to the district and also building infrastructure) and personnel changes. Farrell et al. emphasized the presence of formal and informal contexts in RPPs and suggested that future studies should investigate whether (and how) role negotiation emerges in informal partnership discourse. This current gap in the literature is understandable, as it is challenging to study personal, often undocumented, communication systematically.

University partners as facilitators of perspectives

RPPs that consider the voices of parents and caregivers as coresearchers have shown promise (Mulvey et al., 2020) but require university partners to be particularly mindful of how to center community voices in conversations and actions. Fancsali et al. (2021) found that building strong relationships, using effective communication, and establishing equity among the voices of their partners were key components of their RPP framework, all of which required constant care and attention. Intentional conversations and dialogue are necessary for relationship building, role negotiation, and overall RPP success (Farrell et al., 2019; E. C. Henrick et al., 2017). Often, university partners are mindful of how they facilitate meetings and initiate informal communication in the early stages of a partnership (Mulvey et al., 2020), but these interactions matter across the life of an RPP.

Situated strategies, such as discourse moves, are important when the goal of a partnership includes centering community partners' voices and experiences as an important form of research (Harper et al., 2023) and supporting them in leading or coleading aspects of the work (Donovan et al., 2013; Farrell et al., 2019). Fjørtoft and Sandvik (2021) discussed how participatory dialogue, a situated discourse strategy, can be leveraged in an RPP to build trust, enhance problem-solving, and even engage in boundary crossing. Family-school-university RPP facilitation is unique when compared to school-university RPP facilitation because the increase in diverse perspectives, experiences, and roles of partners prompts continual shifts in responsibilities and crossing of boundaries as partners coconstruct knowledge applicable across home and school settings.

Methods

Data collection

All materials for data analysis came from 16 in-person and virtual group meetings and documented one-on-one conversations from June to November 2021. In the summer months, partnership activities focused on exploring early computer science content knowledge and pedagogy (Bers, 2021) and codesigning the first phases of the culturally relevant preschool robotics program. The fall months consisted of piloting the first two phases of the program at partner schools and students' homes and facilitating family nights with families from the schools. All partners were invited to codevelopment meetings, family night planning sessions, and family nights. Other meetings that focused on program implementation and reflection were held separately with parents and teachers. Ultimately, data sources included five sets of field notes recorded by a university researcher during and/or after meetings or conversations, 13 transcripts of audio-video recordings, and one virtual chat transcription (see Table 2). Interactions with teachers were documented more frequently than partnership work with parents since most conversations with parents occurred informally after the summer. This was taken into consideration when analyzing the data and developing the findings.

Data analysis

We developed data analysis plans that were aligned with our conceptual framework and reflective of the notion that a third space exists in both discourses and environments in which culture and power are recognized and negotiated. These data analysis plans included qualitatively analyzing the roles and actions parents, teachers, and university partners assumed in the formal and informal contexts of our RPP. The first author was lead analyst of the iterative coding process (Miles & Huberman, 1994) and met regularly with the other authors to discuss codebook development. We felt it was important to first develop parent- and teacher-focused codes to ensure we were keeping their voices central to the work and acknowledging the critical forms of participation, perspectives, and positionalities of partners in the collaboration, reflecting our understandings of third space (Laughlin, 2021). Codebook 1.0 included 15 parent and teacher codes sorted into three categories: participation (choices and actions to be a part of the partnership and program in relation to power distribution), perspectives

Table 2. Summary of in-person and virtual group meetings and documented one-on-one conversations from June to November 2021.

