Communities as Fraught Spaces

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Collaborations between education stakeholders are increasingly prevalent due to the need for diverse perspectives on issues of justice in education. Less is known, however, about how stakeholders form heterogeneous communities where people from different backgrounds learn and take action together. This study examined the contours of a community that emerged from a three-year partnership between mathematics teachers, community educators, and university scholars. This racially- and gender-diverse community was marked by contention and affirmation, which illuminates the complex and politicized nature of the joint work. This study illuminates tensions across dimensions of the community including spaces as affirming and fraught, goals as shared and contested, belonging as ebbing and flowing, relationships as personal and political, and roles as imposed and amorphous.

Keywords: *Collaboration, community, identity, individual differences, justice, learning, mathematics education, participatory, politicized trust, qualitative research, race, research community, tensions*

Introduction

Issues of equity and justice in classrooms, schools, and schooling systems are often complex and invisible due to their entrenched and ubiquitous nature. Increasingly, teachers are being asked to attend to forms of oppression that manifest in their teaching. However, classrooms are often isolated from the communities they serve. This means that teachers who do not live in the communities they serve may know less about the realities of their students' lives and, vice versa, community members may not be aware of the constraints teachers face in their teaching. Researchers are calling for new social arrangements that bring teachers and community leaders together to identify humanizing pedagogies and practices that make sense to all involved (Ishimaru et al., 2022; Murrell, 2001; Zeichner et al., 2016). Less is known, however, about how these new social arrangements to bring together teachers and community members emerge and function to support new learning.

Exploring expansive social arrangements for education composed of multiple perspectives and forms of sensemaking necessarily points to the importance of understanding how people come together over time and across space to create new practices and take on new identities, or how they form a community. Often, the focus of a learning community is on trust, mutual engagement, and shared goals toward progress on a predefined trajectory (Lave & Wenger, 1991). However, social arrangements for learning that involve stakeholders with diverse perspectives, or that work across lines of race, gender, and power, may need to be reconceptualized to account for the ways that power and structural differences operate and are reckoned with by the community (Gutiérrez & Jurow, 2016; Peele-Eady & Moje, 2020). This paper examines patterns of participation in a participatory project focused on educational equity and seeks to illuminate nuance in the nature of the "community" that emerged.

Theoretical Framework

Learning Communities

Extensive literature exists on the nature of defined communities engaged in research and/or learning together. Lave and Wenger's (1991) notion of a community of practice (CoP) characterizes groupings of people who form a social learning system that reproduces itself as members work toward a shared goal. The scholars emphasized the homogeneity of CoPs through the apprenticeship model, in which newcomers take on the identities and practices of old-timers in the community, and their participation is marked by joint enterprise, mutual engagement, and a shared repertoire (Wenger, 1999). This is not to say that the authors did not attend to disruptions in theorizing communities; as they write, "the contradictory nature of social practice" (Lave and Wenger, 1991: 58), means that social practices are reproduced and remade at the same time, causing tension. The concept of a CoP, however, tends to *obscure heterogeneity* of the members, their goals, and their trajectories of participation (Peele-Eady & Moje, 2020). Increasingly, scholars argue that heterogeneity in collective activity is key to transforming unjust systems and "wicked problems" (Gutiérrez et al., 2020) that have persisted over time and across contexts (Bang & Vossoughi, 2016; Engeström & Sannino, 2021).

Heterogeneous Learning Communities. Peele-Eady and Moje (2020) and others call attention to the importance of heterogeneity in learning communities, or communities that reflect the varied perspectives and positionalities of individuals who gain from, and those minoritized by, predominant structures and practices. In this case, heterogeneity is fundamental to learning, or, put another way, instability is central to transformation (Engeström & Sannino, 2021).

Instead of being marked by smooth participation and shared identities, heterogeneous communities experience tensions due to the fact that they reflect power-laden social hierarchies and structures that privilege certain identities and practices over others. Peele-Eady and Moje (2020) argue that "A main affordance of disagreement and difference is becoming aware of disparate views, practices and experiences and the ways they can produce new learning and new ways of thinking" (p. 231). Revealing these differences, however, necessarily puts members of the community at odds with each other. We ask, What happens when learning communities don't agree, are unstable, and are left to sit with the tensions? How do these communities maintain coherence and work across differences toward new learning?

The process of working through tensions, problem-solving, and learning anew tends to require a high level of trust between members within a community. Yet, trust can be fleeting when lines of difference manifest in everyday joint activity. Vakil et al. (2016) discuss their experiences working with heterogeneous participatory groups, and the racial tensions and power dynamics inherent to the work. They describe the processes of establishing and maintaining trust across lines of difference, or what they call *politicized trust*, as necessitating, "ongoing building and cultivation of mutual trust and racial solidarity" (p. 199). The authors describe instances of resistance or disinterest from collaborators who no longer wanted to take part in the project or refer to the project as not something belonging to them. Unearthing tensions around belonging stemming from race, gender, or other lines of power, they argue, are key to the pursuit of solidarity and sustained engagement (Vakil & de Royston, 2019; Vakil et al., 2016).

Working through tensions around belonging and engagement points to affective dimensions of heterogeneous learning communities, and the ways members navigate emotional relations with each other. Ehret and Hollet (2016) contend that these affective dimensions of change- and place-making are underrepresented in research on participatory work.

Although the focus on heterogeneous learning communities as sources of collective and transformative social change has increased, particularly as a growing number of researchers turn to participatory epistemologies in their research, characterizations of the inner workings of these communities tends to be thin. We turn now to communities of this nature in the area of education, and specifically those with an explicit focus on equity and justice.

Education-Based Heterogeneous Communities. Over twenty years ago, Murrell (2001) argued that social justice goals of education could only be pursued by coalitions of BIPOC children, their families, and their educators, and that without bringing the voices and perspectives of individuals for whom the educational reform is most consequential, the reform is unlikely to settle or may cause more harm than good. These coalitions have been gaining traction over the years through efforts such as youth participatory action research (Cammarota & Fine, 2008), research-practice partnerships (RPPs) (Coburn & Penuel, 2016), participatory design research (Bang & Vossoughi, 2016), community-based participatory research (Bang et al., 2016), social design-based experiments (Gutiérrez & Jurow, 2016), and others. These coalitions often constitute heterogeneous learning communities comprising different combinations of researchers, teachers, other education stakeholders, parents, community leaders, and youth.

