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## **Collaboration Between Researchers and Parents for the Improvement of Mathematics Education**

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### **Introduction**

In this paper we report on our most recent work that takes place in a large parental involvement project called Math and Parent Partnerships in the Southwest (MAPPS).<sup>1</sup> In reading the proposal for MAPPS, we see that the theoretical framework was informed by theories of funds of knowledge of “minority,” working-class households and was based on parent involvement research that looked at the participation of these parents as active rather than passive and “which critically examine[d] issues of power and perceptions of parents—especially minority and working class parents” (Gay & Civil, 1998). As MAPPS researchers we have often gone back to the original theoretical framework and reflected on whether we actually succeeded in facilitating the critical examination of these issues by the MAPPS participants. We were also searching to make comprehensive interpretations of the mathematics in our particular context and the meaning of experiences as they relate to the engagement of parents with the schools. As MAPPS activities officially ended, we began the “*tertulias matemáticas* [mathematics forums],” which emerged as an effort to further the dialogue and to create a critical approach that would lead us toward action. This could only be possible by including parents as partners in the exploration. The *tertulias matemáticas* are the focus of this paper.

Our approach to parent involvement is largely based on facilitating parents in their empowerment process so that they can effect change, work to challenge the rhetoric of parent involvement, and work to build community action. Our stance clearly implies a rejection of the deficit view that is frequently associated with working-class, “minority”

parents. The deficit perspective does not take into consideration the sociocultural context of the students and their families, or the institutional factors that contribute to the gaps between families and school. We join Valencia and Black (2002) in their work to debunk the myth that Latinos do not value education. We prefer to focus on the strengths and assets of the families and communities with which we work in order to change the focus from needs of the communities to the possibilities present within the communities (Guajardo & Guajardo, 2002).

Through critical reflection we were looking to develop a “community understanding” leading to “community action,” using the resources of our group to address the school community's mathematical needs. The MAPPS model of involvement is primarily concerned with parents being able to help their children with their school mathematics work and sees parents as intellectual resources and leaders in their community. We analyze the partnership of families, schools, and the district, and MAPPS through the lens of cultural historical activity theory (CHAT). We particularly focus on the idea of contradictions as opportunities for growth and expansion of the term *parent involvement*.

### **Theoretical Tools**

The theoretical framework informing our research project draws on the areas of parent involvement and critical theory. Guiding our work is Freire's (1998) notion of praxis and the concept of cultural and social capital in relation to parent involvement (Lareau, 1989; Lareau & Horvat, 1999). The parent involvement literature (Auerbach, 1989; Delgado-Gaitan, 1990; Valdés, 1996) allows us to analyze and situate the type of involvement we see enacted and elaborated on by our parents. Inspired by Freire's work, critical theory is a vehicle for reflection that leads to action. When one adheres to the tenets of critical theory, one no longer carries out research that is meant to examine and describe a group of people; rather, it is research that aims to use the knowledge gained by working with the collaborators in the community as tools of change for the members of the community (Guajardo & Guajardo, 2002; Kincheloe & McLaren, 2002; Delgado

Gaitan, 2001). It is, in a sense, a collective zone of proximal development whereby both the researcher and the “researched” expand their possibilities through the sharing of knowledge, to borrow from Vygotsky’s theories of sociocultural development (1978). The dialogue forces both the researcher and the collaborator to examine, albeit implicitly, the larger social systems that shape their experiences and to move toward a collective action to reexamine commonly held views of parents’ roles in the particular institution of the school.

Praxis is best understood as this critical reflection about the environment and our situation in it that leads to action (Freire, 1998). By reflecting critically on a situation, you become aware of your strengths and the strengths of other group members, which in turn leads to the development of group action (Delgado Gaitan, 2001). Immigrant parents must operate in and come to understand a hegemonic system that does not value individuals who do not belong to the mainstream profile. Through praxis they call into question the workings of the hegemonic system and take action to control their place and value within it.

Cultural capital is of primordial importance when attempting to understand parents’ place in the schooling system. Essentially, cultural capital is knowing the way that the system works and knowing what is expected of the different players in that system. It is the cultural resources that facilitate parents’ adherence to the dominant standards when interacting with the school (Lareau & Horvat, 1999). Middle-class mainstream parents, by and large, know what to expect from the school and know what the school expects from them (Eckert, 1989; Lareau & Shumar, 1996). However, working-class and “minority” parents, in particular immigrant parents, who are not familiar with the workings of the system, are left with many questions, are made to feel as if the cultural capital they possess is not valuable, and are therefore at a disadvantage when compared to mainstream groups. What is more, as Leistyna (2002) states, "Most mainstream efforts to create a school/public partnership are plagued with the problem that parental involvement is often not recognized as being determined within specific and unequal relations of power and cultural capital" (p. 4). By this we mean that what is perceived as involvement is not analyzed from a situated sociocultural perspective. We need to examine parents' roles in the schools in the larger context of what is currently happening

in the local social and political arenas, and what the history of the school district and the state is like with regard to this population.

The social capital possessed by these families then becomes crucial in their interactions with the school system. We are defining social capital as the resources, both material and immaterial, that individuals and families gain through their social ties (Horvat, Weininger, & Lareau, 2003). We are looking at social capital specifically as the networks formed by parents and how they facilitate information exchange with other parents relating to their children's schooling, and parent-child relations. Working-class Latino parents often acquire social capital through family networks and through networks established by participation in programs such as Head Start and Family Literacy. However, it is frequently the case that working-class parents' efforts and knowledge are undervalued by the schools and occasionally by the parents themselves because they differ from what the mainstream culture expects from families. Lin (2000) discusses this difference as inequality and states that "*inequality in different types of capital, such as, human capital and social capital, contributes to social inequality, such as socioeconomic achievements and quality of life*" (p. 786).

We posit that the parents' ability to participate on an equal footing with school personnel and to be appreciated by the personnel as having a vested interest in their children's education is affected by this inequality in social capital. More importantly, working-class and "minority" parents have been found to have less success at using their social capital to advocate for change in unsatisfactory situations with school personnel, instead opting to resolve the problem in an individual manner. Horvat, Weininger, and Lareau (2003) provided an example in which a working-class African American caregiver solved a problem with a teacher's behavior by sending a threatening note to the individual teacher. On the other hand, when a teacher acted in an unacceptable way toward a middle-class child, a group of parents immediately took the matter to the principal. In the working-class example, the behavior did not occur again, but there was no action by the administration. Alternatively, in the middle-class situation, the teacher was suspended, setting an example for other school personnel. In order for working-class and "minority" parents to be heard and have a substantial role in effecting change in the education of their children, their efforts need to move from individual to community

action. Those parents who do possess social capital as well as cultural capital need to interact with the schools somehow, through formal or informal organizations, and to be connected with those parents who are attempting to negotiate the institution of schooling in an isolated fashion. Dealing with schools individually can lead to frustration over obstacles met, but as individuals emerge from isolation into connectedness, the group's collective critical thinking and reflection evolve into empowerment (Delgado Gaitan, 1990, 2001).

The work done by Valdés (1996), Delgado Gaitan (2001) and others highlights the resources, the knowledge, the caring, and the resiliency present among Latino working-class parents. We are therefore guided by a theoretical approach that highlights the understandings these families have that allow them to advocate for their children. Delgado Gaitan (1990) explicitly states that in her project in California, the answers to the parents' questions did not necessarily come from her research but rather were provided by other parents who had similar experiences and shared their knowledge with other parents in her group. Our approach also looks to the possibilities of cooperation between parents armed with praxis and members of the institution ready to examine the sociocultural realities and politics informing school policies and practices as well as their own beliefs and practices.

