This research addresses the impact of language policies on parental engagement in their children’s mathematics education. Our work is situated in primarily Mexican American working-class communities in the Southwest of the U.S. We focus on the implications of a restrictive language policy on immigrant Spanish speaking parents’ interactions with their children (and their schools) around mathematics. In particular we raise issues about 1) potential loss of connection and even conflict between parents and children and 2) the role that language plays in the mathematics classroom placements of some of these children.

INTRODUCTION

One of the characteristics of reform-based mathematics education is its emphasis on communication. Students are expected to communicate their thinking about mathematics in writing and orally. Several researchers have written about communication and discussion-rich mathematics instruction in classrooms where students’ home language is different from the language of instruction (Khisty, 2006; Moschkovich, 2002; Setati, 2005). Less has been written, however, about the implications of this emphasis on communication on the interactions between parents and children, in particular when the parents’ language is different from the language of instruction. Setati (2005) writes about the political role of language and points out, “we must go beyond the cognitive and pedagogic aspects [of language] and consider the political aspects of language use in multilingual mathematics classrooms” (p. 451). In this report we build on this concept of language as political by looking at the impact of language policies on parental engagement in their children’s mathematics education, in particular in the case of immigrant parents whose home language is different from the language in their children’s schooling.

CONTEXT

For over ten years we have been working on issues related to mathematics education and parental engagement. Our work is situated in Latino (mostly of Mexican origin) working-class communities in the Southwest of the U.S. In our research we have addressed several themes that parents bring up in relation to their children’s mathematics education, such as differences in the teaching and learning of mathematics in Mexico and in the U.S., valorization of knowledge, issues of language, and definitions of parental involvement (Civil, Planas, & Quintos, 2005). Our work draws on several bodies of research including research on parental involvement that critically examines issues of power and perceptions of parents, in particular minoritized and working-class parents (Horvat, Weininger, & Lareau,
2003; Pérez, Drake, & Calabrese Barton, 2005); and research on parents and mathematics, particularly that which takes into account culture, ethnicity, race, and context (Abreu & Cline, 2005; Jackson & Remillard, 2005).

Throughout this decade of working with parents we have witnessed the passing of a law that severely restricts bilingual education in the state in which our work takes place. The law allows teachers to use a minimal amount of the child’s native language for clarification, but all children are to be taught in English and English Language Learners (ELLs) receive additional English language instruction. The passing of this law has to be seen within the larger political context in which issues related to immigration have taken a prominent role. The context of immigration, the role played by language, and the general living conditions of minoritized groups are realities that need to be taken into account when addressing these children’s mathematics education.

The schools where our research takes place use reform-based materials that are quite demanding not only in terms of the mathematics (with topics that parents did not study in their own schooling such as data analysis and problem solving strategies), but also in terms of the language. Problems tend to be contextualized and often require a good command of English. In this report we focus on the implications of a restrictive language policy on immigrant Spanish-speaking parents’ engagement in their children’s mathematics education.

METHOD

Our research spans over two projects specifically aimed at parents (mostly mothers of Mexican origin) and mathematics education. We use mathematics workshops, courses in mathematics for parents, and mathematical “get-togethers,” as settings to engage with parents not only in explorations of reform-based mathematics but also in conversations about mathematics education. Our sources of data include video and transcripts of many of these sessions; individual interviews as well as focus group interviews (audio or video taped); classroom visits in which parents and researchers observe a mathematics lesson and follow-up debriefing (video taped). For this paper we draw on two sets of data. One set is from the 16 sessions (1.5 hours per session) from the last year of the first project with a group of 14 mothers and 1 father. All the mothers in this group had been part of our parental engagement project for at least one year prior to these sessions. Thus, we had established a rapport with them and they had actually indicated that they wanted to continue with the workshops and the dialogues. The second set is from our current project and it consists of interviews and focus groups with a total of 15 parents from three different schools.

Our methodological approach is grounded on phenomenology (Van Manen, 1990), which relies heavily on participants’ contributions to the experience and then strives to triangulate the data through multiple experiences and sources of data. The lived experience of each parent is considered significant. All interviews, focus groups, and workshop sessions were transcribed and analyzed using Glaser and Strauss (1967)
constant comparative method. This process leads to the development of themes that inform our overarching research goal, which is to document Latino parents’ perceptions about the teaching and learning of mathematics. As Van Manen (1990) writes, “themes describe an aspect of the structure of lived experience” (p. 87). A recurrent theme in our analysis is the effect of language policy on parents’ engagement in their children’s mathematics education. We address this theme first through two short cases (vignettes) and then through a more general discussion of interactions between parents and children.

