DRAFT

Parental engagement in a classroom community of practice: boundary practices as part of a culturally relevant pedagogy

Beatriz Quintos

University of Arizona, United States
<bquintos@email.arizona.edu>

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Introduction

Many Latino students experience mathematics as a curricular gatekeeper and an irrelevant subject (Apple, 1992; Gutstein, 2003; Stinson, 2004). Furthermore, mathematics education is portrayed only as a product to address unemployment and economic goals which supports a market-driven economy (Moses & Cobb, 2001). This perspective ignores the possibility to transform current unequal power structures and the goal of education to endorse human dignity (Olivares Alonso, 2006). These contradictions have critical implications that need to be addressed in order to improve the educational opportunities for Latino communities.

An inclusive model of parental engagement is central to a culturally relevant mathematics education (Ladson-Billings, 1995). In the last decades, research, policies, and pedagogical models announce the benefits of parental participation. Dominant views, however, often leave involvement or empowerment undefined (Lankshear, Gee, Knobel, & Searle, 1997; Vincent, 1996). This vagueness in the rhetoric of parental involvement tunes into a deficit view of low-income and ethnic- and language-minoritized communities. A deficit-driven model claims educational problems lie in the inadequate socialization within families (Taylor, 1997). This perspective, however, fails to consider the diversity of the funds of knowledge of students and their communities as well as the institutional role in perpetuating unequal opportunities. Furthermore, this perspective often narrows the definition of parental involvement.

A socio-historical view of parental engagement is of a situated and dynamic activity system (Calabrese Barton, Drake, Perez, St. Louis, & George, 2004). One of its main tenets is that the model of participation needs to be culturally responsive and consider the political and historical contexts that mediate power relations. This research study forwards this perspective through the analysis of the interaction of parents and the school system using the framework of communities of practice (CoP) (Wenger, 1998). In particular, we use the concept of boundary

practices to address the particular moments of inclusion or exclusion of parents. The discussion describes multiple ways in which the mathematics learning practices in a classroom connect or disconnect parents as a resource for a culturally relevant pedagogy.

Theoretical Framework

Cultural-historical frameworks underscore that parental involvement is a process and a product of the historical and socio-political context of schools; influenced by educational policies, research, and teaching practices, among other factors such as the race or income level of students' families (Calabrese Barton, Drake, Perez, St. Louis, & George, 2004; Lareau & Horvat, 1999; Lareau & Shumar, 1996; Mapp, 2003; Taylor & Dorsey-Gaines, 1988; Valdes, 1996). Two concrete efforts grounded on this perspective are the project of funds of knowledge and learning communities.

There are multiple projects that illustrate how schools, teachers, and researchers may tap into households' funds of knowledge (Barton, 1996; González, Moll, & Amanti, 2005; Hammond, 2001; Moll & González, 2004; Patterson & Baldwin, 2001). In these projects, the teachers become learners and therefore encounter opportunities to reconceptualize students, their families and communities, as well as the curriculum. The specific resources in the community become evident as the teachers move away from the enclosed area of the classroom. A focus on the strengths and assets of the families and communities implies changing the focus from needs of the communities to the possibilities present within the communities (Delgado-Gaitan, 2001; Guajardo & Guajardo, 2002; Kincheloe & McLaren, 2002). Then, the knowledge gained from a community can be used as a tool that further benefits members of that community

Another effort that includes the transformation of power relations beyond the classroom is the learning communities led by the research group of Flecha, in Spain and other parts of the world (*Comunidades de Aprendizaje*, 2005). These learning communities are projects of social and cultural transformation of an educational setting and its context. These communal projects' principle is that social change cannot be constrained within the classroom, but must include all the spaces in the community and its diverse participants. The learning communities use dialogic learning, through the active participation of the community, materialized in its different spaces including the classroom. Although parents enter the classroom to participate in school-like activities, their role is of collaboration with the teaching staff. There is a continuous praxis that counters dominant power structures. It is significant to mention that there is a dialectic relation of change between the educational practice and the relation with community it serves.