CHAT aids us in providing a structure for the cooperation or dialogue occurring between families and schools mediated by MAPPS. In our research we discuss three activity systems, which are the family activity system, the school activity system (regarding parental involvement), and the MAPPS activity system. Each activity system is composed of the roles of the participants in the system, the community that makes up each system, the division of labor among the participants in the system, the tools used to negotiate the system, the subject whose perspective the researcher has chosen in analyzing the system, and the object or the goal of each system. CHAT allows us to think about and examine parent involvement through different perspectives while acknowledging the influence of various political, social, and historical factors. The three systems we consider--family, school, and MAPPS--are all concerned with parent involvement, but what parent involvement means or entails is particular to each system.

The key principles of CHAT that are essentially relevant to our analysis are the central role of contradictions as sources of change and development and the possibility of growth in the activity systems. We have chosen to highlight these principles due to our specific interest in facilitating the move from individual to collective action and the possibilities that the movement has for the participants' role in parent involvement in mathematics in the district. When discussing possibilities of change and transformation it is important to remember that the formation and the transformation of activity systems is a lengthy process. Additionally, the principle regarding contradictions as the source of change and development underscores the fact that activity systems are dynamic rather than stagnant entities. Contradictions lead to a questioning of the systems, which in turn opens the possibility for an expanded view of the systems through long-term transformations. There is a space for a type of learning, expansive learning, in which all involved have the opportunity to broaden their understandings of the issues under discussion by questioning, modeling, and experimentation (Engestrom, 2001).

In the following section we set the context of our work. We begin by discussing the larger project, MAPPS. We then turn to the arena where our research took place, the *tertulias*.

### **MAPPS as the Context**

#### **Mathematics and Parent Partnerships in the Southwest (MAPPS)**

MAPPS is a research and outreach project in four sites (Chandler and Tucson in Arizona; San Jose, California; and Las Vegas, New Mexico). The focus of the project is on parental involvement in mathematics (for more on the general context of the project, see Civil, Quintos, & Bernier, 2003; Civil, Bernier, & Quintos, 2003). In this paper we address only our work in Tucson, where the project started and was in place for 4 years (the other three sites started 2 years after Tucson). The MAPPS school district in Tucson is largely Hispanic (85.4%), and the majority (77%) of the children are on free or reduced lunch. MAPPS seeks to promote the leadership of parents in mathematics activities in home and school, through three components:

1. **Mathematics Awareness Workshops (MAWS)** are open to all the parents in the district and range over key topics in mathematics in K-12 (e.g., multiplication,

misconceptions about the equal sign, exploring patterns, proportional reasoning). These workshops are self-contained and last about 2 hours. Children and parents are invited to attend, with the children being dismissed at some point to allow for the parents and other adult family members to discuss and analyze their children's thinking.

2. **Leadership development sessions** teach parents, teachers, and administrators how to facilitate workshops for the larger parent community and allow them to participate in team-building activities. After the first year in the program, parents and teachers become joint facilitators of the workshops. In this role they work together to facilitate a learning experience for other parents. Each team of facilitators has a mentor: a parent or a teacher who entered the project earlier. Thus, there are teams in which parents are in fact mentors for the teachers.
3. **Math for Parents (MFP)** are 8-week courses that meet for 2-hour sessions in which parents in the leadership teams have an opportunity to explore mathematical topics in more depth. The five courses developed in this project are Thinking About Numbers; Thinking About Fractions, Decimals and Percents; Data for Parents; Thinking in Patterns; and Geometry for Parents.

### **The tertulias**

MAPPS was officially a 4-year program (in Tucson). This means that the university–school district partnership ended in May 2003. After that, it was up to the school district to redefine and continue MAPPS in the manner it determined would best fit the district's needs. As our collaboration with the district finished, we felt the need to continue our dialogue with at least a small group of the participant-mothers and to create a space of empowerment toward action. This need led to the development of the *tertulias matemáticas*. We felt that in order to create a space in which we could have meaningful dialogue, we had to have a relatively small group of parents, ideally fewer than 20. We sent out letters to approximately 30 mothers who had actively participated in the MAPPS program anywhere from 1 to 4 years. In the letter we invited them to continue their leadership development in the mathematics arena by participating in activities that would:

1. Give them a place to continue discussions about mathematics and mathematics learning, including explorations similar to those in the Math for Parents courses;
2. Allow them to address or try to answer questions they may have about their child's education (e.g., questions about testing, grading, or placement in gifted and special education classes); and
3. Explore how to spread the message of MAPPS to other parents.

The *tertulias* took place in a meeting room at a public library within the boundaries of the school district. We wanted the location to be convenient for all involved. We had 16 sessions that lasted an hour and a half each, every 2 to 3 weeks during the fall of 2003 and the spring of 2004. The 15 participants (14 female, 1 male) received a stipend for their participation.

The *tertulias* were composed mainly of two sections. The first one focused on parents learning mathematics in relation to their children's school experiences. Direct connections were made through samples of homework that the participants brought in; at other times, we studied a specific mathematics theme. Many of our discussions centered on algebra. The homework samples enhanced the conversation about mathematics content as well as the current mathematical learning experiences of the parents' children and their current classroom climate (e.g., standardized testing influencing teaching), and parents' values and beliefs related to mathematics education. The second section of the *tertulias* continued our efforts to have a two-way dialogue with parents about mathematics. The discussions centered on challenges and possibilities relating to their children's mathematical education. This component was meant to be our way to facilitate the development of praxis. However, the participants were not necessarily explicitly aware of the learning situation. That is, we had as our aim the empowerment of the parents but we believe that most of the parents were there for the most part to continue with the mathematics. Having the two components was for us a compatible way to bring our interests together in one venue. This became particularly the case when a situation with the district arose and became group knowledge; a different line of questioning emerged from some of the mothers that we believed also merged the two interests.

## Method

### Participants

All the mothers in the *tertulias* had been part of the MAPPs project for at least 1 year. Most of them had been MAPPs participants for 2 to 4 years. There was also a father who attended the *tertulias*. He was not associated with MAPPs, but his partner had been in MAPPs for 1 year and was also attending the *tertulias*. The total number of participants that regularly attended was fifteen. Except for four mothers, all self-identified in the parent profile as Hispanic or Mexican. One mother identified as Hispanic American, two as White or Caucasian, and one as “Human, Mexican, Italian.” All of the participants had some understanding of English and Spanish. Four seemed comfortable with discussions in either language, and they understood and spoke both languages; five mothers usually preferred English; and four parents (including the father) preferred Spanish.

We are aware that the participants in the *tertulias* (and here we focus on the mothers, since they were the ones who had also been in MAPPs) are not necessarily to be taken as representative of other working-class mothers in the district. The educational background of our particular group from the *tertulias* is diverse and it is (probably much) higher than the average education of the parents in the district. One of them had a master’s degree, eight members of the group had at least some college education (secondary education, social work, business), and the remaining four mothers had some middle school or high school education. Another characteristic of our group is that nine of the fourteen mothers had jobs related to the school system (teacher assistants, instructors at family literacy, bus driver, Parent-Teacher Organization member, substitute teacher). In addition to this, one of them was an undergraduate student of secondary education, and therefore also had an insider perspective of the school system. Two participants had jobs not related to the school.

The previous information is critical because these positions gave the parents the opportunity to form a direct relationship with members of the school staff as well as to access other sources of information about the educational system. At the same time, it makes explicit the fact that these parents cannot be taken as representative for all parents

in the district (see Shumow, 2001, for the dangers of listening to the voices of a few “representative” parents).

Through their participation in the MAPPS project, these mothers gained the experience of working together with other parents, teachers, and administrators. All of them had taken Math for Parent courses and attended leadership development workshops outlined previously. Also, except for two of them, they had all been facilitators of workshops for other parents in the schools of their district. In addition, four of them had been mentors of a team of facilitators that included parents and teachers.