THE CASES OF TWO MOTHERS

In this section we present two brief cases that illustrate different aspects of language policy. The first case highlights parents’ concerns about communication with their children about mathematics because of language issues; the second case addresses the role of language in placement in mathematics classes.

The Case of Verónica

Verónica is a mother who had attended college in Mexico and had some teaching experience in that country. She has lived in the U.S. for several years and in fact her son had started school in the U.S. She has some understanding of English, but she identifies herself as primarily Spanish speaking. Her oldest son was placed in an English-only classroom in second grade by school recommendation. School personnel told Verónica that her son was getting confused in the bilingual classroom and not making progress. This placement affected her ability to participate in her son’s schooling:

I liked it while they were in a bilingual program, I could be involved… When he was in kindergarten … 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 realize many things. And then when he went to second grade into English-only and with a teacher that only spoke English, then I didn’t go, I didn’t go.

Although Verónica stopped going to her son’s classroom, she continued to support her two sons by attending school meetings, which were usually in English (though some translation was provided). About these meetings, she said, “I attend so that they [her sons] 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.” At the time of our study, her oldest son was in middle school (11 years old). She told us that she felt confident about her knowledge of mathematics to help him with his homework, however,

When I sit with him to go over what he’s doing, it’s like he feels lazy about translating the problem for me. And when it’s hard to translate he tells me that he’ll just go early to school or will ask someone else, and that’s something I don’t like…. He is not sure that I am understanding the problem because it’s written in English, I don’t know how to read it and he doesn’t know how to translate well, because he speaks Spanish, he reads
Spanish, but because we have words and questions that we say differently, he thinks that I studied differently. … He’s not sure of me because I don’t speak English and he’s not sure I am able to help him; “Son, it’s mathematics.” “Yes, mom, but…” I don’t know if it’s laziness or maybe he just doesn’t find the words. He knows Spanish but when kids learn Spanish here, their vocabulary is not as developed and he doesn’t translate like he should so that I’m able to help him.

The situation is particularly upsetting for Verónica because she feels she knows the content and could help her child but her child does not trust her knowledge. Underlying this is the issue of academic language. Because her son had been schooled in English since 2nd grade, he did not have a command of academic Spanish, thus making it harder for him to speak about mathematics in Spanish. This is something that we have documented in interviews with children ages 10 -12 who speak Spanish at home but have been schooled in English. These children have to be able to explain and translate the problems to their parent; this is a process that involves proficiency in the mathematics register in two languages (Moschkovich, 2002). Despite these obstacles, Verónica was determined to support her children. For example, she used the school’s after-school tutoring to make sure that they could receive the support (in English) that they needed for the homework.

Verónica’s case highlights several issues that we see reflected in other parents. A language policy that basically makes English the language of schooling has limited parents’ participation in the schools. We wonder about the equity implications of these language policies at a time in which current educational policy asks for increased parental involvement and mathematics teaching and learning are particularly language rich.

The Case of Emilia

Our work takes place in elementary and middle schools. At the middle school level, what we see happening is a school within a school in which ELLs are kept apart from non-ELLs for many of the core subjects. Almost ten years ago, Valdés (2001) described a similar situation and pointed out that through this “two schools in one” ELLs had very few opportunities to interact with students whose primary language was English. This same situation was echoed recently by Emilia, a mother in our project. Emilia arrived almost three years ago to the U.S. We first interviewed her and her oldest son (Alberto, 11 years of age) shortly after their arrival. At that time, they both talked about how the mathematics he was seeing at his current school, he had already studied it in Mexico and that his main problem was with learning the language (“and here they teach me things that they taught me there; it’s just that here it’s hard because of the English”) (See Civil (2006) for more on this case). This was not a surprise to us since our interviews with immigrant parents consistently document a feeling among these parents that the level of mathematics education in Mexico is higher than what their children are studying in their current school. What caught our attention was Emilia’s comment about her child learning things that he already knew:
That is, for them it’s perfect what they are teaching them because in this way it’s going to help them grasp it, to get to the level, because for them, with the lack in English that they have, and if to that we were to add, … If they give them all the information, like a lot, very dense, too much teaching during this period, to tell you the truth, it would disorient them more. Right now, what he is learning, what I see is that it’s things that he had already seen, but if he gets stuck, it’s because of the language, but he doesn’t get stuck because of lack of knowledge.