The strength of the two projects previously described has been well documented. However, there is a need to further understand the connections or disconnections between families and the mathematics learning experiences of students. Many teachers are not within schools that support a radical change in their relation to the community as the project of learning communities requires. The concept of funds of knowledge, on the other hand, is an effort individual teachers can implement. However, establishing the connections between the cultural knowledge of the communities and the mathematics curriculum can be challenging (Civil, 2007).

In this research we use the concept of communities of practice, in particular, the concept of boundary practices, to describe the interconnections between the members of the classroom community and parents.

Boundary practices: parents' participation in mathematics education

The lens of legitimate peripheral participation and CoP redefines learning experiences within the classroom (Lave & Wenger, 1991; Wenger, 1998). A theory of learning as participation includes the individual's evolving trajectories of participation in a community of practice. These transformations necessarily involve the identity and perspectives of the individual, the negotiation of meanings, forms of membership in a community, and the practice in itself (Wenger, 1998). In our case, the community of practice is the classroom participants and mathematics learning is defined as students' trajectories of participation in the particular mathematical practices.

Although a 'community of practice' is a unit of analysis, they are not isolated from other individuals or communities. In this study we explore the interaction between the classroom CoP and boundary practices (Wenger, 1998) that occur around school mathematics learning involving family members. The term 'boundary practices' refers to the lines of connection and disconnection, inclusion or exclusion, between members of two or more CoP. Through this concept it is possible to explore the interactions that relate to the classroom community but that include members of other communities, such as the families of students. Wenger (1998) describes that the boundaries are established in two ways. First, the nature of the community in itself creates boundaries between members and non-members. Second, there are boundary encounters that bridge a community to the outside world. This concept situates the connections with family members in the practices within the community as well as in those practices with the main goal to connect students' mathematics learning with family members.

A fundamental component for establishing a culturally relevant education are boundary practices that include the funds of knowledge of diverse communities as well as practices that contest the hierarchical and hegemonic practices that often characterize parental involvement in U.S. schools, particularly in minoritized communities (Ladson-Billings, 1995). The goal of this paper is to contribute to efforts that propose a distributed and situated notion of parental engagement using the framework of legitimate peripheral participation and CoP. Parental engagement in mathematics education is a practice that can contribute to transform current power structures that disenfranchise Latina/o students and their communities (Civil, 2002). For over ten years Civil has led research efforts on issues of parental engagement and mathematics education in working class, Latino communities (Civil, 2007; Civil, Bratton, & Quintos, 2005; Civil, Planas, & Quintos, 2005; Civil & Quintos, 2006). This research and outreach efforts are grounded on the Funds of Knowledge research projects, and on the concept of parents as intellectual resources (Civil & Andrade, 2003), as a means to emphasize parents' contributions to their children's mathematics education.

Methods

This study takes place in a fifth-grade classroom at an urban elementary school in the southwest United States, in which ninety percent of the students are of Latino background and almost seventy percent of the students receive free or reduced lunch[1]. All the participants have some understanding of English and Spanish, however several of them predominantly use just one of the two languages. The parents of the children in this classroom all signed the waiver requesting bilingual education for their children as established by the state legislation, Proposition 203[2]. Many of the children were previously in English-only classrooms and some recent immigrants, in Mexico, in Spanish. This classroom was chosen based on the researcher's personal respect for the teacher as well as the teacher's national recognition for her teaching practice. She is a teacher-researcher who talks about and enacts her beliefs and values about teaching and learning, mathematics, and curriculum.

The participants in the study are: nineteen fifth-grade students, the parents of four of these students, and the classroom teacher, Olga. We developed in-depth case studies for four of the nineteen students. These students are Mexican immigrants or Mexican-Americans. The students were selected based on the teacher's knowledge to include diversity in gender, mathematical proficiency, and language fluency in English and in Spanish. The case studies are: Yessenia and her mother, Lorena[3]; Maite and her parents, Monica and Enrique; Diego and his parents, Alejandra and Ulises; and Facundo and his parents, Maria and Carlos. In this paper we focus primarily on the case study of Yessenia, and her mother, Lorena.