### **Sources of data and analysis**

The *tertulias* centered on group discussions focusing on knowledge and barriers the participants had identified related to their children’s mathematics education. To address this component we use the technique of the unfolding matrix based on a dialogical method (Padilla, 1993). This methodology purports that by critically examining problematic aspects of their own lives, participants can get a critical understanding necessary to identify viable possibilities of change. The question we posed to the parents was, “How can all children in the district be successful in mathematics?” (For a discussion of how we used the matrix technique, see Civil, Quintos, & Bratton, 2004.)

The unfolding matrix utilized transcripts from selected discussions (all *tertulias* were videotaped), field notes from the *tertulias*, in-depth interviews with five participants described below, and a focus group. We used grounded theory (Charmaz, 2001) for the data analysis and to further learn about the evolution of the collective knowledge and the beliefs shared for further actions.

We have chosen to focus on immigrant families to underscore the myriad issues that affect this population, such as restrictive language legislation, anti-immigrant sentiment, differentiation in resources available in areas with predominantly “minority,” working-class populations, and so forth. All these factors impact the establishment of power relations between the family and the school. Interactions between school and family occur in a climate in which schools wield more power, largely because families come from multiple situations of oppression or disadvantage. This context explains the historically accumulating tensions within and between the systems (Engeström, 2001)

around the area of parent involvement. Additionally, these factors help us to understand the climate in which each system has evolved and how the systems might continue to evolve in the current sociocultural context.

As one parent stated:

*La gente inmigrante nos cuesta mucho trabajo adaptarnos a una sociedad que nunca te va a aceptar realmente. Tú vas a ser parte de su economía. ... Siempre va a haber, no van a tener la puerta abierta, siempre vas a tener algo que te va a detener, realmente a tu poder decir esto necesito como inmigrante.*

[It costs immigrants a lot of work to adapt to a society that never is really going to accept us. You are going to be part of their economy. ... There is always going to be, they are not going to leave the door open, you are always going to have something stopping you from having the power/ability to say I need this as an immigrant.]

Based on this particular interest in the experiences of immigrant parents who are Spanish dominant, we selected five mothers from the group for in-depth interviews to pursue recurrent themes. In the interviews, we explored particular details from their experiences and perspectives. Four of the interviews were conducted in the participants' homes; one interview was conducted in a meeting room at the library. Two husbands and the father from the *tertulia* were present at the interviews, as well as the mother of one of the participants. We also held a focus group with three of the five mothers at the library. We want to point out once again, these mothers may not be representative of immigrant, working-class mothers. They were all in a two-parent household, with a relatively stable economic situation. The mothers either did not have to work for at least the beginning years of their children's education or had a flexible schedule. Generally, when speaking of working-class Mexican immigrant parents, economic instability is likely to be a major factor in the households (Cammarota, 2000; Lareau & Shumar, 1996; Valdés, 1996), which means that both parents are working long hours to provide for the family. It also means movement from one house to another, thereby uprooting children from schools.

Often, as well, the mother is largely responsible for the education of the children. These five mothers probably, because of their “privileged” situation, have been able to match the school’s model of involvement. The mothers we interviewed all mentioned the support of the family resources, especially the support of their partner.

The parents in the in-depth interviews were Bertha, Verónica, Eugenia, Mónica, and Esperanza.<sup>2</sup> Ernesto participated in the interview with Mónica as both partner and fellow *tertulia* participant. Jesús and Julio, who were the husbands of Eugenia and Bertha, respectively, decided to join the interviews.

Using CHAT, we looked at contradictions within and between systems as the motivation for change. We have chosen to highlight three contradictions that are at play in the dialogue of the family-MAPPS-school activity systems. We will discuss issues surrounding language, parent involvement, and mathematics. For this paper, we will primarily highlight the five immigrant mothers.

### **Findings**

The three activity systems that we consider are the family activity system, the MAPPS activity system, and the school activity system. In our case, the MAPPS activity system mediates the dialogue about school-parent collaboration in the area of mathematics education between the family and the school. To represent our family activity system, we have both the composite picture of data from the *tertulias* and past MAPPS activities, and the individual family systems composed of data from the interviews conducted with the five immigrant parents. Their involvement in the school system gives us a more in-depth look at their process, perspectives, conflicts, disconnections, and ways to be successful within the school system. They are individual cases that help us build the components of the activity system from parents' perspectives.

Therefore, we have constructed a general sense of what a family activity system looks like for the immigrant, Latino, working-class population we are working with in this school district. However, as noted above, the parents we worked with are not to be taken as models for all Latino, working-class parents in the district.

The school’s activity system was composed using anecdotal evidence from our interactions with teachers and other personnel of this particular district, as well as

information from research on parental involvement in schools. It is a constructed representation and should be taken as such. In order to speak authoritatively on the school's perspective, we would have to do more in-depth interviewing of those who are supplying our anecdotal evidence as well as other school personnel.

Finally, the MAPPS system is constructed from the researchers' reflections on their involvement in MAPPS and the relation to theory, understandings of the original project proposal, and many conversations regarding the events over the past 5 years.

By having the three systems engage in dialogue about parent involvement in mathematics education, we can consider the complexity of the situation, specifically for immigrant parents, and fully explore the ways in which the different systems attempt to achieve their objects or goals and how they are aided or constrained by the tools, rules, and division of labor within each system. It is important to understand the object of the activity that drives the system because it is in the attempt to achieve that object that the system finds its direction and is distinguished from other activity systems (Leont'ev, 1978, in Engeström, Engeström, & Suntio, 2002). For our purposes we have determined that the family activity system has as its object the success of children in the school system. For example, Verónica asserted, "*Sí, lo único que queremos es el éxito de nuestros hijos, al menos [yo] por eso ando metiendome* [All we want is the success of our children, at least that's why I am in here]." The school activity system has as its object numbers of parents who attend the mathematics family events. The MAPPS system has as its object parents becoming leaders in mathematics education. While these systems apparently have different objects motivating their actions, we think that the potential for the construction of a joint object, that is, an expanded view of parents' involvement in the mathematics education of their children, would in the end have a positive effect on student achievement.

### **First contradiction: Language**

Latino families have consistently been the majority in the school district. Recent legislation such as No Child Left Behind (2002), Arizona Proposition 203,<sup>2</sup> and current testing at state and district levels create a climate of pressure. The restrictive language

policies coupled with the emphasis on testing make the needs of Latino families and students more difficult to address.

The children of all the families we interviewed were in English-only classrooms. In general, the mothers mentioned they did not understand the system when they first arrived. Esperanza explained she felt she was in a labyrinth and was very confused. Even if choosing English-only classrooms is an informed decision, in the case of these families, there were “questionable” factors that influenced their decisions. Esperanza chose English because she thought the other class would only teach her son Spanish:

*Cuando Fernando entró a la escuela, yo no sabía cual era el sistema, yo no entendía absolutamente nada. Entonces cuando yo fui y lo inscribí, porque yo fui y lo inscribí, no obviamente, me dice la secretaria, lo quieres poner en clase bilingüe o lo quieres poner en puro inglés. Pues se supone que si va a estar aquí en Estados Unidos tienes que estar en puro inglés, yo pensaba que en bilingüe le iban a enseñar puro español, y después cómo va a aprender el inglés, dije yo. Entonces lo metí en puro inglés, fue difícil, pobrecito mi hijo, porque yo no hablaba nada. Cuando llegaba por él a la escuela, iba me estaba medio día en la escuela, luego venía hacía comida y luego iba y lo recogía. Cuando llegaba por él, le decía, “Mijito, ¿cómo te fue en la escuela? ¿pelearon contigo los niños?” le decía. “Ni te Porcupes [sic], ni les entiendo,” me decía. Pero fíjate, entró en Marzo, para mayo ya sabía hablar inglés.*

[When Fernando started school, I didn't know how the system worked, I didn't understand anything at all. So when I went to register him, because I went and I registered him, the secretary asked me if I wanted to put him in a bilingual class or in an English-only class. I assumed that if he's going to be in the USA you have to be in an English-only class, I thought that in a bilingual class they were going to teach him in Spanish only, and then later how would he learn English, I asked myself. So I put him in English-only. It was very difficult, my poor little son because I didn't speak any English. When I arrived at the school for him, I was half day in the school, then I went home to fix lunch and then went back to

get him. When I arrived to get him, I would ask him, how was school, my son? Did the children fight with you? Don't worry, I didn't understand them at all, he would say to me. But, he started in March and by May he knew how to speak English.]