Date	Type	Description	Participants
June 29, 2021	Field notes	Teacher meeting focused on powerful ideas in computer science, lesson plan ideas, and daily classroom connections.	Ts; Coach; UPs
August 15, 2021	Field notes	Individual meetings with parent leaders	Ps; UPs
August 18, 2021	Field notes (virtual)	Teacher meeting discussing implementation of initial phases of project and documentation.	Ts; Coach; UPs
August 23, 2021	Field notes	Coplanning meeting at affiliated community organization discussing initial phase implementation and providing feedback.	Ts; Ps; UPs
August 23, 2021	Field notes	Parent orientation planning meeting.	Ps; UPs
August 30, 2021	Transcript (virtual)	Teacher meeting to discuss implementation, share experiences and documentation.	Ts; Coach; UPs
September 13, 2021	Transcript (virtual)	Parent orientation meeting that introduced the project and supported conversations around at-home activities.	Ps; UPs
September 22, 2021	Transcript	Teacher meeting reflecting on the successes and barriers to implementation.	Ts; UPs
September 27, 2021	Transcript (virtual)	Coplanning meeting, Ts only, breakout room discussions.	Ts; UPs
September 27, 2021	Transcript (virtual/ chat)	Teacher and parent coplaning meeting.	Ts; Ps; UPs
September 27, 2021	Transcript (virtual)	Coplanning meeting with Ps; discussions around content knowledge and feedback from Phase 1 and conversations about the codevelopment of Phase 2.	Ts; Ps; UPs
October 6, 2021	Transcript	Teacher meeting reflecting on research participation and Phase 1 implementation.	Ts; UPs
October 18, 2021	Transcript	Teacher meeting with individual teacher, providing Phase 1 feedback and discussing Phase 2 implementation.	T; UP
October 19, 2021	Transcript	Teacher meeting with individual teacher, providing Phase 1 feedback and discussing Phase 2 implementation	T; UP
October 27, 2021	Transcript	Teacher meeting focusing on research participation, logistics, and teacher support.	Ts; Coach; UPs
October 28, 2021	Transcript	Teacher meeting with individual teacher, providing Phase 1 feedback and discussing Phase 2 implementation	T; UPs
November 8, 2021	Transcript	Teacher and parent meeting to explore robots	T; P; UP
November 15, 2021	Transcript	Teacher meeting with individual teacher to debrief Phase 2 activities.	T; UP
November 17, 2021	Transcript	Teacher meeting focused on powerful ideas of computer science in Phases 1 and 2.	Ts; UPs

(beliefs, values, and opinions related to the partnership and program based on experience and practice as forms of research), and positionality (roles, responsibilities, and positions within and across boundaries). All developed codes reflected the undergirding third space framing as each category—participation, perspectives, and positionality—demonstrated how partners sought to minimize hierarchies and develop collaborations in the partnership rather than from various specific roles, how new knowledge was fostered using various expertise from across partners and bridging the gap between theory and practice, and how the role of each stakeholder was critical for coconstruction and implementation. The participation and perspective codes were previously developed from open coding eight documents analyzed for a prior study. The positionality codes were built from roles identified by Sjölund et al. (2022).

Caudle began coding with the first codebook and shared challenges about the difficulties in separating roles from the perspectives and actions. It was decided that these should be conceptualized together, as they are in the broader third space literature. The authors revised the role codes to encompass perspectives and actions. Codebook 2.0 included six specific roles that were coded as either parent or teacher focused. Caudle began using Codebook 2.0 to open-code chunks of data from the voices of the university partners, which resulted in seven university facilitator codes. In using Codebook 2.0, we recognized some inconsistencies in how we were describing the strategies facilitators used to conduct discussions. As Harper reviewed the *in vivo* codes, she noticed some

similarities between the emergent codes and a framework for teacher discourse moves (Herbel-Eisenmann et al., 2013) from mathematics education. For example, “seeking feedback” could be mapped to “inviting student participation” in the teacher discourse moves framework. As we compared our in vivo codes to the framework, we found that the framework could exhaustively encompass in-vivo codes with slight adaptations. Specifically, we made adaptations to account for how the discourse moves functioned differently in our group settings compared to how they function in mathematics classrooms (e.g., “inviting student participation” became “inviting participation”). We found the teacher discourse moves framework especially helpful for categorizing talk in our data because the framework was adapted from a more general “talk moves” framework (Chapin et al., 2003) to account for issues of authority and control that arise through discourse (Herbel-Eisenmann et al., 2013). Although it was developed for a different setting, the framework was generative in helping us capture the differing power dynamics across our group. Thus, we chose to replace some in vivo codes with adapted categories from the existing framework because it helped us to establish a shared language and clarify definitions and application of codes.

Once the new facilitator codes were agreed upon by the authors, they were added to Codebook 2.0 to develop the final Codebook 3.0 (see [Tables 3 and 4](#) for code definitions and examples). One of the facilitator codes, *logistics* (i.e., instances in which university partners shared logistical information with teachers/parents/other partners) was commonly used. However, since logistical conversations are a necessary part of any project involving multiple collaborators from varying contexts, we chose not to focus on these excerpts; they did not provide evidence of centering parents’ and teachers’ voices as the other action-oriented codes did. Therefore, this code was not included in [Table 4](#).

Table 3. Code development, definitions, and example excerpts—roles of partners.