Data collection and analysis

This year-long qualitative case studies (Dyson, 2005) explore in detail the particular engagement of some Latino families in connection to their children's mathematics learning experiences. The use of multiple case studies bridge local particulars to the abstract social phenomenon of CoP. We used ethnographic tools for our data collection which took place in three sites: the classroom, students' households, and two after-school programs. A detailed review focused on those activities that from this author's perspective are significant boundary practices. This in-depth analysis included the transcripts from the interviews with the teacher, students, and parents; as well as video transcripts and field notes of classroom observations. Grounded theory (Charmaz, 2001) is a process that explores emergent themes. The different sources were used to triangulate the information and build thick descriptions. The discussion

[1] Free or reduced lunch is used as an indicator of poverty level

[2] Proposition 203 is state legislation that was approved by Arizona voters in 2000, based on the same tenets of Proposition 227. It is now part of the Arizona state statutes. It proposes to replace bilingual education with Structured English Immersion classes for a period of 1 academic year. It states, "Although teachers may use a minimal amount of the child's native language when necessary, no subject matter can be taught in a language other than English" (A.R.S. Section 15-751 [5]).

[3] All names are pseudonyms.

focuses on different boundary practices and the implications for the learning of mathematics as well as for parents.

Boundary practices: Parents as legitimate peripheral participants

There are two means with which this classroom community of practice sets its boundaries towards students' family members. The first category comprises the nature of the mathematics practices in the classroom. The second group involves those encounters that have the overt purpose of bridging students' learning and parents.

Nature of mathematics practices in school

In this classroom there are two main practices that connect students' mathematics learning to their communities, including parents: a curriculum that embraces critical, community, and classical mathematics (Gutstein, 2006) and the sharing of personal stories.

Classical, community, and critical mathematics

Children engage in investigations in the three areas of classroom mathematics that support an empowering pedagogy for Latinos: classical mathematics, community mathematics and critical mathematics (González, Andrade, Civil, & Moll, 2001; González, Moll, & Amanti, 2005; Gutstein, 2003, 2006). The combination of these mathematics practices relies on Olga's principles of a democratic education that aims to empower students as mathematical learners and critical citizens.

Community mathematics

Guiding Olga's vision of creating a community of critical mathematical citizens, is the renowned phrase of Freire (1998), "read the word to read the world." Olga expects children to read the sign systems of mathematics in order to enhance their understanding of their world. Her goal is that critical thinking merges the life experiences of students outside and inside the classroom.

> Olga: For me community knowledge is bringing the outside into the inside and developing those ideas in such a way that when they step out of the classroom their outside is enhanced, their mathematics is enhanced because they're coming up with this community knowledge and now they are understanding a little bit better. It is bringing the outside inside, dissecting it, and sending it back out to enhance their world.

> We are trying to mathematize their world, and I think …math is everything, is everywhere, I think they have a broader definition of it, but it is because you bring the outside.
>
> (personal conversation, Olga, March 31st, 2006)

Olga's disposition towards mathematics becomes part of this community. Mathematics is an indispensable lens that she uses to enhance her understanding of the world and to interpret others presentation of the world.