One of the major strands of this body of work is RPPs. In a recent meta-review of RPPs, Vetter et al. (2022) found that only 17 studies focused directly on educational equity. Across these studies, the researchers identified several aspects of the communities that constituted these RPPs. One feature was the continual negotiation of the purposes of the effort as members' roles shifted and new issues were

unpacked. Another feature was an emphasis on the expertise and epistemologies of minoritized members, who unveiled counternarratives and stories that pushed against dominant structures and practices both local to the RPP and more broadly. For example, Barajas-Gonzales et al. (2018) found that family and community strengths were instrumental in mitigating students' exposure to violence through ongoing discrimination against their families. These RPP communities also sought to explicitly and deliberately unearth tensions and contradictions that enabled deeper examination of the issue and more opportunity for expansive social imagining.

Bang and Vossoughi (2016) have argued that in these coalitions, less attention has been paid to subject-subject relations, or the ways that members of heterogeneous learning communities embody and experience roles, relations, and practices of the communities. Guillen and Zeichner (2018) describe the relations that emerged between (predominantly-white) pre-service elementary and secondary teachers and (predominantly-BIPOC) community leaders, who worked and lived in the schools' communities composed mostly of BIPOC youth. When the researchers studied the experiences of the community members in particular, they found that although the members experienced genuine interest and openness from the teacher candidates, they also recognized candidates' lack of awareness of their privilege and the ways power operated in the US with respect to different racial and ethnic groups. Community members found themselves in the position of educating the candidates about their whiteness (Leonardo, 2004), sometimes directly or through other candidates. This study highlights the ways that communities can become lopsided in terms of who is benefiting most from the collaboration.

In contrast, in solidarity-driven co-design (Ishimaru & Bang, 2022; Ishimaru et al., 2018) minoritized families, community members, and researchers engaged in co-design processes to re-imagine practices and policies that harm the local and broader communities. These heterogeneous learning communities aimed to continually "de-settle" norms and routines that reinforced status quo narratives and located blame with communities. Established roles (researcher, community member, family members) were also fluid as required forms of expertise varied and tapped individual positionalities in different ways. As described in studies above, tensions were viewed as manifestations of broader structural inequities and treated as opportunities for new sensibilities and social relations. Troubling normative practices, identities, relations and stories were in service of creating solidarity. As the authors write, "building solidarities across and with difference constitutes a key aim of the work to enact transformative and consequential forms of learning and activity" (Ishimaru & Bang, 2022, p. 137).

Growing success of these coalitions suggests that it is incumbent upon researchers to work alongside teachers and communities toward new learning through mutualism, difference, and politicized trust. At the same time, much more could be learned from close attention to the interactional dynamics in heterogeneous learning communities that emerge. This study examined the nature of a heterogenous learning community in a participatory project involving mathematics teachers, leaders of community-based education organizations, and university scholars. The primary research questions addressed in the study were the following: What was the nature of the community that emerged in this project, and in what ways did the members experience it as a community? The study also examined the features of the community that played a role in members' experiences of it.

Methods

Context

The aim of the project was to bring together the divergent perspectives of teachers, community members, and university researchers into conversations around noticing (Mason, 2002; van Es & Sherin, 2002), mathematics, and racial equity. Although the participatory approach to the project was solely intended to elicit the expertise, experiences, and noticing patterns of diverse stakeholders in education who work closely with youth and who had previously engaged in some anti-racist work, their perspectives and experiences during the project also highlighted how privilege, race, and power may show up and operate in an intersectional research community designed to critically investigate how systems of oppression and social hierarchies shape experiences for minoritized youth.

The study on mathematics teachers' noticing forged a community of eleven stakeholders that included five teachers, three community leaders, and three university scholars. The mathematics teachers in the study were selected due to district recognition for their special attention to equity and equitable practices in their classrooms. The three community leaders (one of whom is author four) were also selected to join the study for their dedication to equity and for their on-the-ground experience working with youth of color in the communities where all of the teachers taught. The university scholars involved in this study comprised the project PI (second author) whose research centers equity in mathematics education, a postdoctoral researcher whose work centers on mathematics, equity, and PAR (third author), and a graduate research assistant (first author).

Study Participants

Participants interviewed for this paper included three of the five secondary mathematics teachers, Garrett, a white man, Isabella, a Latinx/white woman, and Amy, a white woman (see Table 1). At the time of the study, all of the teachers were living in their respective students' communities except Amy,

TABLE 1.
Interview Participants.

Participant	Project Role	Self-Identified Demographic Background	Professional Background
Garrett	Teacher	White, Man	Secondary mathematics teacher
Isabella	Teacher	Latinx/White, Woman	Secondary mathematics teacher
Amy	Teacher	White, Woman	Secondary mathematics teacher
Jayla	Community Leader	Black, Woman	Director, youth-based organization; education doctoral student
Joshua	Community Leader	(Black/White), Man	Educator/Employee, youth-based organization
Jihee	Community Leader	Asian, Woman	Educator/Employee, youth-based organization
Elizabeth	University Scholar	Latinx, Woman	Education postdoctoral researcher
Michelle	University Scholar	Black, Woman	Education graduate researcher
Vicki	University Scholar	White, Woman	Professor; project PI

who commuted each day from a neighborhood nearby. The other two teachers involved in the study who identify as white females were not interviewed for this paper as they each left the study early due to medical leave and a new position creating personal time constraints. The three community leaders interviewed for this paper included Jayla, a Black woman, Joshua, a Black/white man, and Jihee, an Asian-American woman, who worked at a BIPOC youth-based organization. Jayla also held the role of an education doctoral student in addition to directing a youth-based organization. Last, the university scholars interviewed for this paper included Elizabeth, a Latinx woman, Michelle, a Black woman, and Vicki, a white woman. Elizabeth joined the study on mathematics teacher noticing as a postdoctoral researcher, Michelle joined a year later as an education graduate researcher, and Vicki, the project PI aimed to continue her work with mathematics educators on the topic of mathematics teacher noticing. Three of the five teachers in this study had previously worked together with the PI on a grant around mathematics equity and aimed to help continue that work.