Another mother believed children could learn Spanish at home, and therefore they should learn English at school. These decisions were made by the families. However, we question if they received enough information about their choices or possibilities. Verónica did not have a choice, although at the moment there was no law limiting access to bilingual education. Her oldest son was placed in an English-only class based on the school's recommendation. School personnel told her he was getting very confused, not making progress in either language, and therefore he was getting behind:

*A David lo metieron de lleno en inglés, porque David no tenía la capacidad para estar en un programa bilingüe, me dijeron. Ni avanzaba en el español, ni avanzaba en el inglés y tenía mucha confusión.*

[They put David into an English-only classroom because they told me he wasn't capable of being in a bilingual program. He wasn't advancing in Spanish or in English and he was very confused.]

On the one hand, Verónica was troubled about how her son's Mexican identity would develop if he did not learn Spanish. On the other hand, she felt she needed to listen to the school's concern. The school has also influenced her youngest son's language development. Oscar started his schooling in a bilingual setting. In the first grade his English-language proficiency was tested, and it was determined he was proficient in English; therefore, he was placed in an English-only classroom in second grade. In his case, Verónica felt more at ease because he had already learned to read in Spanish. Moreover, she understood this was the only choice available because of the lack of bilingual teachers at the school:

*Entonces a segundo lo tenían que mandar a puro inglés ... porque él ya pasó el examen que ya podía, que ya tenía poquito inglés y que tenía que ir a inglés. Entonces dije bueno, pues si ya sabe leer y escribir en español y lo tienen que porque no había otro grupo. La única maestra que había bilingüe, ya tenía muchos, y ya no podían meterle más. Y a ese niño, tiene la capacidad de aprender inglés y sabe inglés, pues el español que se lo averigüen sus papás, pero él va a estar en inglés. Y no tiene otra opción.*

[So in second grade they had to send him to English-only...because he took an exam and he did well, he already had a little bit of English and he had to go to English. So, I said well, if he already knows to read and write in Spanish and they have to put him in that group because there was no other group. The only bilingual teacher already had a lot of students, they could not give her any more. And if this child has the capacity to learn English and he already knows English, the parents can take care of the Spanish, but he is going to be in English. There was no other option.]

These stories are representative of the contradiction between the families' view of their native language as an essential part of their identity and their desire for their children to learn English since their lack of knowledge of the language has been a barrier for them. On the other hand, the district lacks adequate resources, which in some of the parents' cases limited their ability to provide bilingual education programs for all those who preferred their children to be placed in such a system. Additionally, the information provided to parents regarding language options was not always sufficient for them to make an informed decision and in any event is arguably not firmly grounded in theories of second language acquisition. Thus, while the school's object or goal is to serve all students or is aimed at providing an environment in which all students can succeed, the way in which language choice is carried out has provoked tension among the immigrant families interviewed.

This context of English dominance impacts the relationship of parents and schools, parents and children, and children and schools. Parents' participation is hindered as they

try to help their children with academics and attempt communication with the schools. Verónica volunteered in the classroom until her children were put in an English-only classroom:

*A mi lo que me gustaba era que si mientras estuvieran en un programa bilingüe, yo podía estar involucrada ... mi niño empezó a crecer, me empecé a detener, pues voy a obstruir, como que si en lugar de ayudar iba a obstruir al maestro, o a perturbar estar de voluntaria. Como cuando estaba en el kinder, pues muy fácil, recortar, pasarles trabajitos a los niños, recogerse los, hasta me traía trabajo para la casa para llevárselo a la maestra otro día. En primero igual, me iba con él y como ella hablaba español, pues me daba para calificarle y cosas así, pero ya me veía ahí mi niño, ya oía, yo ya miraba ahí, al estar ahí sentada, yo estoy mirando, me estoy dando cuenta. Y ya cuando David, ya puro segundo fue, a puro inglés y con el maestro que hablaba puro inglés, pues ya no, ya no fui.*

[I liked it while they were in a bilingual program, I could be involved ... my son began to grow up, and I began to hold myself back. I am going to get in the way, instead of helping the teacher, I would get in the teacher's way, or disturb her if I was a volunteer. When he was in kindergarten it was easy to cut out things, pass out the projects to the kids, gather them up, I even brought work home to take for the teacher the next day. In first grade it was the same thing, I went with him and because the teacher spoke Spanish, she gave me things to grade and other jobs like that. My son saw me there, I could listen to him, I watched him. By being there watching, I realized many things. And then when David went to second grade into English only and with a teacher that only spoke English, then I didn't go, I didn't go.]

She explained that her limited English proficiency had strongly hindered her possibility to help her children in academics: "*Me siento como si no ayudo bastante* [I feel as if I don't help enough]." She believed she had the knowledge to help both of her children, who were in second and sixth grade, with their

schoolwork. However, even with college studies and with some teaching experience in Mexico, she had to use after-school tutoring and rely on the school's information about her children's learning. She used school interpreters and attended school meetings. She commented that these meetings were usually only in English, but she attended them in order for her children and the school personnel to see her interest. She said, "*Voy para que ellos se sientan que me interesa que voy, pero no porque sé que voy a venirme con algo o entender* [I attend so that they see that I am interested, but not because I think that I'm going to come back with something or that I'm going to understand]." Bertha went through the same process; however, now she is more fluent in English. Bertha stated:

*Traté de participar en todo lo que se podía, traté de que ellos siempre vieran que yo estaba ahí, no importaba que nada más fuera de voluntaria o que, por ejemplo había juntas, también yo trataba de ir, si la junta era en inglés, bueno, pues, alguna vez había alguien que tradujera pero si no, yo trataba de estar ahí presente para que ellos vieran mi presencia no, aunque dijeran, pues no entiende y no sabe hablar pero bueno ahí está y a lo mejor algún día nos va a entender todo no ... cuando llegaba yo muy, el corazón me latía y pensaba yo muy bien, yo sabía las preguntas que le iba a hacer pero si el me decía otra palabra, que no entendía, ahí era donde uno patinaba no.*

[I tried to participate in everything that I could, I wanted them to see that I was always there, it didn't matter if I was just there as a volunteer or, for example, there were meetings and I also tried to go. If the meeting was in English sometimes there was somebody who translated but if not I still tried to go so that they would note my presence. They might have said she doesn't understand and she doesn't know how to speak English but she's still here and one day she's going to understand everything ... when I arrived my heart started beating rapidly and I thought, all right, I know the questions I'm going to ask but if he says something else to me that I don't understand, that's the thin ice I'm skating.]

Compounding the language barrier felt by the parents is the fear of not being able to express their thoughts to or understand the school staff, in particular the teachers.

Bertha said:

*Hay una chica que supuestamente ella me dijo que se graduó de la Universidad de Hermosillo, es contadora, esta muchacha y ella estaba yendo a la escuela primaria, a aprender inglés como segundo idioma y aun así, aun así ella se siente limitada por el inglés. Yo creo que tiene miedo al ridículo, al menosprecio a sentirse mal, entonces yo creo que eso es algo muy terrible para como persona sentirte ridiculizada.*

[There is a woman who told me that she graduated from the University of Hermosillo, she's an accountant. This girl is going to the elementary school to learn English as a second language and even in that case she feels limited by English. I believe she's afraid of looking ridiculous, of being underappreciated, of feeling bad. I think it's really something terrible for a person to feel ridiculed.]