Code	Definition	Example Excerpt
Roles of partners (i.e., university and community partners—parents, teachers, and instructional coach)		
Advisor	Shares direct feedback about the program design or implementation; this includes suggestions or reflections on specific program experiences with children	Teacher: <i>I liked the printed version and the only thing I would like to do more, maybe is share actual lesson plans like, maybe that one of the other teachers have created so that we can put in our weekly lesson plan structure . . .</i>
Co-designer	Codesigns program with university partners; this includes providing input about practice, redesign, or adaptations to fit the local context	Parent: <i>I think, maybe, providing a blank version of this graphic organizer that’s kid friendly could really help them visualize and I know our pre K kids aren’t filling out that graphic organizer . . .</i>
Decision-maker	Shares decisions or choices made regarding participation in the program or implementation that supports development of epistemic agency/authority	Field notes] Teacher acknowledged that a few students seemed not to be as motivated because they still did not understand how the robot worked. However, she has implemented some differentiation between her small groups, <i>focusing on one command at a time.</i>
Educator	Provides practical strategies or instruction about the program to others; this includes when they shared about how children engaged in program activities or what they know about the children’s development or skills	Parent: <i>Computational thinking is a collection of thoughts, ideas, or steps that serve an instructional purpose.</i>
Leader	Engages formally or informally as a leader, including providing suggestions, changes, or directions during partnership meetings and activities	[Field notes] Teacher suggests it would still be helpful to break into smaller groups to plan out sequences rather than completing as a single group. Teacher states, “It would lead to richer discussions” when we return as a large group and discuss differences between groups’ sequences.
Learner	Engages formally or informally as a learner, including demonstrating understanding, asking questions of others, seeking knowledge, and sharing insights about lessons learned	Teacher: What’s the best way to that you would suggest to see something about screen-free robots, what would be the best way to go about teaching that? . . .

Table 4. Code development, definitions, and example excerpts—facilitator actions.

Code	Definition	Example Excerpt
Facilitator actions (i.e., specific approaches taken by university partners to facilitate partnership)		
Provides affirmation and/or encouragement	Provides words of affirmation and/or encouragement	It sounds like what you're doing is working really well and they've already learned so much, and it sounds like you figured out what learning context works in your classroom.
Supports collaboration	Facilitates activities where partners work together or encourages collaboration	OK, all right, I'll do a screen share so we can just walk through this one together and we'll kind of get to be, we will kind of move had a little bit to the section that talks about the small group activities.
Invites participation	Seeks feedback, shares, and encourages involvement through questions and/or prompting	So anything interesting come up in terms of ideas about the focal experience for Phase 2 or anything about the small groups that we wanted to share out, share with others?
Shares logistics	Provides logistical information about the program and the partnership	OK, so we'll investigate that. We can discuss that tomorrow with University partner and we'll get her to figure out that piece too.
Engages in problem-solving	Offers solutions to problems or concerns	So I was wondering if, something that you could that's not those green squares right that you would like roll out on the carpet that would help the mouse to move a little more smoothly if something like that might be helpful.
Provides details around program design/implementation changes	Shares aspects of the program design or revisions that have been made to the program	We have been kind of brainstorming over on our end about sort of how to move on to the next phase. And so we have come up with a plan and we hope that you all are OK with this plan.
Revoices	Responds to discussions by repeating, restating, expanding, reporting, and/or confirming what community partners share	But having that free exploration is also probably very engaging for children. So I think that's a great idea. Does anybody have anything else to add before we kind of wrap up on Phase 1?

Dedoose was used while coding 1,180 data excerpts, resulting in 1,752 code applications. Data excerpts that were coded with the prior codebooks were recoded. Interrater reliability was established between Caudle and Quinn. Quinn was provided 10% of the coded data excerpts to code, and interrater reliability was found to be very high at 92%. Next steps in data analysis included reviewing code occurrences to identify dominant codes that would contribute to thematic findings. Due to the overabundance of teacher data compared with parent-focused data, we separated data based on type of context within data displays. Data analysis included reviewing data displays to identify dominant codes and changes in code occurrences across time to uncover patterns in interactions between university partners and the parents and teachers. Further, it was imperative to identify which roles were assumed by parents and teachers during different parts of the partnership development and how the university partner supported the development and negotiation of these roles.

Data displays informed the development of the four themes presented below. Specifically, codes representing distinct roles of parents and teachers and facilitator actions and discourse moves were organized and reviewed based on context and type (see [Tables 5 and 6](#)). Data excerpts with dominant facilitator and parent/teacher codes were reviewed. Example excerpts were isolated and organized according to the four themes.

Results

During the first 6 months of our family–school–university partnership, we established a third space where parents' and teachers' voices were central to the codevelopment of the preschool robotics program and informed the partnership's functionality. As initial facilitators of meetings and conversations, we utilized discourse moves that shared authority and fostered equitable communication patterns. Parents and teachers were regularly invited to participate, and we captured their voices as we

Table 5. Code occurrences—teacher group meetings.