Critical mathematics

Through the year long topic of world-mindedness Olga brings the world population closer to this classroom and promotes a caring and informed attitude towards others in the planet. This attitude is not extraneous to mathematics; on the contrary, it is through mathematics, as well as the other content areas, that Olga promotes her goal. Olga encourages children to use the different domains of mathematics to make sense of their world. This stance of world-mindedness means that students need to develop a critical stance to reflect and act in their world. But in order to achieve this goal children also have to make sense of mathematics. For instance, the first week of classes Olga read to the class the children's book *If the world were a village* (Smith & Armstrong, 2002). The author invites the readers to consider the world as if it was the size of a village and includes topics such as world population, religions, nationalities, food distribution, schooling and literacy, money and possessions, electricity, among other topics. During the read aloud Olga highlighted some aspects for the children to consider as citizens of the world situated in their particular contexts. She read, "Sixty percent of the world population is hungry and of those twenty six percent are severely undernourished and twenty four percent of the population always has enough food" (field notes, August 18th, 2005). Then she stopped and posed the question to the students, "Why does this happen?" Olga was not searching for answers as much as highlighting a call for critical thinking. She continued reading about the languages most spoken in the world. Some of the languages listed were Chinese, Hindi, English, and Spanish. After Olga read these data she said to the students, "If you speak Spanish, you are at a great advantage because it is one of the four most spoken languages in the world." Olga connects the meanings presented in this book to the identity of students as Latina/o and counters the demeaning view of Spanish –or other languages different from English—in this particular state which tries to eliminate its use as a linguistic resource in schools. She uses this information to highlight the value of students' knowledge and identity. Furthermore, Olga emphasizes the importance of them making informed decisions. She said, "Smith wants you to know you are the citizens of the future, you need to know the information to make the right decisions" (field notes, August 18th, 2005). In this short event, Olga emphasizes the way mathematics is a tool to make sense of their world and their own identities. This approach to mathematics permeates her curriculum.

Classical mathematics

In an activity in which children explored Body Ratios, Olga models continuously mathematical discourse. She describes concepts and their relations in the context of the investigation. For instance she describes the mathematical relation between the measurements of their body parts. She uses rich vocabulary including equivalent, congruent, line of symmetry, and fractions.

> Olga: What did you discover?
> Andres: If you measure your waist, then you get your leg measure.
> Olga: Everyone [she asks children to do what Andres described]. Once around your waist is equivalent to your leg measure, to your ankle.
> Andres: Your waist is about half of your height.
> Olga: Ok, and remember that these are approximations.
>
> (classroom observation, November 4, 2005)

Olga focuses on developing students' communicative competency and mathematical reasoning. She promotes connected investigations that facilitate children's active participation in mathematics discussions, visualizations of patterns, mathematization of their world, and connections of concrete and symbolic representations. The investigations frequently launch from a world context and are based on concrete experiences that promote students' participation in the negotiation of mathematical meanings. Furthermore, they connect students' communicative competency in everyday life to the academic discourses of mathematics. These inquiry projects give time for students to gain experience in the different practices. These expanded zones are the result of the nature of the activities, social interactions, and mediating tools.

Olga's teaching follows the suggestions from the NCTM Principles and Standards (2000) and a socio-constructivist perspective. The mathematics learning in this community, however, encompasses more than reform mathematics. Olga's humanist vision of education goes beyond mathematics as a communicative competency or interconnected meanings and representations. It includes the identities of students as subjects of their learnings. A humanist perspective counters a banking education that considers individuals as objects in the learning process. This identity of members as subjects requires that individuals make sense of the mathematical tools and use them for their own purposes.

Personal stories

A way of interaction in this classroom is the regular sharing of stories from Olga and the students. Olga explores children's vast knowledge and connects with children's families and other communities through their personal narratives. At the same time, she often shares stories of her personal life or ones that are meaningful to her. These stories are about her family, herself, past students, or historical characters, among others. Some of the stories emerge during the instructional activities such as in the sharing of their reading, mathematics explorations or science experiments. For example, this conversation took place during an exploration about proportions of the human body.

Olga: As you're growing they measure your head to see if it is growing normally and that your head is growing into proportion.
Yessenia: Were you growing?
Olga: O*h, seguro y estoy proporcionada, pero cuando estaba más chica, no me podían comparar con otras personas de mi altura, porque yo era muy alta y los demás eran muy cortos de estatura, pero ya llegando a cierta edad, cuando entré a la secundaria, había muchos estudiantes que eran de mi misma altura. Pero en la escuela, en el salón donde estaba yo, no era cierto, yo era la más alta. Pero nomás eso ocurrió cuando estaba en la primaria.*
[Oh, of course and I'm proportionate, but, when I was younger, they couldn't compare me with other people of the same height, because I was very tall and the rest were shorter, but when I reached certain age, when I got to middle school, there were many students of my height. In the school, in the classroom where I was no, I was the tallest. But that only happened when I was in elementary school.] (translation)