Some children have to translate the problems to their Spanish-speaking parents in order to receive their help. This situation requires the children to be able to explain and translate the problems, which is a process that involves proficiency in mathematical register in two languages (Moschkovich, 2002; Licón Khisty, 1997; Ron, 1999). As we see in the following quote from Verónica, this has resulted in her son's lack of trust in her ability to help and her own frustration about her possibility to help him:

*Cuando yo me siento con él a ver qué es lo que están haciendo, como que a ellos les da flojera traducirme el problema para yo ayudarlos. ... Pero se presta mucho cuando está difícil a traducírmelo, para decirme, como que prefiere irse temprano, o preguntarle a alguien, y ya es algo que no me gusta.*

[When I sit with him to see what it is he is doing, it appears that translating the problem so that I can help ... is too much trouble. ... But it takes a lot of work when it is difficult to translate something for me, to tell me, so he prefers to go early or ask someone else and that is something I don't like.]

Verónica added:

*El no siente mucha seguridad de que yo le estoy entendiendo porque el problema está escrito en inglés, no lo sé leer y no me lo sabe traducir bien, porque habla español, lee español, pero por las mismas palabras y preguntas que hemos dicho diferente, él cree que yo, estudie diferente*

[He doesn't feel very sure that I am understanding him because the problem is written in English. I don't know how to read it and he doesn't know how to translate well for me because he speaks Spanish and reads Spanish, but we say different things for the same words and questions, I think he thinks I studied differently.]

This is especially frustrating for Verónica, as she knows the content and wants to help and support him but cannot. She is an example of a mother still attempting to overcome the barriers of immigrant parents.

The restriction of Spanish not only lessens children's trust in their parents but also hinders their communication. Mónica and Verónica commented on their children's limited Spanish vocabulary. Mónica said, "*Pues, él no me entiende, a veces le tengo que repetir las cosas dos, tres veces, y ¿mami qué quiere decir esa palabra? me dice* [He doesn't understand me, sometimes I have to repeat things two or three times. He says to me, 'Mom, what does this word mean?']."

Finally, language also played a role in children's achievement. This was especially clear with Eugenia's daughter, who was referred to special education. Her child's teacher was insistent that she needed to be in special education. Through

Eugenia's resistance and with the support of the principal, her daughter was tested. The diagnosis was not a learning disability but rather a language issue. Because of the existing testing procedures, she would have ended up in special education if Eugenia had not fought the decision.

As CHAT suggests, the sociocultural context influences all the elements of the system. In this way, language as a tool is constructed and transformed by the historical moment. For instance, in our particular setting it is fused with expectations, discrimination, and the cultural and social capital and agency of the families.

**Bertha:** *Lo único que yo me di cuenta es que, los maestros, los que son, los maestros que son bilingües aceptaban mejor a las voluntarias que hablaban español, que los maestros que hablaban puro inglés, realmente no querían trabajar con las mamás que no hablábamos inglés. Entonces, desde ahí empiezas tú a notar la barrera.* [The only thing that I realized is that the teachers that are bilingual accept more readily the volunteers that speak Spanish than the teachers who are monolingual English speakers. They really don't want to work with the mothers who don't speak English. From that point you start to sense the barrier.]

**Eugenia:** *Pero siempre batallaron [mis hijos] al principio cuando recién llegamos aquí. Teníamos que batallar más porque el idioma de nosotros y luego no teníamos libros en inglés suficiente para ayudarlos, ahora ya sé que puedo ir a la biblioteca y agarrar un libro, no tenía tanta información como ahora.* [When we first arrived here the children were always struggling hard (with the language). We had to work hard due to our language and we didn't have a sufficient amount of books in English to help them. Now I know that you can go to the library and get out books, but I didn't have as much information then as I do now.]

To conclude with this contradiction, we present a quote by Esperanza that highlights the difference between language and voice, where issues of power and agency are highly involved:

*Se me fue quitando el miedo y aprendí de que tu voz cuenta, aunque no hables el mismo idioma, cuenta.*

[The fear just slowly went away and I learned that your voice counts, even if you don't speak the same language, it counts.]

As we can see, “Uncritical approaches to language neglect to engage the very social and historical conditions within which codes of communication develop. Consequently, the inherent relationship among experience, ideology, power, language, and identity is also insufficiently explored” (p. XXXX, Leistyna, 2002). This population requires a new, integrated approach that does not yet exist. What that means for our families and their children is that a sociocultural and critical perspective toward schooling is needed to provide them with an educational plan that works for their children and addresses the shortcomings of the traditional setting.

### **Second contradiction: Parental involvement**

The sociohistorical development of the family system--that is, the binational formation of families' ideas about how parent involvement looks--and the school system's view of parent involvement that has developed in the above-mentioned context, leave much room for tensions to develop. The second contradiction we found centers around these tensions related to the differing “definitions” of parent involvement. We focus on these tensions within this topic of parent involvement at two levels. First is the tension surrounding the parents' perceived role with their child's school and the issues that can arise with parent empowerment efforts and when parent involvement efforts made by the school lean towards rhetoric. At the other level, more specific to their participation in MAPPS, are the tensions surrounding MAPPS as a mediating structure between family and school and the parents' roles within its system.

In general for the families interviewed, there is confusion about the division of labor, that is, who is responsible for what in regard to the education of the child. Some of the “understood” responsibilities arising from the redefinition of their role were conflicting for some immigrant mothers. They felt that here in the United States, parents

are responsible for parenting as well as for being the “teachers” of their children, while in Mexico the parents’ role is mainly expected to be geared toward the home.

We found that perhaps unintentionally, MAPPS had added to the pressure felt by these parents by joining in the rhetoric of teaching parents how to teach their children. This frustration is clear in the following quote from Eugenia:

*Ahora que estamos involucrados somos los maestros de ellos, porque el maestro les da [tarea] y nosotros tenemos que quebrarnos la cabeza aquí.*

[Now that we are involved we are the teachers of our children because the teacher gives them (homework) and here we have to rack our brains.]

The idea of “having the responsibility to be the teacher of their children” caused them to feel pressured and uncomfortable. Are parents in fact responsible for giving “school lessons” to their children? How are parents responsible for their children’s mathematical learning? One of the goals of MAPPS is to help parents develop the ability to help their children with school homework. However, the intention is not to give them responsibility for “being their children’s teachers,” annulling the expertise of the professionals. The following quote tells of how participating in MAPPS helped Esperanza realize when she was helping out in two different classrooms that she was seeing different levels of mathematics in the same grade. She explained how she arranged for her daughter to have her mathematics class with one of the teachers from MAPPS, who was proceeding with mathematics at a more advanced level than her daughter’s regular classroom teacher. She also highlighted the fact that when her daughter’s regular classroom teacher realized that she was in MAPPS, she gave the mathematics class time to interact with Esperanza:

*Había una maestra en Tierra y María estaba con ella. Entonces yo entraba a la clase de ella y entraba a la clase de la Ms. Jones, y entonces yo miraba que las clases de la Ms. Jones eran del mismo grado pero iba más adelante que las Ms. Franco. Entonces yo le dije a la Ms. Jones, le*

*hice el comentario, la clase de la María va muy atrasada en matemáticas, dice si quieres traétela y como yo entraba a ayudarle, si quieres traerla y que aquí que vea su clase de matemáticas. Entonces a mi me pareció perfecto, no. Entonces yo vine y le comenté a la Ms. Franco, “¿por qué usted va en este nivel del libro si la Ms. Jones va más adelante?” y la Ms. Grijalva, va igual que la Ms. Jones, entonces yo fui buscando los niveles en los que estaba mi hija, para ver porque iba tan atrasada, “porque trabajamos diferente, porque esto, porque lo otro.” Entonces yo no me quede ahí, yo comencé a escarbar, ¿por qué? Es que a esa maestra le daba mucha flojera la matemática. Cuando se dio cuenta [refiriendo a la maestra de su hija] que yo estaba en MAPPS, que yo entraba de voluntaria con ella, siempre me dejaba a mi la clase de matemáticas.*

[There was a teacher in Tierra and María was with her. When I started going to her class and also to Ms. Jones’s class, I saw that Ms. Jones’s class was in the same grade but that they were more advanced than Ms. Franco. So I told Ms. Jones, I remarked that María’s class was really behind in mathematics and she said that if I wanted to I could take her (María) to her class as I went to Ms. Jones’s class to help her out I could just take María there and she could have her mathematics class. That seemed like the perfect solution to me. So I went to speak with Ms. Franco, and said, “Why are you at this level in the book when Ms. Jones is farther ahead and Ms. Grijalva is in the same place as Ms. Jones?” I did some looking into the level that my daughter was in to see why she was so far behind, it was because, “We work differently, because of this, because of that.” So I didn’t stop there, I started to poke around into why? It was because the teacher didn’t like to teach mathematics. When she realized (referring to her daughter’s teacher) that I was in MAPPS, when I was a volunteer in her class, she always left me with the mathematics class.]