Codes/Meetings	6/30/21	8/18/21	8/30/21	9/22/21	9/27/21	10/6/21	10/27/21	11/17/21	Total
Teacher and University Partner Roles									
Teacher as advisor for program design and implementation	0	0	8	13	8	7	16	8	60
Teacher as codesigner	6	1	12	1	1	3	2	1	27
Teacher as decision-maker	0	1	8	5	1	7	7	5	34
Teacher as leader	0	1	2	1	2	7	7	11	31
Teacher as educator	0	1	14	11	2	15	5	61	109
University partner as educator	0	4	22	1	9	11	22	27	96
Teacher as learner	0	1	2	1	4	7	7	11	33
University partner as learner	0	0	1	0	0	4	5	0	10
University Partner Discourse Moves									
University partner provides affirmation/encouragement	0	0	28	1	2	7	19	7	64
University partner supports collaboration	0	0	11	0	0	0	4	3	18
University partner invites participation	0	0	44	11	6	26	31	44	162
University partner shares logistics	0	3	16	0	1	9	22	8	59
University partner engages in problem-solving	0	0	2	0	0	4	10	1	17
University partner provides details around program design/implementation changes	0	0	12	0	7	3	21	6	49
University partner revoices	0	0	7	0	11	5	24	33	80

developed a collective voice and coconstructed knowledge. In each partnership context, we found that parents and teachers acted as advisors for both the program design and implementation; further, they assumed roles as educators to a degree comparable to university partners (see [Tables 5 and 6](#)). Over time, the adoption of roles occurred, supporting parents and teachers in assuming positions as coleaders. How we functioned in the early stages of our equity-focused partnership was influenced by the specific discourse strategies we used as facilitators and how parents and teachers responded to our discourse moves.

Inviting participation

While facilitating our RPP meetings and conversations across the summer and fall, we invited participation among partners in several ways. When we encouraged parents and teachers to participate in discussions, we assumed roles as learners as we sought to learn from their expertise in educating preschoolers in both formal and informal settings. Our efforts supported our resistance of deficit views, as we learned from one another, an important mitigation strategy when differing perspectives on collaboration can threaten the health of a partnership built on shared power. Inviting participation among parents and teachers helped us gather insights into preexisting classroom and home practices. During an August codevelopment meeting, a university partner brainstormed ways to possibly use existing school-based portfolio assessments to document children's learning within our program:

University Partner: Are you doing documentation for your preschool portfolios? So it would be nice if there was a way to kind of double dip, right? And be thinking about is there a way . . . how in pre-K you have to do those portfolios so is there a way to have this documentation and I'm not sure because I don't know enough about the portfolios. [Co-Development Meeting: August 23, 2021]

In this excerpt, the university partner invited participation by asking questions. They also evidenced their lack of knowledge about the portfolio system, thus, supporting the notion that the

Table 6. Selected code occurrences—co-development meetings, parent meetings, and individual teacher meetings.

Codes/Meetings	Coplanning meetings (T, P, U)			Parent leader meetings			Individual teacher meetings			Parent/ teacher meetings
	August 23, 2021	September 27, 2021	August 15, 2021	August 23, 2021	September 13, 2021	October 18, 2021	October 19, 2021	November 15, 2021	November 8, 2021	
Teacher/Parent/University Partner Roles										
Teacher as advisor for program design and implementation	3	24	–	–	–	14	9	1	1	1
Parent as advisor for program design and implementation	0	8	5	2	0	–	–	–	–	0
Teacher as educator	4	23	–	–	–	6	13	2	2	4
Parent as educator	0	6	9	0	3	–	–	–	–	1
University partner as educator	7	42	0	6	12	6	15	1	1	2
University Partner Moves										
University partner provides affirmation/encouragement	1	4	0	1	3	5	2	0	0	0
University partner supports collaboration	1	5	0	1	1	2	0	2	2	0
University partner invites participation	0	57	0	3	8	12	10	0	0	1
University partner shares logistics	1	18	0	0	5	11	7	1	1	0
University partner engages in problem-solving	0	16	0	2	0	15	9	0	0	0
University partner provides details around program design/implementation changes	1	13	0	2	0	5	6	0	0	0
University partner revokes	0	13	0	3	1	7	1	0	0	0

teachers were the experts and may have helpful suggestions for linking the program documentation to what was required for portfolio assessments. Later in the fall, we continued to seek information about classroom practices from teachers. In a teacher meeting, a conversation was initiated by a university partner about how we could develop systems for sharing program experiences across classrooms, schools, and homes in an effort to build a community of users and instill a sense of belonging. This led another university partner to ask questions about current opportunities in the classroom for children to share with one another, which prompted teachers to educate the group and brainstorm possible future practices.