Author Positionalities. Similar to the other participants in this study, our roles within the community were not confined to a single identity or subgroup.

The first author joined the study as a new graduate researcher, a Black woman, and a former classroom teacher. Her involvement within the community shifted between aligning with the perspectives of university scholars and that of teachers or other BIPOC members. The second author, a white, female university professor, served as the PI of the research grant underpinning the project. It was her first time facilitating participatory approaches to research. This experience was coupled with her identity as a white person in the community. The third author, a Latine female, worked as a postdoctoral fellow during the project. She sought to integrate participatory approaches, theories of learning, and teachings from Curanderismo, a Mexican indigenous healing art, into the summer institute. The fourth author, a female

doctoral student, contributed multiple identities as a BIPOC member with expertise in critical ideology, focusing on centering BIPOC youth and communities through Youth Participatory Action Research. Her teaching background and work within non-profit organizations informed her perspectives and her engagement within the community.

The authors' and other participants' intersectional identities, backgrounds, and roles informed the viewpoints they each brought to the research community that, at times, struggled to maintain its solidarity amid tensions that mostly arose across lines of race and power. Subgroups of the community (teacher, community leader, and university scholar) were determined by the roles that participants held when opting into the study. Later in the project, the three subgroups contributed to growing tensions in the community mostly due to all of the community leaders identifying as BIPOC, and the majority of the mathematics teachers and the project PI identifying as white. Despite tensions, participants' personal and political relationships within the group and across subgroups, participants' ability to contribute meaningfully to the study and participants' commitment to educational equity each shaped how members of this study experienced the research community. And, ultimately, influenced members' choice to remain part of the community or not.

Methodology

This study is part of a longitudinal qualitative study around equitable mathematics teaching. The data for this paper primarily relied on semi-structured interviews (Given, 2008) conducted with study participants. We attempted to gain a sense of participants' perspectives on how the community did or did not form, the ways they did or did not contribute to this community, and tensions that arose throughout the project. Interviewers also asked the participants to reflect on the nature of the relationships that emerged over the course of the project, the interactions within it,

project activities, and interactions that took place outside of the community that were instrumental to developing or preventing relationships.

Interviews were analyzed through thematic coding (Saldaña, 2021) that highlighted features of the community that participants reported as having weight for their engagement: feelings of affirmation and belonging, feelings of disconnection, instances of trust building, personal and political goals, and relationships through racially and politically charged tensions.

Study Design

The study design intended for teachers, community leaders, and university scholars to collaborate around noticing in mathematics classrooms to create more just and affirming learning experiences for BIPOC students. Previously recorded videotapes of Garrett, Isabella, and Amy's classrooms and their interactions with their students provided the community with artifacts to contemplate how the teachers noticed (BIPOC) students during mathematics instruction, in turn shaping student trajectories of participation in mathematical activity. Participant viewing sessions or noticing sessions were coupled with readings on equity and anti-racism in mathematics teaching and learning. The ultimate goal of noticing sessions was to better understand the "noticing blind spots" that may occur for teachers of BIPOC youth who are more or less intentional of how and what they attune to during instruction. Individual and group reflection on the noticing practices observed in the teachers' classrooms moved noticing conversations toward discussions of race, gender, power, and other societal structures that were in play in their classrooms, but were also in play among the research community itself, although tension within the community was not always explicitly discussed. Differences in noticing, mostly between the teachers and the community leaders, shaped the ways that various participants contributed to the community and felt connected to it. These tensions became most poignant between the white teachers whose documented noticing practices and student interactions served as examples for the community to analyze. However, BIPOC members of the community reported feeling this tension the most, often taking on the responsibility of calling out noticing practices and behaviors that they found problematic.

Intentional Design of Community. Although the study centered on teacher and community leader/educator noticing, the following analysis focuses on how participants viewed the community that formed over time, their role within it, and the aspects of the community that led them to feel more or less part of it. We foreground the vulnerability embedded in the discussions that took place as tied to power, discussion of race, and ideologies (Hand, 2012; Louie, 2018).

As such, we designed our initial whole-group gatherings (Summer Institute 1) to center on deepening and cultivating relationships in a playful, embodied way that elicited personal and professional experiences. The approach to this form of relationship-building imagined opportunities to build relationships that could extend beyond the space. For example, we opened the whole-group gathering with a community altar to engage in the sacredness of sharing time and personal narratives, and we facilitated and participated in noticing walks to better understand other members' points of view. These activities were selected not only to help the participants get to know each other and their backgrounds, but also to bring awareness to the various privileges and challenges that would shape how they entered into this noticing work. Additionally, we invited in language around emotions and body knowledge (Anzaldúa, 2015) through activities that asked us to feel into our bodies and use our bodies to gain insight into the ways students are positioned in classrooms. We elicited play and imagination through activities ground in the theater of the oppressed (Boal, 1993) to both sit deeply with issues at hand and to create without constraints. We also embedded feedback through spoken and written communication, which helped identify tensions arising in the conversations.

Following the initial gathering, participants met bimonthly in the classrooms of various teachers in the group to co-notice during noticing sessions. The group met for two years. Participants often read articles in advance of these sessions to hone the noticing discussions. During these meetings, participants engaged with recordings of classroom observations of Garrett's, Isabella's, and Amy's classrooms while playing video and audio, and also video only and audio only. Participants would then document their noticing in journals and later compare their noticing practices with that of other noticers. During this process of reflection and sharing, norms were created to support participants in better communicating what they noticed, especially if they noticed issues around issues of race and power as they relate to BIPOC youth in mathematics classrooms.

Data Collection

A total of nine semi-structured interviews were completed with each member of the research community. These interviews were conducted by the university scholars six months after the study ended. Closing interviews took place over Zoom, were approximately one hour long, and were guided by semi-structured questions designed by the university scholars to document how members reflect on their time engaging in the anti-racist noticing work of the study, and how they reflect on their experiences and contributions to the group. Teachers and community leaders were each interviewed by one university scholar and the university scholars interviewed each other.