**Jill Bratton:** *¿Estabas enseñando la clase?* [You taught the class?]

**Esperanza:** *Sí. Les explicaba y que yo me quedara con los niños. Y ella se metía a la oficina y que yo me quedara con los niños a ayudarles. Entonces lo que yo hice era aceptar lo que la Ms. Jones me ofreció, a la hora de la clase de matemáticas, iba y sacaba a María, la metía en el cuarto de la Ms. Jones y ahí hacia su clase de matemáticas.* [Yes. She explained it to them and then I would stay with the kids. She would go into her office and I stayed with the children to help them. So what I did was accept what Ms. Jones had offered. At mathematics time I went and got María and took her to Ms. Jones's class and she had her mathematics class.]

The situation just highlighted with Esperanza is an interesting segue into the second tension that relates to the parents' participation in MAPPS. The goal of MAPPS was to give parents an equal role in the division of labor through their participation in teams with teachers presenting the Math Awareness Workshops (MAWS). This was accepted by the parents, teachers, and other members of school personnel on the surface level, but we currently believe that on a deep level, the old system of division of labor--teachers do the teaching and parents are the recipients or aides--remains. (See Civil & Bernier, 2004 for a discussion of the teacher-parent component in the training for MAWS.) This is perhaps an area in which MAPPS did not challenge the status quo. The project centers on parents as leaders in mathematics and worked to examine the role of parents in our particular scenario. We feel that as project staff, we did not aid the participants (teachers, administrators, and parents) in examining parents' traditional roles in school activities and, particularly, in addressing the issues regarding parent-teacher relations.

Historically, individual participants have advocated for their children and have actively sought means to acquire the cultural and social capital needed to participate in the schools. They dealt with the issues surrounding their involvement on their own, without any mediating structure such as MAPPS. Through their participation in MAPPS, these mothers found another way that they could be involved in the schooling of their children, at the same time reaching other families in the district. They received extensive preparation in order to become facilitators of MAWS, working with teachers as part of a team.

Tensions surrounding the issue of who was teaching the MAWS had begun to mount over the last year (2003-2004 academic year) in the *tertulias*. As the project officially ended, it was up to the different school districts to decide how they were going to continue the MAPPS efforts. This particular district decided to continue to offer the MAWS but with only one team made up exclusively of teachers (and one parent, whose sole role was to translate). This approach was not what had been intended for MAPPS. The parents, because of their involvement in MAPPS, expected more from the district in the way of acknowledging their capabilities. The parents in the *tertulia* felt as if the district were not valuing their preparation and the effort they had put in throughout their years in MAPPS. As one of the parents, Jilian, stated:

Yes but the whole point of MAPPS was for parents to come in and teach math to other parents so that they wouldn't feel so uncomfortable, or intimidated by teachers. Teachers can come in and teach, that's what they do, but when you have another parent teaching you [it's special] you can absorb a lot more. (Civil & Bernier, 2004, p. 12)

As we have interacted with parents over the past year, intentionally trying to examine hard issues and push the mothers to do the same, interesting outcomes have surfaced. The mothers we interviewed have raised questions regarding the established school activities for parent involvement, ranging from participation in the MAWS workshops to the workings of the Parent Council meetings to the need to be present at the school to be considered involved. We have also seen participants questioning the established MAPPS system as a real tool to mediate parents' collaboration with schools, due to its logistical setup. Verónica questioned this:

*¿De qué va a servir que vayamos al programa (MAWS), una vez cada 3 meses?... en una junta salieron motivados en el momento y trabajaron en el tema y participaron, pero no vieron un resultado, no sé cual es el resultado de una sola junta, que quieren ver ... eso no quiere decir que va a tener éxito porque el éxito es la constancia.*

[How is it going to help that we go to the program (workshops), one time every 3 months?... in a meeting they came out motivated in the moment and they worked in the topic and participated, but they didn't see an outcome, I don't know what is the result of one meeting, what do you want to see... that does not mean they are going to succeed, because success is constancy.]

Additionally, through the interviews and *tertulia* discussions, we learned that some parents felt that the school system's district-wide parent involvement efforts were filled with rhetoric. Rather than addressing the big issue of what role parents should play in the education of their children, organizations such as the District Parent Council talked about what needs to be done by parents to help fulfill current legislation requirements. Topics also centered on what parents should or ought to know about their children's education, rather than conversing with the parents about their concerns and questions. Through the critical awareness developed and acquisition of praxis, our mothers have been triggered to action and are questioning these practices of the school. As we see from the following conversation, parents are thinking about how to begin to organize community action to effect change in this district and their role in that process.

**Bertha:** *Los padres podemos cambiar la escuela, o el sistema, o cualquier cosa que no estemos contentos, pero en realidad es como, el que nos den, como decimos en México, "atole con el dedo" [la frase quiere decir que es parecido a comer un licuado espeso con el dedo]* [As parents we can change the school, or the system, or anything we are not happy, but in reality, it is as if they gave us, as we say in Mexico, "atole con el dedo" (the phrase is saying that it would be like eating a thick milkshake with your finger)].

**Eugenia:** *Porque no te dejan hablar* [Because they don't let you talk].

**Bertha:** *Vamos a hacer que tú creas que puedes ayudarnos, pero en realidad...* [We are going to make that you can help us, but in reality...]

**Eugenia:** *Cuentas pero no cuentas, estás pero no estás, simbólicamente vas pero...* [You count but you don't, you are but you are not, symbolically you go but...]

Bertha: *Sí, es difícil, y como hispanos nos falta unión. Debemos pensar que si tú haces algo en este distrito* [Yes, it's difficult, and as Hispanics we lack union. We have to think that if you do something in this district].

### **Third contradiction: Educational quality**

There was a perceived tension with the immigrant families in relation to the quality of the education their children received. Our families actively participated in school activities that in some ways enhanced a critical perspective of the system. Several of them doubted the U.S. school system was doing a good job educating their children, making a binational comparison. Ernesto, Bertha, and Julio, as well as several parents in other MAPPS activities, were very clear in their views that their children were behind in mathematics compared to relatives or friends in Mexico.

**Ernesto:** *Yo pienso que el nivel educativo, en el caso de mi hijo, las escuelas están muy, [básico]... el nivel en México es más alto. Lo digo porque tengo sobrinos allá y acá, y ellos están, veo que han aprendido más cosas en la escuela.* [I think that the educational level, in the case of my son, the schools are very (basic) the level in Mexico is much higher. I'm saying that because I have nieces and nephews there and here and there, I see that they have learned more things at school.]