University Partner: So what kinds of things do you do in your own classrooms already to have children share with one another?

Teacher 3: We try to wrap up small group with some sort of . . . we try to do it but it doesn't always happen, but usually we try to end with them sharing with the group something they did or something they learned.

Teacher 2: Can't we also do that in our circle up time? And share?

Teacher 3: Maybe and, you know, and I don't do this, it just came to me. In center time, you know, like when they come over to you and go "Come look at what I'm doing!" Responding to it but also kind of encouraging them to share with their friends and not just with us. And that might be one of those opportunities to take a picture that we then share with another class. [Teacher Meeting: November 17, 2021]

In this excerpt, the university partner opened up the conversation by asking an open-ended question that directly related to the teachers' daily experiences. Field notes from initial summertime conversations with parents demonstrated how we invited parents to share about toys they already had at home that could support children in developing design-process knowledge.

What toys do you have at home that you could use while engaging children in the design process? Parents responded with toys, such as toy car tracks, trains, Legos, and blocks. They also shared activity suggestions that included making jewelry and designing an outfit. [Parent Meeting: August 15, 2021]

As seen in this field note, we were interested in parents sharing more about materials and toys they had as well as activities they were already doing. As we learned more about how teachers and parents were engaging with children (e.g., their practices and experiences), we were able to develop more ideas about how we could codevelop and run the program in authentic ways without it being "one more thing" for parents and teachers to do.

Inviting participation from parents and teachers also helped us understand how they chose to enact the program in their local contexts of the schools and homes. As coresearchers, they had firsthand experience and knowledge about what worked and did not work in the program activities and, more importantly, how they chose to adapt the program to fit the needs and interests of the children in the local contexts. In early fall, a university partner revisited a topic from a prior meeting in an effort to gain more knowledge about which materials teachers chose to use.

University Partner: I think you talked about some of the robot materials already at the last meeting, but I just wanted to because that's such a central part of the program, revisit that to see if you had any additional things that you wanted to share so by that I'm talking about the kind of this specific robotics materials that are part of Phase 1 with the coding cards, the foam mats, the Code and Go Robot Mouse® and the Code-a pillar®, kind of which of those you need the most and kind of how you use those would be great for us to know.

Teacher 6: So the coding cards have been used in the Code and Go Robot Mouse®. We haven't brought up the foam mats just yet, but I can think of some things that we will use and then Code-a pillar® I did not use because I didn't want to introduce too many different types of robots at the same time, and so,

for Phase 1, I really just wanted to focus on the Code and Go Robot Mouse® and then each week on Friday during small groups introducing like a new way to use them are new problem solving technique or debugging algorithm, teaching something like that to them each week and I felt like I needed more time to do that before introducing the Code-a pillar®.

Teacher 5: With me I just look at what I was looking at like the actual literature that was being used. I think this week there's something about Mouse Paint so I was trying to kind of it might not work for all of them, but I was trying to hear whatever the robotics piece was with the book some type of way so I may wait to do like the very, Very Hungry Caterpillar or something or I may bring in later on. But I kind of agree with Teacher 6 it is just one thing at a time, especially since my kids are three. So I'm just trying to keep one thing at a time and they're just now getting to where they kind of can work the mouse. So Teacher 3 and I are working on those cards. I think she did hers today and we're finishing up ours that we're working on. Teacher 6 did the 1-2-3-4 and I think Teacher 3 did one with eight just for her like more advanced students. She did a card with an eight on it. [Co-Development Meeting: September 27, 2021]

This exchange shows how the university partner sought to learn more about specific decisions that teachers made. With our support and facilitation, family nights also offered noteworthy opportunities for parents to provide input about their program-related expertise and decision-making, thus, providing us with rich data points on the home-based program in action. At a virtual family night, a parent was asked to share about their experiences implementing some of the initial at-home program activities.

University Partner: So Parent 2, I don't know if you want to share a little bit about how this went when you tried this at home.