The interviews asked participants to share insights gained through noticing sessions, journal reflections, and discussions about race to make their sensemaking explicit. The semi-structured questions provided an opportunity for participants to describe their experiences and perspectives on the community that the study aimed to form, the degree to which a community emerged, the various forms of support or nonsupport received from the collective, and any ways in which the interviewee felt they contributed to the community or not. Additionally, each interviewee was asked about tensions that emerged individually and as a collective to better understand how the work landed on different members of the research community, and also how members felt the community succeeded or not in resolving these issues.

Data Analysis

Data analysis began with the transcription of the final interviews. First, codes were generated from the Peele-Eady and Moje (2020) framework for heterogeneous communities, and from the notion of politicized trust (Vakil et al., 2016). A priori codes included conceptualizations of community, learning, naming tensions, relationships, roles, and shared or unshared goals based on the frequency of occurrence. The primary author, a graduate researcher familiar with the PI's previous work and analysis around equitable teacher noticing, used the a priori codes to take an open-coding approach. Open-coding revealed common themes in reports from white participants of the study who struggled with their roles in the research community and their level of contribution as compared to the BIPOC community leaders and other BIPOC members. Similarly, open-coding revealed that BIPOC members of the research community reported tension in navigating whiteness and white fragility which particularly showed up in discussions about noticing race. Continuing to identify themes of reported tension for interviewees, additional codes were added to the codebook (e.g., persistence, affirmation, reflection, and frustration), and the codebook was further refined. Once the initial coding pass was complete, the second author, the PI on the project, coded a subset of the interviews to seek agreement on the codes created by the first author. In cases of disagreement, the codebook was revised to best capture the various nuances of the interviewees' shifting roles and level of participation across the project. Jayla, a community leader, reported that her identity as a Black woman, a mother, and, at the time, a future scholar, influenced how she engaged within the space. Her various identities determined whether she came to the space as an educator, a mentor, a mentee, a learner. Sometimes, she embodied all four roles. The codes "navigation of roles" and "(Role) model" were added to capture this shift in the roles she took up. Once a final codebook was completed, the final set of interviews conducted to elicit the perspectives of university scholars was also coded by the first author and the PI.

Emerging findings of analysis brought out thirteen types of tensions reported across dimensions of the community (e.g., avoidance, whiteness, performativity, reciprocation, accountability, and vulnerability) that were demonstrated or experienced by different participants. The authors then collapsed these emergent themes into five overarching themes (e.g., space as affirming and fraught, goals as shared and contested, belonging as ebbing and flowing, relationships as personal and political, and roles as fixed and amorphous). For example, "space as affirming and fraught" described instances where community members described tensions within the community but also moments of affirmation that solidified their membership within the community. And "roles as fixed and amorphous" described reports from members who, like Jayla, spoke of the challenges of negotiating different roles at different times and simultaneously. The major themes were used to analyze the following excerpts and capture the nuances for the members of this community who all hold intersectional identities and who took on various roles throughout their time with the project.

Findings

Our analysis revealed that the participants felt that a community had emerged to varying degrees over the course of the project. The community persisted over time, both physically and in the members' imaginations. At the same time, the participants expressed that the nature of the community was complicated, laden with tensions, ruptures, and new beginnings. An apt metaphor for this community was as a kaleidoscope, where different dimensions shifted in and out of view.

In the next sections, we explore the features of the community that emerged: 1) spaces as affirming and fraught, 2) goals as shared and contested, 3) belonging as ebbing and flowing, 4) relationships as personal and political, and 5) roles as imposed and amorphous.

Space as Affirming and Fraught

The data revealed the community that emerged was experienced as both affirming and also fraught with tensions by different members at different points in time. For example, nearly all of the members felt that the community was at some point a place where they could be themselves and feel supported and valued. When asked if he felt supported and how, Joshua, one of the community leaders, described how, despite notable differences across the perspectives that individuals brought to the work, the project activities created space for the plurality to be affirmed.

> I felt like there were activities where, again, affirming activities where you got to hear or see other people affirming your perspective or your point. I can't remember what they were, but opportunities that allowed for a larger environment where we knew that there

were other people that, even if we were at odds with our belief system or ideologies, if there was just some type of difference, you knew that it was still a supporting environment.

Joshua attributed his sense of affirmation to activities where people were receiving his perspective. Additionally, in moments when differences in perspectives emerged, a sense of being in a supportive, affirming environment remained. Elizabeth (third author) echoed this sentiment when she reflected, "The vulnerability that people shared. The willingness. I look back at what we asked people to do, and the fact that people did it is still surprising."

Not all participants in this community had previously prioritized critical identity work when joining the study to broaden their understanding of equity and mathematics. Some early activities that the community engaged in, like identity mapping, required a level of vulnerability that some participants had not anticipated. For example, Amy, a white teacher, described her early realization that discussions would not be structured for teachers to explain their noticing to the group, stating, "I still felt like I was carrying an agenda of, like, 'Oh, I will explain noticings to you and I will explain all of this to you.' Once I had done a lot of processing, I read *White Fragility* and understood a lot more about the constructs that people were talking about." Although Amy did not anticipate discussions about whiteness, she was willing to make attempts to better understand the type of community that was being formed, and her role within it as a white woman and as an educator of BIPOC youth.

Although members generally reported feeling affirmed by the community, exploration of race and racism meant that the community was sometimes contentious and fraught with political tension. Early in the project, subgroups emerged along lines of race, which became a significant tension as the project progressed. When asked about disconnects that became evident over the course of the project, Jihee (fourth author) described a point of racial tension between white teachers and the BIPOC community leaders, stating:

> Jayla pointed out to me a disconnect that I couldn't put into words. When she said it I was like, "Yes! That's what's happening!" The disconnect was between the community members and the teachers, right? So we had white teachers and then we had community members that were people of color and then just seeing that kind of power dynamic play out.

A consistent challenge during the study was keeping discussions critical and equity-focused rather than defaulting to the instructional side of mathematics, which was a more comfortable and familiar way for the teachers to talk about equity. In the above statement, Jihee points to fracturing that emerged along lines of race, and also along participants' roles. Tensions around issues of racial identity emerged early on in the project, which led to pivots in the project

design like opportunities for noticing meetings based on affinity groups to try and address the power dynamics that Jihee described as playing out between different subgroups within the community.