This personal story bridges the classical mathematics concepts of proportion to the life of students, in particular, to their body as human beings. Children respond to this story with other personal stories. For instance, Marcela shares a story about her father and his height who is also tall (classroom observation, November 4, 2005). During the sharing of independent reading, many students highlight interesting measurements or facts from their readings. For instance, Santiago talks about his book of Caves and highlights a volcano that is seven kilometers or eleven miles. Pedro shares from a book about the Most Fascinating places on Earth that the Grand Canyon is two billion years old. To all of their participations Olga responds to the content or meaning of these sharing.

Boundary encounters

The belief systems of the participants and the institution guide the practices in a classroom. The educational institution contributes with tools that convey a belief system, such as regulations of parental participation, adoption of textbooks, and norms for teachers. The teacher, then, takes the decisions in the everyday practice in interaction with students. The boundary encounters in this community exemplify the dynamic and situated nature of the interactions between the school system, through a particular CoP, and students' families.

The perspective of the teacher about parental involvement is a key mediator of her interactions with parents. In the following excerpt Olga describes her role in supporting parents instead of holding a list of pre-established tasks that parents need to complete.

Beatriz (Researcher): What do you expect from parents as a teacher?

Olga: Is not what I expect from parents, as much as what I expect from myself for parents. I have learned that parents trust a teacher considerably and that's scary. But for me the parents are already doing what they are supposed to do, send their kids to school and my job is to try to teach children in such a way that they [children] talk about what

> they are learning when they go home, and also to try to have the evidence so parents believe in their children so they can be advocates for their children.
>
> (teacher interview, June 29, 2006)

> Olga: I have to be respectful to parents, because they are the best they can be at that moment in time, because they were given certain education opportunity. I can't judge the past, I can't judge their present, I got to be respectful but what I do know as a teacher, I got to provide new experiences for them to understand, is not the child, it could be experience, how do I get parents to advocate for their children, well they've got to know how to trust their children, I got to give them experiences so they can see that their children are very capable.
>
> (Olga in parent conference, February 11, 2006).

Olga informs parents in ways that they can become advocates for their children. In her everyday practice she includes tools such as the students' agenda to inform parents about their mathematics learning. Children record personal statements, based on state standards, about their mathematics learning. She also acknowledges that often parents are not comfortable with mathematics and feel foreign to their children's experiences in school. Following is the description of two boundary encounters one in the school and one after-school. These encounters exemplify some of the contradictions that abound in parental involvement activity systems.

Immersion: classroom observation

All family members of the students in the classroom were invited to observe and participate in a mathematics lesson. During this visit, one of the activities consisted of revisiting an exploration of the surface area of rectangular prisms. All these interactions were in English and Spanish. The investigation began with a discussion of the importance of the surface area of leaves, with a focus on the vegetation of the desert where they live, and the role of surface area in the packaging industry and therefore the environment. The mothers in collaboration with their children, then drew three-dimensional prisms, traced the faces, and described their observations. When the children left for lunch, the classroom observation concluded with a discussion guided by the observations of the mothers and one grandmother about their children's mathematical learning experiences. The analysis focuses on Lorena and Yessenia since Lorena was the only parent from the case studies who attended this observation.

In this context the bilingual community welcomes these adults as legitimate peripheral participants. While the teacher uses both languages, Yessenia collaborates with her mother and talks to her mostly in Spanish. Throughout the school-year children had the choice of either language, but Yessenia oftentimes chose to do the classroom tasks in both languages. Lorena values English highly and wants to preempt her daughters from the limitations she experiences as an emergent English speaker. Her desire for her daughters to know English, however, does not counter her value of Spanish. Most of their family still lives in Mexico, and even the ones in the United States mostly speak Spanish. Lorena is also proud of their Mexican identity and tells her

daughters that they should also take pride in their nationality. In this way, she connects Spanish with their identities and this community of practice supports her goal.