Parent 2: The best example that I have had thus far is my daughter making a peanut butter and jelly sandwich. She loves peanut butter and jelly sandwiches. And there's times where there's a step that makes sense to her that, you know, you just automatically do it. But when you're trying to teach your child how to code things, it's like University Partner said, every single step matters. So the parts for me were getting her to not only realize that, but verbalize that. And in using some of the words or so, there was a time in which now using algorithm or coding wasn't easy from the get go. But once we actually broke that word down and put it in terms of, OK, what's the next step? Or are we forgetting a step or asking those key questions, well, you put the peanut butter on the bread? But well, how do you put the peanut butter on the bread? Breaking down things like that is definitely what worked for my daughter and repetition once we go through a step and if it's something that she forgot, you know, starting back from the beginning and having her incorporate that back into it so that we can keep the sequence going. [Parent Meeting: September 13, 2021]

As evidenced in this conversation, we were able to engage in respectful exchange of ideas with the parents by facilitating dialogue that prompted us to work side-by-side as coleaders on family nights. These efforts were particularly important because they supported parent leaders to cross school-partnership-family boundaries and leverage their experiences as parents to guide other BIPOC families joining the family nights to engage in home-based activities.

Revoicing

In our RPP, we, as university partners, strived to coconstruct new knowledge and reconcile different types of knowledge by revoicing during conversations. Revoicing encompassed several strategies wherein we responded to discussions by repeating, restating, expanding, reporting, and/or confirming what parents and teachers shared.

While meetings included time and space for collaboration in smaller groups, it was important for our revoicing strategies to include a recap of these conversations. For instance, following

a collaborative activity in the late summer, a university partner shared about her small group coplanning work with the rest of the team.

University Partner: So I think that we've identified a couple of really good things here, which include making a couple of lists, continuing on with routines, using songs and fingerplays in the books that as you see the children interested in them thinking about what's coming up with fall and Halloween and books that might really complement some of this as well, and allowing them to engage in the STEM building first for a while. So that's something we'll probably want to think about in the next phase. [Teacher Meeting: August 30, 2021]

This excerpt demonstrates how revoicing included recapping specific details about how the group made decisions on continuing, extending, and pacing activities to meet the needs of the children. When discussing a draft of the second phase of the program during an early fall meeting, revoicing helped us understand how teachers wanted to move forward in the next steps of the project.

University Partner: And then kind of what I was hearing from you, with the robot materials is maybe we don't introduce anything new at this point, maybe it's just the design process anchor chart the coding cards, the foam mats since you haven't had a chance to use them yet, and then keeping the mouse and the Code-a pillars® kind of the two primary robots, but you might draw from any thoughts or questions about those parts. [Co-Development Meeting: September 27, 2021]

This excerpt shows how the partnership team made decisions to adjust plans to better meet the needs of the children specifically by pausing the introduction of new materials and robots. Teachers are often not given autonomy to adjust curricular plans in the moment, making this type of revoicing even more powerful and reaffirming. During the first family night meeting of the fall, parents talked about how they envisioned the at-home activities for the first phase and, more specifically, what materials parents needed for home use. The university partner leading the meeting informed another university team member of these decisions when they returned to the meeting.

University Partner 1 tells University Partner 2 that the group had discussed sending home popsicle sticks for families to make mazes/obstacles for robot mice in addition to the printed mazes. [Co-Development Meeting: August 23, 2021]

In this excerpt, parents expressed a need for support to implement their new plans for specific home activities. Revoicing was not only used to make connections in one context but also to build bridges across contexts, as partner communication frequently occurred in smaller, informal conversations (e.g., *I think Teacher 3 and I spoke about this a couple of different times; I met with Teacher 1 this week, and she was talking about how the 4-year-olds have really picked up on that idea of a bug*). This bridge-building was also important in normalizing parents' and teachers' voices as being equitable in making program decisions, particularly since they often did not meet together.

University Partner: I was talking to Teacher 8 and Parent 6 about maybe opening up to some families at Parent Connection [pseudonym]. For this year, we do want to have some more families try out the program so that we can get feedback and make it better for next year, when, hopefully we can invite all the parents to participate. [Co-Development Meeting: September 27, 2021]

This excerpt demonstrates how informal conversation topics contributed to program expansion that was informed by ideas presented by both parents and teachers.

Educating

Our RPP was built not only with the goal of centering the voices of parents and teachers but also with the goal of encouraging parents and teachers to assume leadership roles in program and partnership work. Coleading was not only important to establish an equity-focused, sustainable RPP, but also supported an ideal third space in which stakeholders could adopt roles and engage in boundary crossing. One primary way parents and teachers coled our work was through enacting roles as educators. Parents and teachers spent substantial time providing practical strategies or instruction about the program to others; this included when they shared about how children engaged in program activities or what they knew about the children's development or skills. While this role seemed to align with a teachers' main career roles, how they chose to educate in our group of adult learners was unique because early childhood teachers rarely have opportunities to interpret curricula and educational programs to fit their local classroom contexts, then educate others on those processes in a collaborative setting. Since parents are children's first teachers in life and the ones that remain with them the longest, opportunities for them to be educators in RPPs are powerful.