At the same time, Joshua noted how in the beginning of the project prior to the intentional changes to the project design, there seemed to be "multiple communities at multiple times." Joshua continued to describe this disconnect, stating "There were two separate communities, and it was based off of racial identities." Jihee also described differences in emotional labor between the "two communities" that formed at the beginning of the project, saying, "I think the labor wasn't—the balance was not there in some ways. Not the whole time, but in little moments." The fact that the teachers and community leaders were divided along racial lines, and that the community members faced a racialized burden, meant that the community, especially in the beginning of the project, could feel like a place of harm. Although the community that formed was fraught with racial and political tension, the disconnect between the teachers and community leaders became less prominent after more frank discussions about the racial dynamics at play and how to mitigate them, participants perceived the two communities to feel more connected.

Isabella also recalled the tensions around race that arose early on in the project, but then described how later intentionality around the openness of conversations led to a sense of intimacy within the group moving forward:

> We had that rough start, which I think was really important. I think we've all kind of picked it apart and looked at how we could have done it better, but I don't know that we could have. I think it was important for us to just sort of have that rough start. I think what came from that group is a sort of an intimacy, that we were all laid bare and then we were like, "Okay, well, we're in this, all together."

Isabella's description of the early racial tensions that the community faced refers to being able to address problems together and "pick them apart." For Isabella, this close scrutiny of the tensions was important for the community coming together as a whole.

In summary, racial tensions coupled with participants' feeling of togetherness through shared intentions reflected a sense of politicized trust (Vakil et al., 2016), or people trusting each other enough to be engaged in work for the same political ends through shared interests and ethical commitments. The flexibility and intentionality of the study design was one aspect of the community that allowed participants to feel comfortable calling out imbalances in the amount of emotional labor taking place and also disconnects between subgroups within the community. Trust between the members served as a tool to help foster the resolution of tension for the sake of the equity work being done to benefit BIPOC youth.

Goals as Shared and Contested

The excerpts above indicate that even among tension, participants found commonality in their shared goal of supporting BIPOC youth through equitable noticing. Working toward this goal helped connect the subgroups of the research community through a common purpose, which remained the top priority of the community as a whole, but in a more inclusive way.

In her closing interview, Jihee stressed the importance of having "everyone at the table" in this community to ensure the community's goals were reached in a collaborative way.

> This work doesn't—cannot work without every single person being committed to equity and thinking about youth at the center. If it's just one group working on it, it doesn't work. [. . .] Every single group has to be committed to the work for the overall picture to shift.

Having a shared goal of supporting BIPOC youth provided opportunities for the community to be genuinely collaborative, more equitably considering the perspectives of each member of the community, and also the wealth of expertise and knowledge within the subgroups of the community. Jihee described wanting everyone to have a seat at the table, highlighting the importance of community members having the opportunity to contribute to the group in meaningful ways. This sometimes looked like teachers sharing personal anecdotes about their classrooms and their students, which provided helpful context and insight into how they try to notice their students in intentional and asset-based ways. For Jihee, placing BIPOC students at the center of the work was the community's most important commitment to achieving its shared equity goals.

Although centering BIPOC students in the noticing work had been a shared goal among the community from its inception, members still faced challenges understanding their role in helping the group to reach this particular shared goal. One of the struggles that the group still faced was differences in personal agendas which could either support the community in reaching its goal or hinder it. For example, Amy recalled the tension of realizing that Joshua, a community leader, had different views about what it meant to contribute to the community in meaningful ways that pushed the project forward. She said, "Joshua's view was, 'I had to come in and we [BIPOC members] had to explain to them [teachers].' And then and I came in with my own agenda too. And so I was like, 'Oh, no wonder!' We all came in with these different points of view. [. . .] I for sure, was carrying an agenda, which I didn't realize was barricading everything."

Differing agendas and perspectives about what it meant to engage in the noticing work led Amy to further interrogate her role in this process. She elaborated further on this, noting that the contributions she initially expected to make to the community were markedly different from that of BIPOC community leaders like Joshua. She said:

> My agenda was to come in and say, "Oh, this is how noticing goes, and this is how it is to teach in a math classroom and what it's like to be a math teacher." Joshua really felt like he was invited in to work on equity with teachers who were not as familiar with equity as he was.

Amy conceived of the shared project goal in the same way as Joshua, but what it looked like to pursue the goal and their individual roles were at odds, leading to points of frustration for Amy. She realized that her role as a white teacher meant that she was coming to this work with different perspectives and with a different agenda than that of BIPOC community leaders like Joshua. In this way, the overarching shared goal of theorizing noticing in mathematics classrooms in ways that supported BIPOC youth was perceived differently for some members at different times in the project (Peele-Eady & Moje, 2020). The goals were imagined and interactionally accomplished as members pursued their agendas based on their positionalities and positioning in discursive activity. This meant that the means to the goal could be explicitly and implicitly contested in ongoing social activity. Another way that differences in individual contribution and participation emerged in the community was around issues of belonging within the community.

Belonging as Ebbing and Flowing

Another key finding relates to the idea that identities in community spaces are intersectional (Crenshaw, 1989) and that aspects of identities can be backgrounded and foregrounded, at times within the same setting or across the life of the project. All of the members who started with the project returned to the second summer institute, with the exception of one who left for work and another who left due to health reasons. Out of the remaining members, each indicated having a sense of belonging, defined here as sustained community membership anchored by the relationships formed and support.

Tensions along racial lines were particularly challenging for members' sense of belonging within the community. This was in part because member contributions were imagined differently, and also because of the emotional labor and pain of interactions and discussions grounded in discourses of racism. For example, Joshua described feeling like leaving the group early on after working with the teachers as they were both recognizing and navigating their whiteness in real-time. Joshua cited his emotional labor during this process as an indication that perhaps, this community was not one that he could contribute to safely.