**Ernesto:** *No, es que, está en el cuarto año y mi hijo está en cuarto año también y lo que le están poniendo ahorita, aprendió en el segundo año. Entonces, el nivel*

*educativo, no quiero decir que sea malo ... el nivel educativo es más bajo o van aprendiendo más lentamente de lo que aprenden en México.* [No, it's that he's in fourth grade and my son is in fourth grade too. What they're giving my son now, he (the other child) learned in second grade. So, the educational level is lower and they learn more slowly than they learn in Mexico.]

**Bertha:** *No, no estoy contenta. Siento que hay repetición de muchas cosas. No puedo entender porque es ese aprendizaje tan lento. No me gusta, no me gusta el sistema, no me gusta para nada. Yo, este, nosotros que vamos para México ... mis sobrinos o sus sobrinos de él, hay niños que están mas o menos en la misma edad del Jaime y yo veo que el Jaime está atrasado. Aquí me dicen que el Jaime, muy excelente.* [No, I'm not happy. I feel that there is repetition of a lot of things; I don't understand why the teaching is so slow, I don't like it, I don't like the system, I don't like it at all. I, when we go to México ... my nieces and nephews or my husband's nieces and nephews, there are children that are more or less the same age as Jaime and I see that Jaime is behind. Here they tell me that Jaime (is) really excellent.]

Researchers have made observations similar to those of our participants. McLaughlin (2002) suggests Mexican students' mathematics background often exceeds the expectations they face when entering a school in the United States. Macias's (1990) comparison of the Mexican curricula and the U.S. curricula suggested that the Mexican curricula are more challenging and in some aspects better in quality. At the same time, he recognized there is a lack of cross-national data on curricular differences. This is a complex situation in which critical questions need to be addressed, such as, "Is seeing mathematics content earlier an indicator of a higher educational level?"

As we discussed this contradiction in the focus group, Bertha gave us her perception:

*Probablemente el contenido en México es más avanzado. Están mucho más, hasta el 8vo grado. Algunos chamacos en el 8vo grado, algunos no saben ni que es una raíz cuadrada. Pero lo que me gusta de aquí, en México te enseñan en si la operación que tienes que hacer, y algunos problemas. Pero aquí hay una aplicación diferente, hay una aplicación en tu vida real, en tu vida cotidiana. Que es algo que yo no vi cuando estaba en México. Aplicar el álgebra o las estadísticas, a mi vida, como me iban a funcionar en mi vida. El contenido es más avanzado en México, pero la aplicación es diferente aquí. Eso es lo que yo veo. El Jaime le gustan las matemáticas. Mi sobrino en México, está mucho más adelantado que él, y yo a veces lo veía mucho muy atrasado al Jaime en comparación y decía Dios mío, si tú vas a México, te reprueban. Yo siento que si el Jaime se tuviera que ir a México, lo bajan a 5to.*

[The content in Mexico is probably more advanced. They are much more, until eighth grade. Some of the students in eighth grade, some of them don't even know what a square root is. But what I like about here, in Mexico they teach you the operation that you have to do and some problems. But here there is a different application, there is an application to real life, to your daily life. That is something that I didn't see when I was in Mexico. Apply algebra or statistics to my life, how those things would function in my life. That is what I see. Joshua likes mathematics. My nephew in Mexico is much more ahead of him, and sometimes I feel that Joshua in comparison is very much behind and I said, for heaven's sake, if he went to Mexico, they'd fail you. I feel that if Joshua were to go to Mexico, they'd demote him to fifth grade.]

In addition to this, it is important to consider the possibility of the influence of the level of education from the particular schools or individual differences. For instance, a mother mentioned some children in fourth grade did not know their multiplication tables. However, the National Council of Teachers of Mathematics standards indicate this

content should be covered in this stage. In addition, Bertha worried about the idea that children in the district struggle with Arizona's Instrument to Measure Standards (AIMS)<sup>3</sup> when she believed it is very basic:

*Me da tristeza que yo veo el AIMS, yo tengo, aquí me han dado folletos del AIMS y yo los he visto, obviamente para mí, es difícil entenderlo por el lenguaje en el AIMS, la matemática, y todo eso, pero conforme lo voy haciendo, lo voy entendiendo ... pero yo creo que el AIMS es muy básico para muchas gentes, y los niños están temblando porque no lo pasan, entonces digo bueno, si yo siento que el nivel es bajo, y el AIMS es alto, y para mí el AIMS es básico, entonces en qué nivel están?*

[It makes me sad when I see the AIMS, I have some pages from the AIMS and I have taken a look at them, obviously for me, it is difficult to understand the language in the AIMS, the mathematics, but I can make do so I can do it and understand it ... but I believe that the AIMS is very basic for many people and children are shaking in their shoes that they're not going to pass it. I feel that the level is very low, and if the AIMS is high, for me the AIMS is basic, so at what level are they?]

Jesús was also critical of the pedagogy of the teaching in his children's schools. He described how and why he thought the pedagogy in Mexico worked better for the children's actual learning. He explained three ways he believes children learn:

*El sistema de allá era muy, aprendía uno más porque escuchaba y escribía. Daban una explicación, el maestro con su libro, nadie más tenía libro más que el maestro. Estaba uno escuchando al maestro y lo que estaba explicando ... uno sacaba lo más importante y lo escribíamos todo.*

*Nos lo dictaba él. O sea que eran dos veces, las que escuchaba uno y en una de ellas iba escribiendo, ya eran tres. Es mucha ventaja, se le olvidaba algo a uno, veía el papel.*

The system there was very, you learned more because you listened and wrote. The teacher gave an explanation using the textbook, only the teacher had a textbook, nobody else. You were listening to the teacher and what the teacher was explaining ... you took the most important points and everybody wrote them down. He lectured. So it was two times, the times when you listened (and saw the explanation on the board) and one when you were writing, so that is three times. It's advantageous, if you forgot something, you could look at the paper.]

Some parents' perception of the teaching their children receive here in the United States is based on worksheets, no textbook, and hurried explanations. In the *tertulias*, the topic of hurried explanations also came up, often in the context of the current push for standardized tests. Eugenia said:

*Se me figura que los maestros de México como que te insisten hasta que te grabas lo que te van a enseñar y aquí el maestro te da la explicación y si la captaste pues que bueno y si no pues a batallar para que lo saques. Al menos hay maestros así.*

[It seems to me that the teachers in Mexico insist until you get what they are teaching you and here the teachers give you the explanation and if you get it, great, and if not, you have to fight until you do. At least there are teachers like that.]

Esperanza was happy with the teaching that her children had received. She was aware that there are important differences in the way mathematics are taught nowadays in the United States versus what she experienced in Mexico. She gave us the following example:

*Tenías que aprenderte las tablas de memoria. Y aquí no, aquí les dan una tabla con todos los números, no les dan las tablas 2x1, 2x2, no. Aquí les dan una tabla grande, y ahí tienen los niños que estar mirando las que no se recuerden. Y allá, no, tenías que macheteártela del 2 al 12. Hasta el 12 y tenías que! Yo me acuerdo que ya después no más, tantaran tan [cantando] ... la pura cancioncita.*

[You have to learn the multiplication tables by memory and here no. Here they give you a table with all the numbers, they don't give you the tables 2x1, 2x2, no. Here they give you the big table and the kids can look at the ones they don't remember. There no, you had to kill yourself to get from 2 to 12 down. Up until 12 you have to memorize! I remember that afterward you didn't remember, tantaran tan (singing) ... just the song.]

### **Discussion**

The rhetoric of parent involvement needs to be challenged. Parents are participating in parent involvement activities but feel there is no real way to effect change; they're not *really* heard. This is not uncommon, as seen from in Leistyna's (2002) work: "Neither the students nor their parents, for that matter, were invited to participate as members of the Multicultural Central Steering Committee. Both groups were talked about, but never with" (p. 16). While the situation in the district we worked with differs from the school district highlighted in the Leistyna article, the general philosophy behind the school's actions might be compared. For example, going back to the way the teams for this year's MAWS were formed: Letters were sent out to the principals by the district, and from there it appears as if there was a breakdown in communication, resulting in a team composed of three teachers and one parent in the role of translator.