In an August parent meeting, one parent chose to educate the group about a game they used with their child to reinforce concepts presented in our program activities. This was documented in field notes taken by one of the university partners.

Found coding game on Amazon with a rabbit/bunny: coding the rabbit's movement to a finish line. Has a specified number of steps that it wants you to take to reach the target, but still provides positive reinforcement for child's attempt. Used this game as an opportunity to teach son about "debugging" and now he loves the word. [Parent Meeting: August 15, 2021]

This excerpt demonstrates how a parent not only took the initiative to find an activity for their child but also connected it to our home program and shared those steps with other parents. In this same meeting, another parent shared strategies for teaching vocabulary to their child.

Vocabulary – Tried to simplify language in some cases (e.g., "let's think of the steps" instead of "sequencing") and other times used visual cues and body language to reinforce vocabulary (e.g., twirling hand for "loop") [Parent Meeting: August 15, 2021]

Interestingly, this excerpt shows how the parent used a range of strategies depending on the situation and computational thinking term. Often, teachers educated other partners by sharing knowledge, beliefs, and related strategies to support others in developing new pedagogical understandings (Bers, 2021). While brainstorming at-home activities, Teacher 5 shared her thoughts.

I would say don't give them too many marshmallows or just say, okay, I want you to build a triangle. How many of these do you think you would need to be able to make a triangle, and you can give them marshmallows and toothpicks you can give them marshmallows and spaghetti noodles—there's just various different ways you can do it, or you can ask them what do you think we would need to build a triangle. Or, if they want to build a house, what do you think we would need to build a house, because I did the house building thing with the magnet tiles. I guess you could do the same thing, it would just be [with] different materials. [Co-Development Meeting: August 23, 2021]

As evidenced here, the teacher used her knowledge of prior activities, materials, and young children to provide suggestions for how to approach one of the program activities.

Advising

Another primary way parents and teachers coled our initiatives was through advisory roles. As advisors, they provided direct feedback to university partners about the design and/or implementation of the program based on their own practices or experiences as forms of research. Capturing advice from those most closely involved in implementing the activities with pre-schoolers supported parents and teachers in developing identities as expert educators. This

process of learning from them helped us share power, develop mutual respect, and work together to ensure that the program would be successful in the long-term. During codevelopment meetings, parents and teachers often provided advice about design elements of our program, and when we engaged in parent and teacher meetings, they frequently shared advice about program implementation. However, design and implementation advice were also regularly coupled together since we collectively brainstormed ways to design and redesign the program over time. During an early fall teacher meeting, teachers were able to share if the Phase 1 plans were doable and what pieces of the program they were prioritizing.

University Partner: Do you feel like you have been able to work toward the goals as stated in Phase 1 and/or address Phase 1 essential questions? Do you think children are developing understanding using steps?

Teacher 6: Yes, because of the connection with routines, they are getting it. I am supporting children as they move to sequencing stories, which is an important standard for us.

University Partner: Are you using keywords/vocabulary? Would it be helpful to have environmental support to help with vocabulary or key terms?

Teacher 5: Yes, sequence, debug, bug, algorithm. Not so much about coding/code.

Teacher 3: I am using the word “program” a lot, as well as coding, and sequence. I use problems and solutions a lot so I need to work on using bugs/debugging.

Teacher 7: I tell the kids their job is to be the “programmer” when they are coding the teacher or the mouse. [Teacher Meeting, September 22, 2021]

These exchanges reveal how, early in the school year, the teachers were able to identify and share specific program language they were using and ways they were integrating the program into their daily classroom experiences. Around the same time of the year, during small-group breakout sessions, one parent provided rich feedback about the Phase 1 at-home documents developed to support initial program implementation.

University Partner: Okay, so we’re here with Parent 1, Parent 4, Teacher 4, and Teacher 5 and we are going to start by talking first about the front matter. I will show you kind of the parts that we’re talking about and then any feedback that you have about making that front part more accessible for parents would be great . . . I’ll give you a moment to look at that either on my screen or on your screen and any ideas or thoughts that you have you can either put in the chat or you can unmute and share and we will take notes in the slides on that.