Amy also questioned her place in the community as the project continued shifting away from honing in on students' mathematical activity to focus more on systems of oppression that underlie their mathematical experiences. When invited to share more about her thoughts of exiting the community, Amy pointed to incidences of care and follow-up

from other community members that helped reassure her of the value and worth that she too brought to the work:

> People kept continuing to reach out to me, which was good. Because I, multiple times, did not want to stay in the group. So, I was actively trying to leave the group most of the time.

Amy said that she contemplated leaving the community multiple times over the course of the project and that she was actively trying to leave. She never explicitly expressed her desire to leave with the group during meetings; however, there was a notable change in her participation. Upon realizing the growing distance between Amy and the community, members were instrumental in helping Amy establish herself as a vital part of the group even amid the internal turmoil she faced.

For Joshua and Amy, belonging within the research community at times became tenuous; however, for community members like Jayla the community fostered a sense of flexibility around belonging which allowed her to distance herself from the community due to increasing demands in her personal life, and then resume her participation normally when time and circumstance allowed. Jayla spoke to the importance of being able to move in and out of the community:

> When I think of communities, I even think of friendships, right? They ebb and flow so there are times where you are really connected. And then there are other times where it's like, okay, I need some space. And I felt like there was grace to do that here, which I really appreciated.

Jayla described how grace was developed within the community to allow for the natural ebb and flow of belonging across the multiple years that the community worked together. Ebbing and flowing, as defined by Jayla, included allowing members to take necessary steps back in ways that were not viewed as a sign of disengagement or disinterest in the work. Rather, there was enough trust built between the community members to recognize and acknowledge a need for self-care and a sense of faith that individuals committed to supporting BIPOC students would return when able to. Belonging in this community hinged on Jayla's ability to maintain individualism while also fostering a collective identity which allowed her to perceive herself as fulfilling a role vital to the community's practices and goals (Nasir & Hand, 2008).

Conversely, it is important to note that not all of the community members shared similar sentiments about their participation being foregrounded and backgrounded at different times during the project. For example, Amy described not seeing her role as vital in the group or helpful as the community discussed mathematics and teacher noticing more critically. She described her feelings of belonging and value within the community as more black and white. Garrett, another teacher, reported feeling a similar level of uncertainty about his belonging within the community around academic discursive practices which he was still gaining familiarity with at the time. He stated:

> You know, at first, to be honest with you, a lot of the vocabulary and especially the academic vocabulary made me feel almost outside the group. I was like, "I'm in over my head and I don't belong here in these conversations."

Academic discourse, as well as discourses around critical race theory (Ladson-Billings & Tate 1995), mathematics teaching, and noticing can be likened to a magnetic field, where discussions of more challenging topics acted either as forces of attraction, bringing members closer together, or as forces of division, creating distance between community members at different times. In this case, Garrett felt alienated by the discourse practices. Over time, however, Garrett felt he was improving and making progress due to positive and supportive interactions with other community members who reinforced his belonging by supporting his role as an academic. He said:

> I think about all of the articles that she's (Vicki) has written and shared with me. They kind of helped me get that academic understanding. Jayla was really big in helping to find studies and articles and words that help make sense of these ideas that I think can be ambiguous, especially because a lot of it's relational. It's about human interaction.

With the support of multiple members of the community, Garrett describes working through the challenges of academic discourse and writing, which helped to re-center his belonging in the community.

Relationships and human connections were instrumental in helping both Amy and Garrett maintain a sense of belonging and worth in the community. Without these relational supports, it may have been more challenging for these and other project members to persist in the community over time.

Relationships as Personal and Political

The connections formed within the community were vital in helping members feel comfortable in the collaborative space, and to work through later tensions that developed over the span of the project. Some members described the ease with which they were able to share space with each other in formal and less formal capacities. For example, when speaking about the created bonds and relationships of the community, Jihee said:

> I saw Jayla and (another member) earlier in the week and I was really happy to be in a space with them. Even if it's Thursday, right? And then, to see you (Elizabeth), too. It just feels easy. [. . .] I guess overall I think the most powerful thing was building these relationships. That made the work genuine and authentic.

Jihee expressed joy at sharing space with the other three members regardless of it being outside of an official work context. She noted that it felt easy being around her peers, implying that the bonds she formed within the community extended to other spaces as well. The easiness that Jihee mentioned having in her relationships now is different compared to the tension that Jihee and other community members reported feeling earlier on in the project. Another important part of Jihee's statement is her sentiment that the work itself became more authentic through the genuine bonds that formed.

Members also expressed how relationships helped them navigate unsteady ground and difficult conversations. For example, Garrett describes how consistency and different opportunities for connections were powerful for him:

> I think [with the] summer institute it's the consistency of being with people and being able to have tough conversations, but still being together, and having lunch together, and talking, and connecting in other ways. . . It's the consistent follow-up and being able to be together, and you know say, "Yes, your language hurt me, but you know it's not the end of our relationship." It's not over. I think that that helps.

The tough conversations around race that we described above were for Garrett supported by the prolonged contact with other participants, both in official and unofficial spaces. Relationships could be sustained through harmful language or practices that landed on members negatively.

Joshua mentioned that being paired with different teachers during the noticing walks enabled him to see past their whiteness.

> I would say being able to have individual time with different teachers like in noticing walks, allowed for me to feel—I don't know if supported is the best word—but to start to develop relationships that *could be* [italics added] supportive. Because it kind of knocked down some barriers. And, again, just allowed for some humanizing of people.

Here, Joshua noted that individual encounters with teachers formed the building blocks upon which relationships could be developed. Importantly, the teachers, many of whom held dominant identities, could be humanized by Joshua, a BIPOC male who felt the weight and burden of discussions around race and whiteness. The design of the project toward creating space and activities for humanizing each other, and for caucusing around racial identities, appeared to have had a powerful influence on the ways that the team dealt with future issues that emerged.

Across these examples, trust was politicized because it was required to make participants continue to feel welcomed and valued by the community when racial tensions might propel them out. Without having established these connections and built this trust, it may have been challenging for members to reconnect to the community and persist.

Roles as Imposed and Amorphous

Another way relationships in the community were sustained over time was through the space created for members to take on a range of roles, some of which related to the project, and others that were based on individual trajectories of participation within and beyond the project.