How aware are immigrant parents of the process by which their children are placed in mathematics classes? We are concerned about the thinking behind these placements. Emilia seemed to think that this was good for her son because he would not be overwhelmed with having to learn both language and content. This was two years ago. More recently, we interviewed Emilia again. She appeared satisfied with her children’s progress in mathematics, although as the interview went on she pointed out what we mentioned earlier, that her children seemed to be interacting mostly with other Spanish-speaking students. She also brought up a concern for how little homework her children seemed to be doing and noticed that her two sons who are supposedly in different grades would sometimes bring the same homework. The reality is that the push for learning English is such that schedules are made around this priority, at the expense in some cases of the learning of content such as mathematics. As Valdés (2001) points out, “students should not be allowed to fall behind in subject-matter areas (e.g., mathematics, science) while they are learning English” (p. 153). We do wonder about the (in)equity implications of some of these placements.

PARENTS’ AND CHILDREN’S INTERACTIONS

Verónica is concerned about the conflict she feels between her oldest son and herself around mathematics. She feels she can help him in terms of her content knowledge but language somehow gets in the way. Other parents have brought up the language issue in being able to help their children with homework in mathematics:

Candida: Well, I remember that they would give her homework in English and in Spanish, and so I could help her a little more. But when it was all in English, no. Then I couldn’t. I felt bad. I would be very frustrated because I couldn’t explain it to them, I would have liked to explain it to them and I couldn’t. I was frustrated.

Selena: Sometimes I cannot explain it to him because I hardly know English. There are things that he reads to me and he translates them into Spanish; sometimes I understand what he’s telling me in English, but others, definitely I don’t understand anything.

Lucrecia: it was difficult for us, that the boy did the homework, because we didn’t know English and were not able to translate the problem for him.

As we mentioned earlier the nature of the homework in many of the reform-based materials is likely to put demands on parents’ knowledge of mathematics as well as of English. We are aware that it is often hard to separate what is due to content and what is due to language, but our focus here is on data that illustrate the role that (English) language plays in these parents’ access to their children’s tasks. We are
not referring just to typical word problems, but tasks in which the instructions are rather complex; tasks in which the students are asked to provide written explanations; tasks in which they are given graphs, tables and other representations that assume a certain knowledge of how to interpret these and that tend to have quite complex sentences.

There is another side to this language policy that we want to address here. So far we have talked about how a limited knowledge of the language of instruction (English in this case) may affect parents’ participation in their children’s school, the most obvious way being as they try to help them with homework. But what about the effect of this policy on the children? Interactions between children and parents concerning each other’s mathematical knowledge can be a way for all those involved to gain knowledge. But these interactions can be made particularly difficult when children need to bridge not only school and home knowledge but also different languages. We have seen that by not being able to continue to develop their knowledge of content in Spanish, they lose the ability to, for example, talk about mathematics in Spanish. This affects the communication with their parents. We wonder about the effects of this reduced communication on the relationships parents-children and on children’s academic achievement. As Worthy (2006) writes, “as linguistic connections with their families and roots fade, these children also face a loss of cultural knowledge, family values, personal nurturing, and academic support” (p. 140).

IN CLOSING

The parents in our research were concerned about limitations to their participation and the possibility of a loss of connection with their children due to the “language barrier.” Language plays a key role in the learning and teaching of mathematics, particularly in reform-based classrooms. It is also true that language is a key component of one’s identity. We are aware that in many countries the language of instruction is indeed different from many students’ home language. But in our local context what we want to highlight is the political and educational implications of a change in language policy. It is not about whether we teach mathematics in English or in Spanish, but it is about what messages these language policies give about the valorization of certain forms of knowledge over others. We want to point out, however, that several of these parents were quite resourceful in accessing their own networks (Horvat, Weininger, & Lareau, 2003) to provide the necessary support to their children (seeking the help of neighbors, relatives, or teachers). Our parent workshops, focus groups, and interviews have also served as places to network, not just with school personnel and us but also among themselves. The conversations provide a context for reflection, as is the case of Emilia who in her third interview is starting to question issues related to the actual academic achievement of her children. We wonder what Emilia (and others like her) can do as they become more aware of the situation. As one of the mothers, Esperanza, reminds us, there is a difference between language and voice, “Se me fue quitando el miedo y aprendí que tu voz cuenta, aunque no hables el
“mismo idioma, cuenta” [The fear slowly went away and I learned that your voice counts, even if you don’t speak the same language, it counts].

Endnote
This research was supported by the National Science Foundation, grants ESI-9901275 and ESI-0424983. The views expressed here are those of the author and do not necessarily reflect the views of the funding agency.

References