Parent 1: I think this is nice and very informative, not too overwhelming as far as the font is just right . . . not too many words. Also, love the incorporation of the definitions for the words because a lot of people are not going to know what a prototype is, you know, most people have heard of a computer scientist or engineer, but like in our first meeting I didn’t know what a computer scientist did so I think the definitions are perfect there. [Co-Development Meeting: September 27, 2021]

In this exchange, the parent provided useful information about how the documents could be useful to other parents who are unfamiliar with some terms, just like they were when they first entered the partnership. While we implemented strategies and collaborative exercises aimed at seeking feedback from our partners, we also developed communication patterns that supported this type of boundary crossing without direct prompting from facilitators. For instance, during a mid-fall one-on-one conversation between a university partner and a teacher, a teacher openly shared feedback about her challenges in teaching children how to use the robot mice.

University Partner: It's hard because you want it to be a playground, but you also want it to be, like, intentional and official playground. You know, it's fun to play with and I also have to hope that, over time, they will develop a better understanding of, "I push this and this happens."

Teacher 7: That's part of my hope. I'm like okay, if they're over here doing this, then they're gonna be like oh, it went that way. I think the bane of my existence with the mouse is the clear button. No, I really hate it. [They] push it thinking it's going to do other things and then they're like, "Why is it doing that?" They're not figuring it out.

In this exchange, the teacher demonstrated how one small button led to many challenges for them early on. As the partnership progressed, teacher and parent advice also encompassed ideas they learned from one another, which shows how essential it was for them to be educators in our RPP. For example, in a fall teacher meeting, one teacher shared how they found an idea shared by another teacher to be very successful.

Teacher 3: Teacher 6's idea of the cards with the numbers across them has been fabulous. So that's helped my kids a lot to kind of focus on going between the card and the mouse. It's kind of giving them an easier organizational technique so that one little poster board has just done wonders. [Teacher Meeting: October 6, 2021]

While this excerpt is about one small adjustment to an activity (i.e., a small board with velcro for children to organize their programming cards), it demonstrates how the teachers were not only adopting advice from each other but also openly acknowledging how successful the ideas were in their own classrooms.

Conclusion and implications

In this study, we developed a third space where partnership work was coconstructed, negotiated, and deeply rooted in the daily experiences of parents and teachers. Through open dialogue in both formal and informal settings, we encouraged community stakeholders to be authentic, engaged partners from the beginning of our RPP. We sought parent and teacher involvement early and often as we navigated decisions around codevelopment and program implementation. We adopted a vision and framework for our RPP that centered the voices of parents and teachers while also supporting them in being coleaders in the partnership. Through our decisions as facilitators, we fostered real dialogue that directly influenced our program design and implementation. Our experiences show how the intentional design of an RPP that integrates parent and teacher voices can not only empower these constituents to participate in the research process fully but also result in role and power shifts on the research side that makes space for other voices to be represented.

Some implications from our RPP study include the importance of understanding how culture and power are recognized and negotiated in the beginning stages of an RPP. Implications for future RPPs include considering how a third space can be created by dispersing and sharing power, embracing rich collaboration, inviting participation among all partners, and adopting roles that include boundary crossing. Future studies should also examine whether and how partner roles shift across time as partners assume more leadership responsibilities in the enactment of the RPP goals. Guiding work has previously taken years of partnership work. Penuel et al. (2015) call out the need to build from a shared evolving vision created through the practice of the RPP. Further, Booker and Goldman (2016) suggest that our open and sustained dialogue will continue to develop agency in our partners, which should result in more-visible shifts in roles. This study adds to our understanding by offering an up-close view of one RPP's partnership forming with a limited scope of only 6 months.

RPPs can lead to transformative educational research experiences as teachers and parents offer a more robust understanding of how children learn and develop.

Of course, there are some limitations to our study. We collected more data from participating teachers than from parents. This is due, in part, to the fact that teachers routinely engaged in formal, documented meetings with university partners, while parent/caregiver communication frequently occurred in casual formats (e.g., undocumented phone calls or text messages) that were private and would not be appropriate to analyze as we did the other forms of informal communication. Moreover, we analyzed only the first 6 months of the partnership exchanges, which limited our ability to identify any notable shifts in roles within our RPP; these would likely occur over a longer period of time and require lengthier qualitative data collection. Further, while it was beyond the scope of this study, identifying similarities and differences in the ways university partners and parents/teachers educated the collective group would have developed deeper understanding of how to support them in educating others without the presence of university partners. Finally, we did not code for instances where discourse moves did not support a third space. Future studies that identify discourse moves and exchanges that are not conducive to third space would provide more transparency around the range of conversations that exist in RPPs.

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