The use of Spanish is not sufficient to include these mothers whose dominant language is Spanish. The negotiation of mathematical meanings departs from concrete experiences that underscore participants' previous knowledge of surface area and supports it through a collaborative community and concrete tools. Lorena and others are invited to connect the concrete prism, geometrical representations in two-dimensions, and the formula of surface area. In this way, Lorena visualizes the surface area and then connects it to the formula. Mathematics as a human practice that supports sense-making allows her to be a legitimate peripheral participant. The connections between the different representations add to the transparency of the mathematical meanings. In an interview after this experience, Lorena redefines her view of mathematics connecting to her conversations with the teacher about mathematics as a communicative competence to create meanings. Furthermore, she also reconsiders her ability as a learner. She shifts from a deficit view of herself to a critical analysis of her learning experiences. She describes herself using a new lens that included the analysis of the educational system in which she participated.

Lorena: *Yo sé que soy inteligente porque ahora me doy cuenta, pero antes, no sé que me pasaba a lo mejor decía, 'no voy a aprender, no voy aprender' entonces eso a lo mejor también por eso no aprendía, a lo mejor podía haber llegado más lejos, más lejos de la primaria.*

...Si, se las enseñan diferente también. Se las enseñan diferentes porque yo pues no más estudié las tablas... yo estudiaba, no, y ya con eso, pero no te explicaban y ahorita ya te explican, si no entiendes de una forma, te explican de otra hasta que ya le entiendes.

(parent interview; May 10th, 2006).

Lorena: I know that I am intelligent because now I can see it, but before, I don't know what happened to me, maybe I said to myself, 'I'm not going to learn, I'm not going to learn' and maybe because of that I didn't learn, maybe I could have gone further, further than elementary school. …Yes, they teach [mathematics] differently too. They teach them differently because I only studied the times tables… I studied them and that was all, but they didn't explain and now they do explain, if you don't understand in one way they explain you in a different way until you understand. [translation]

Homework: At home and in an after-school

Homework is a good example of a school related practice that for these families depends on multiple agents. The four students in these case studies attend some after-school program. Yessenia's support focuses on mathematics, while the other programs help with homework from all content areas. All of these parents rely heavily on these programs' capacity to help their children with their homework. While Monica checks her children's homework completion, other parents trust that their children do their homework. Some children also mention their siblings are an important resource, including younger ones. Diego mentions he sometimes helps his younger

sister because he understands English better than her. Monica shares that her next younger sister also helps her occasionally. However, this practice also brings to light that school practices often fail to share their assumptions and decision making with parents. When Yessenia was in fourth grade Lorena was concerned that her daughter did not talk about her learning of mathematics and did not receive much homework. Lorena interprets this silence as a lack of emphasis in the classroom to this subject. She ignores the underlying reasons of the teacher since she did not share her concern at that time.

This year Yessenia and Lorena attend an after-school program at the school site that focuses on mathematics. While the overt purpose of the program is to help children with their mathematics homework, Lorena's personal purpose for attending is to reinforce her close relationship with Yessenia. This is one space Lorena creates to spend time with her daughter.

In this context, the connection with the classroom curriculum was mainly sustained through Yessenia. She brought questions or shared topics discussed in class. The following segment is a description of a time in which Yessenia asked for help with her mathematics homework. The textbook series used at the school was *Scott Foresman – Addison Wesley Math* (Charles et al., 1999). Yessenia brought the following question from her textbook:

"Can you show 0.02 using only tenths place-value blocks? Explain."