While the mothers have made great efforts at advocacy at an individual level, their stories make a strong case for the need for community action. This community action will support the diverse and broad definition of parent involvement: participation in or partnership with the schools. We have realized, though, that we need to critically reflect on what this means, due to what we see as the danger of parents assimilating into the school system and adopting the deficit models and/or ways of thinking still present in today's schools. For instance, Esperanza told a story about her friend who just did not like being in the school, so she did not go to the school events for her children. However, this friend always enlisted Esperanza's help with homework, and so forth. *"De ahí saco yo por conclusión de que no a todos los papás les gusta estar involucrados en la escuela* [Based on that, I conclude that not all parents like to be involved at the school]." This story is important because it shows that the neighbor was using her social capital to obtain help for her children without physically going to the school. The school might consider her not involved, yet she knew whom to call on to get her children what they needed. If Esperanza can recognize that behavior not as indicating that her friend does not care about her child, but perhaps as evidence that the schooling experience that some parents have had influences their choice in how they are going to be involved, then she too is adopting a broader view of parent involvement. However, if she takes this to mean that the neighbor does not care about her child, then she has adopted the school model of a parent's presence as an indicator of the parent's valuation of the children's schooling and his or her role in it. School systems cannot ignore parents' different historical backgrounds, which impact how they negotiate within the school system. In order for schools to connect with Latino immigrant families, this has to be addressed.

We can take the individual advocacy to community or collaborative action with mediating tools. Through different programs such as MAPPS, Family Literacy, Head Start, and so on, families meet other people in their community and see that they can share and obtain knowledge about the school system's rules. Esperanza shared what she is now able to do through her work in Head Start:

*Pero ahora en mi trabajo, en lo que yo estoy, son mamás que acaban de llegar de allá, son mamás que tienen a sus niños en el Head Start y que tienen el miedo que*

*yo tenía, lo tienen ellas ahora, entonces la maestra con la que yo estoy trabajando, está muy contenta porque dice que yo les transmito esa seguridad, esa independencia, de que sí se puede, aunque no hables inglés, sí se puede y pues estoy muy contenta con mi trabajo porque les estoy ayudando a las mamás que apenas van llegando.*

[But now in my job, where I am, there are mothers who just arrived from over there (Mexico), they are mothers who have their children in Head Start and that have the fear that I had, they have it now, so the teacher with whom I am working, is very happy because she says that I transmit (to) them that confidence and independence, that it can be done, even if you don't speak English, they can do it and so I am very happy with my job because I am helping mothers who just arrived.]

In the *tertulias* we intended to reflect more on these issues. Participating in a dialogue with MAPPS participants forces both the researcher and the parent to examine the larger social systems that shape their experiences. Through discussions regarding the structure of schooling and the sense of agency that the mothers feel relative to that environment, we hope the mothers begin to challenge the larger forces that shape the school structure, that is, go beyond the context of their particular situation and discover that what has occurred with them is symptomatic of the struggles of many families in the school district. The alienation or perhaps the separation felt between parents and the institution of the school is the breeding ground for the development of praxis. This group of researchers was very interested in working closely with the participants as we tried to gently move forward from helping and advocating for their own children to working with the families and children in the district. By participating in the *tertulias*, the parents from MAPPS, like the parents Delgado Gaitan (2001) worked with, "were forced to challenge

their thinking about the obstacles that impede their gains of resources and opportunities for growth. Unpredictable possibilities opened up for the group when the parents made it clear that they were willing to put aside their fears for the sake of their children" (p. 22). In fact, the turning point in the *tertulias* for the MAPPS researchers was when Verónica commented:

*Yo les [refiriendose al grupo en la tertulia] dije, ¿qué van a hacer ustedes? como ustedes están promocionando este programa para motivar a los padres al éxito con los niños en las matemáticas. ¿Que es lo que vamos a hacer? Porque yo lo que hago es venir para ayudar a mi hijo, al mío. Pero eso no significa el éxito de un distrito, de una escuela, verdad. No, ni del distrito, ni de la escuela.*

[I said to you (referring to the tertulia participants), what are you going to do? You are promoting this program to motivate parents for children's success in mathematics. What are we going to do? Because now, what I do is to come to help my child, mine. But that doesn't mean the success of a district, of a school. No, not of the district nor the school.]

Our perceptions had been that many of the mothers were totally committed to doing whatever they needed to help their children, for example, joining MAPPS to acquire particular knowledge, but had not moved their participation in MAPPS to another stage, which would mean helping the rest of the district. We have questioned from early on in the *tertulias matemáticas* whether we had made it clear to the parents that in addition to coming to the *tertulias* to continue developing their mathematical skills, we were going to reflect on the issues raised by Verónica in order to answer the question, "What do we need to do to assure that all students in the district are successful in mathematics?" The other mothers did react in a way that showed their initial, primary concern was with their children. For example, Michelle wanted to help the other children in her daughter's classroom so that her child would not be held back. However, as the

*tertulias* came to an end, the talk had turned to how the parents were planning to work with the district to reach more district children and their families. It is from the change in the focus of their talk that we have learned that the development of praxis and the acquisition of cultural and social capital are processes that take time and commitment.

CHAT is a conceptual tool that allows us to see that the mothers were able to advocate for their children's achievement when they worked within the system rules. Our object is to work to change the system so that its rules function for diverse parents. Verónica is an example of one of the parents who still has barriers stemming from her attempts to navigate the system according to its rules. The problem with our approach is that so far we are only presenting parent perspectives and our position on the interaction of these activity systems. In keeping with Engeström's work (2001, 2002), we feel we need to hear from the voices of the schools rather than represent their approach using theory and our anecdotal evidence. As we stated above, that process takes time and a desire from all participants. All voices must be heard, and the sociohistorical and sociocultural perspectives of parent-school relations must be taken into account.

When we talk about a broader definition of parent involvement, we mean allowing parents to determine how they want to be involved and supporting them in that decision. The mothers at the *tertulias* are now considering the idea of homework night and the continuation of the MAWS they had previously worked with but revising them to make the connection with the mathematics curriculum in their schools stronger. We have seen in the last *tertulias* the first signs of community action being taken. The possibilities were multiple, and the discussions surrounding them were at times heated and went on for several *tertulias*. We still do not know how the final outcome will look in the fall.

This transformation in the MAPPS activity system can possibly have an impact on the division of labor in the school activity system. If the mathematics homework night idea comes to fruition, this will be a content-area program conceived by parents, organized by parents, and taught by parents. The parents are talking with a principal to work out the details of logistics and have asked us to be support mechanisms.

We can see that MAPPS has been a mediating tool for our parents to make sense of their children's mathematics education. Mathematics is not an untouchable subject in which to involve parents. If you work within the system rules of involving parents in only

certain capacities, change is limited. The MAPPS system has worked hard to establish a comfortable bilingual atmosphere in which parents become knowledgeable about the mathematics education of their children.

Other programs such as Family Literacy and Head Start were also important tools for some of our parents to learn about the school system and start participating in it. Characteristics of their particular experiences that were empowering from this were an explicit respect for their language and identity and a focus on family unit rather than mothers. Mediating agencies can work when they examine the immigrant family's situation through a sociocultural-historical-political lens and keep that in mind as they work to help parents negotiate the system.

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### Endnotes

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2. All parents' and teachers' names are pseudonyms.
3. Proposition 203 is state legislation that was approved by Arizona voters in 2001. It is now part of the Arizona state statutes. It proposes to replace bilingual education with Sheltered 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]).

4. Arizona's Instrument to Measure Standards (AIMS) is a standards-based test, designed to provide educators and the public with information regarding the progress of Arizona's students toward mastering Arizona's reading, writing, and mathematics standards.