People entered the project with prescribed roles based on their experiences, job titles, and their relation to students. Yet, the members held multiple identities across these roles and took on positions as learners and teachers, or apprentices and experts. Roles in this community included people coming into the space as peers, colleagues, mentors, mentees, educators, community leaders, students, and academics. The fact that prescribed roles were not as concrete as they anticipated given their primary roles within the community as either teachers, community leaders, or university scholars, served to create space for tension, humanizing, as well as reciprocity. For example, Jayla described the inner negotiation she experienced as a community leader and student who was also in the process of becoming an academic:

> If you think about that side [a mentor], and then the academic side of me too, [I'm] thinking, "Oh, this is so dope! If I go into academia, I want to do something like this!" And my nerd side is geeking out. I'm also a student in that moment. Right? And so I'm sometimes thinking, "I really need to perform well so that I could be seen as a potential faculty member or colleague."

Here, Jayla described wearing multiple hats during her participation in the community which allowed her to take on and nurture her personal interests and goals, while at the same time creating personal tension for herself by feeling the need to perform. At various times, she was an academic, a student, a community leader, and also a potential faculty member. Her roles in the community shifted based on the roles taken up by other members within and beyond the community, and also what she perceived to be needed of her during those times.

Jayla also pointed to her awareness of performativity in the space based on some of the roles she took up. In particular, Jayla struggled with her role as a community member, often calling out teachers' whiteness: "I was feeling that was a really deep tension for me [with] the white educators. Again, I'm like, 'What's my role? Should I be constantly teaching? Um, I'm not a professor.'" She went on to explain, "It's not like you [university scholars] said: 'You will perform in this space.' It's just more of my own internalized issues sometimes that I navigate." Here, Jayla is describing a sentiment expressed by each of the community members in the navigation of politicized trust with teachers who were grappling with how whiteness shows up in mathematics classrooms. The gray space of role navigation that Jayla described led her to tread a fine line between her roles, or grappling with the burden and urge to "constantly teach."

Vicki (second author), similarly, navigated unsteady ground around her role in conversations around race: "What am I supposed to say? What is my role? And, who is going to talk about race?"

We view the ways that members like Jayla and Vicki navigated the imposed and more amorphous roles as emotional work. Having to decide how to position oneself (and being positioned) in conversations around noticing race is fraught with tension, and lands on BIPOC bodies in particular ways.

Garrett also expressed hesitation around the ways he should contribute to the group:

> I think that's also part of not wanting to take the center of attention. I focus a lot on what can be fixed, what can be done there. So, I think a lot of times, when I was invited to talk about tensions, or how I was dealing with it [tension], I probably focused more on the structures of school and what teachers could change as far as a task, and maybe not personally. . . emotionally.

Here, Garrett described a similar tension to Jayla around roles, and how to take up space in the community, particularly in conversations where speaking about school structure and teacher actions was more comfortable for him than speaking directly about the roles that race and power play in change-making for BIPOC mathematics students. Although Garrett did not grapple with the pressure to constantly take on the role of expert or teacher, he wanted to make sure his emotional work (likely as a white, male) did not become the central focus. Thus, he was more inclined to center issues of racial injustice as problems solved through external measures, rather than focusing inward.

Across these accounts, participants described a community that formed across the project work and their participation in it. They expressed feeling affirmed by this community but also recognized how conversations became fraught when discussing race and racism in education. Although the goal of equity in mathematics education was shared, it was envisioned and constructed differently at different times by different members, particularly along racial lines. These differences sometimes caused participants to wonder about whether they belonged and what their contributions were to the community. Belonging was supported by relationships, both personal and political, which were forged through consistent interactions and activities that supported the humanization of each other. Finally, prescribed roles within the community tended to become ambiguous as participants navigated their relationships with each other and how the space was shared. Although the community was created intentionally by being composed of different subgroups and intersectional identities that would intersect topics about race, power, and gender, there were no subgroups or individuals whose job was to bring up race when race needed to be considered. This became an unofficial and unassigned role that was intended for each member of the community to take on to some degree; however, BIPOC members of the

community took on the responsibility of addressing societal structures and oppression most of the time. The disproportionate burden placed on BIPOC participants led the members of this community to constantly grapple with whether it was more useful and appropriate to talk about race or instruction and who should decide.

Discussion

Theorizations of community, including communities of practice, have revolved around the idea that alignment across goals, practices, and identities, and a sense of belonging or mutuality is entailed in their constitution (Lave & Wenger, 1991). As Peele-Eady and Moje (2020) have argued, this prevailing notion of community gives the impression that communities are largely homogeneous and bounded, and that participation is contingent upon a sense of belonging and trust. This study found, however, the community that formed around this participatory research project was amorphous and went through phases of uniformity and non-uniformity based on participants' varying degrees of awareness, participation, and sense of belonging. It comprised a single community and multiple others, with identities, goals, and practices that were both shared and contested, which meant that it was affirming in some ways to some people and also a place of contention and harm.

Being able to holistically participate in the community was a factor in the ways that the community operated and the practices that were taken up. As Joshua and Elizabeth noted, the early embodied and critical focus invited vulnerability and participants' whole selves, which enabled participants to engage in ways that felt authentic to them, and that helped bring various pieces of them into the space (Mendoza et al., 2021). At the same time, the community was fraught due to tensions arising across racial lines, particularly given the challenging history and ongoing challenges that communities of color face while navigating white, western models of schooling (Hong, 2012). This was felt early on by Jihee, Jayla, and Joshua, who noticed polarization based on the fact that all of the community leaders were BIPOC and the teachers were white. Despite and even *because* of the fractured, often nebulous, and contested community that formed through this project, as Isabella argued, members found affirmation, joy, relationship, growth, and purpose. Although it was always the goal of this study to support the members of this research community in engaging with the work in ways that were meaningful to them, this was not a goal that could be facilitated through study design alone. Much of the growth and development that community members reported in their closing interviews took place due to members' support of one another and their commitment to each other and their shared goal of supporting BIPOC mathematics students. Although participants cited instances of tension and distress within the community that at times distanced them

from it, these instances simultaneously opened up opportunities for participants to learn and grow in new ways (Peele-Eady & Moje, 2020).