Before we continue, for those not familiar with the place value blocks and their uses with decimals, the equivalencies established were the following: a square unit represents the hundredths, a line of ten square units represents the tenths, and the flat of a hundred square units represents the ones. In her homework, Yessenia wrote the following response, "No, you can't use tenths place value blocks." Yessenia's answer was correct but the teacher revised it and said her solution was not clear since it did not explain the reason why one could not use tenths place value blocks. The tutor explained to Yessenia the decimals using place value, but the tutor was foreign to the use of place-value blocks with decimals and was not using this means to explain the question. Yessenia built on her classroom learning experiences and shared her knowledge of these representations using drawings of the blocks with the tutor. She drew base ten blocks trying to make sense of the decimals. She explained to the tutor that with two lines or two tenths she could not represent two-hundredths because they were smaller. Yessenia was unsure of her statement so she also represented the decimals drawing money. This time she explained to the tutor "I have two pennies and that [line] is two dimes." During this interaction, Lorena's participation consisted of watching Yessenia's efforts and the non-verbal cues of the tutor to evaluate Yessenia's explanation (field notes after-school setting; February 9th, 2006).

In this practice, we focus on two central resources that set the elements of boundary for Lorena, the language of interaction and the mathematical meanings in negotiation. Lorena becomes an outsider as soon as Yessenia reads the question in English. Although Yessenia is now in a bilingual classroom, her educational history did not support her development of academic Spanish. In this way the history of a practice that included only English situates Lorena as an outsider when she tries to participate in Yessenia's mathematics learning. This position is especially contradictory when Lorena's goal for participating in the after-school program is to reinforce her close relationship with Yessenia. In this manner, the language choice for homework and instruction influences the access of parents to their children's mathematical learning.

The second structuring resource in these interactions connects to the negotiation of mathematical meanings. Lorena's schooling experiences taught her that only some children are innately good in mathematics while others are not born to become members of learning communities in school (parent interview, July 19th, 2006). She was retained in elementary school for several years in Nogales and finally they referred her to a Special Education school. Since then, she has defined herself as an outsider to mathematics because she could not memorize facts and algorithms. In the example discussed above, Lorena is situated as an outsider not only due to language issues but also because she did not remember learning decimals at school and views school mathematics as a subject matter disconnected from her common experience. She evoked her personal history of exclusion in her mathematics education experiences. In contrast, Yessenia's experience with learning mathematics is one that focuses on creating meaning (e.g., from the abstract numbers of two-hundredths and two-tenths to the place value blocks and her experiences with money). In her classroom, mathematics is treated as a language or tool to create meaning. Yessenia turned to these connections with world experiences (e.g., money) and was able to make sense of the decimal numbers. Yessenia, therefore, did not conceive of mathematics as a series of procedures or rules to be memorized or practiced. This position is radically different in that it empowers her over the mathematics. It is not the mathematics that tells the individual its rules, but it is the individual who fills the numbers with meaning and then manipulates them. Yessenia's approach to mathematics contests the relationship towards mathematics existent in many educational settings.

Conclusions and Implications

The data presented through these case studies suggest that the nature of the community of practice plays a critical role in the types of relationships established with parents. These examples of boundary practices decenter the notion of parental involvement and focus on the organization and history of the community, as well as the identities of the participants. Language practices and mathematics education practices play a defining role in these interactions. Language use in this community is not only a tool to negotiate meanings, identity, and the community, but it becomes an element of boundary. At the same time, the nature of school mathematics practices goes beyond the realm of negotiation of meanings. Mathematics practices are elements of membership as well as elements of identity. Finally, our data indicate that a culturally relevant pedagogy promotes an egalitarian dialogue with parents and between parents and teachers.

A detailed analysis of boundary practices underscores the situated and dynamic nature of parental engagement. The structuring resources determine the access to the negotiation of identities, meanings, communities, and practices; they set the boundaries of inclusion or exclusion. We argue that a situated and distributed notion of parental engagement may open spaces in education for diverse social communities. At the same time, this perspective brings to the forefront the need to problematize current power structures. Unless we are serious about addressing the inequities of opportunity that surround and permeate mathematics education we might reinforce those means that disenfranchise the communities we claim to work for. The

systematic exclusion of the funds of knowledge of Latino families, including bilingual mathematical communicative competencies, and mathematics as a knowledge base rather than a tool for meaning making, will continue to exclude Latino students and their families.

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