One reason the community thrived was the shared commitment to expanding the noticing of mathematics teachers' classrooms that placed students at the center of the community's shared goal. Goals, however, are social constructions and are imagined differently based on individual positionalities and agendas for approaching the work. It is not surprising, therefore, that members like Amy and Joshua envisioned the overarching goal differently based on their expertise and experiences engaging with critical equity frameworks. We wonder what it would have meant to create opportunities for participants to engage in visioning work together around questions such as, "How do you imagine working towards this goal together? What do you see are the strengths you bring to the table?" Importantly, this research illustrates the importance of allowing for the work to shift in response to tensions that emerge in the group's work (Severance et al., 2014). Delving into these tensions can create opportunities not only for new social arrangements and imaginaries towards the re-humanization of mathematics for BIPOC students (Gutiérrez & Jurow, 2016), but also the humanization of research communities like this one where diverse perspectives of education stakeholders may give new insights into what it means to engage in equity research.

Due to tensions emerging around race and variation in how goals were imagined based on the identities people held, some participants expressed conflicted feelings about whether or not they belonged in the community. This was particularly true for Amy, who described constantly trying to leave the project. Often, community conversations centered around issues of race and power in the teachers' classrooms, which, unsurprisingly, created a space of discomfort for all. Similar to Guillen and Zeichner (2018), we found that community leaders often felt a sense of performativity in conversations around race and carried the burden of the teachers' whiteness. Power and status also played out in other ways, as Garrett noted around using academic discourse as a teacher, which again led members to challenge their sense of belonging. We argue that not naming instances of tension or minimizing tension for the sake of the work being done obscures the ways that power gets constructed in and through social hierarchies. Additionally, while working with RPPs, we suggest being clear about what we hope communities can be—spaces that support shared goals and community members and serve as a place to share knowledge. However, it is equally important to acknowledge and inform members that communities will inevitably face challenges too. Setting expectations around the potential tensions within a community is especially crucial for racially diverse RPPs, where racial tensions are most likely to arise.

The fact that this community was fraught with tensions, which sometimes caused members to feel as though they did not belong, was something the community also embraced to varying degrees. It was not that people needed to be part of the community all the time, but aspects of identities became salient at different times and shaped the sense of belonging the members felt. Additionally, members moved in and out of the space, taking time to nurture themselves so that they could return to the community and contribute in healthy, meaningful ways. Importantly, persistence among the members was tied less to a comfortable and compatible environment, and more to the bonds that had formed among the members, which were sometimes personal, political, or both. Time spent together both within and outside of the community, and the shared commitment members held, figured prominently in the politicized trust that emerged (Vakil et al., 2016). The politicized trust that eventually formed between members of this community was established mostly through members' continued membership even amid past and ongoing tension, and a willingness to compromise on the means to meeting the community's end goal.

The community was amorphous in the way that it stretched across places, was composed of different subgroups at different times, and sometimes felt more imagined than real (particularly when navigating the outbreak of Covid19). Members expressed that the amorphous quality was more of a benefit than a drawback, as the community shifted in relation to tensions and needs that were emerging. Similarly, although people might enter a community with an expectation of how they are going to contribute, in the case of this project, the roles that individuals took on or were positioned into shifted as the community created a path that was responsive to the collective ideas. Importantly, although our results reinforce the claim that a community must have shared goals to support politicized trust, similar to Peele-Eady and Moje (2020), we found these goals are personal and collective constructs that live in intersectional identities. For example, the way Joshua imagined the community and its process differed greatly from that of Amy, who reported having her own agenda too for how the community would operate. What is important to note is that even amid the division of ideas about pursuing research goals, members must choose to remain committed to addressing tensions that arise in order to find a new way forward. For this community of education stakeholders, addressing tensions included discussing the power dynamics at play amid the racial tensions, and giving members the space to repair and forge relationships that helped to sustain their membership in the group.

Conclusion

This paper explored how mathematics teachers, leaders of youth-based community organizations, and university scholars learned to expand their perspectives and work toward re-humanizing BIPOC students in mathematics education. The project team was heterogeneous in terms of their

relations to the sociocultural communities of the students served, and most notably, along racial lines. This type of social arrangement for educational reform is of increasing interest to researchers and other education stakeholders (Murrell, 2001; Zeichner et al., 2016) for research to be "answerable" to the communities they serve (Patel, 2015).

The participants in this study recognized that although the research group did not initially feel like a community, a community did form over time, mostly due to their willingness to address tensions that arose. Community members cited affirmation, shared goals, belonging, the flexibility of roles and engagement, and personal and political relationships as essential aspects of the study design that supported their persistence in the project. Community members' closing interviews document a process by which individuals may grapple with tensions they have with others through their awareness of how their words, actions, and behaviors shape not only their own participation within a research community but also that of their peers. Individual and group reflection were critical in supporting community members to interrogate how being a member of the community was landing on them, and how making collective changes to the study design could improve their experiences. There is still more to be known about the nature of communities and how tensions along lines of differences are negotiated.

Members' conceptualizations of the community were marked by tensions, although the tensions became sites of rupture and sites of new bonds. The commitment of participants to complete this much-needed work around equitable noticing built politicized trust which kept the community together during times of strife. Ultimately, the members of this community were very passionate about supporting BIPOC students, and from this motivation, made commitments to themselves and to their community to see the work through.

Future research investigating how education stakeholders support BIPOC youth by promoting equitable noticing should examine more deeply other processes by which politicized tensions can be negotiated, and how critical identity work and reflection invites the vulnerability and humanizing of participants.

Limitations

The research community that formed from this study was made up of high-school teachers, community leaders, and university scholars; however, future equitable noticing work should include the perspectives of other education stakeholders, like school administrators who also notice and interact with youth daily. Additionally, any future iterations of this work should aim to further diversify subgroups by race and gender. Although the research community was a heterogeneous one made up of individuals with intersectional identities, it is impossible for the group that formed to encompass the full range of noticing practices that shape BIPOC youths' mathematics learning experiences. Research communities engaging in equitable mathematics teacher noticing should expand to include more scholars and school and community-based educators who identify as male and BIPOC, and who have experience with engaging in critical equity work that supports BIPOC youth.

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