

LATINO FAMILIES INVOLVEMENT IN THEIR CHILDREN'S MATHEMATICS EDUCATION

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This study is grounded on a sociocultural perspective and focuses on the role of Latino families in their children's mathematical learning. Through parents' voices we explore possible ways of inclusion that may allow for Latino families to overcome social and educational exclusion. Latino mothers explain strategies to counteract this exclusion using resources they find in their communities.

This study focuses on Latino families' involvement in their children's mathematics teaching and learning. Our goal in this paper is to try to understand the nature of this involvement from a sociocultural point of view. Through parents' voices we explore possible ways of inclusion that may allow Latino families to overcome social and educational exclusion. We examine the kinds of strategies that Latino mothers in our study used to overcome some of the barriers that affect their children's learning of mathematics.

Theoretical Framework

Drawing from the sociocultural approach (Cobb & Yackel, 1996; Nasir & Hand, 2006), we assume that learning is a social and cultural phenomenon that cannot be understood only through the analysis of cognitive processes, but also it is a process in which contextual aspects of the student intervene. We understand learning as a reality in which school, teachers, students, families, and the social context in which they live in are intertwined (Elboj, Puigdemívol, Soler, & Valls 2002). Whereas other studies have looked at educational practices inside schools, hence focusing on interactions among students and teachers in the classroom, our focus is on the parents' perspectives of their children's learning of mathematics. This approach builds on prior work we have done in this area (Civil & Andrade, 2003; Civil & Bernier, 2006; Civil, Planas, & Quintos, 2005).

Methods

Our research takes place in two elementary schools located in working-class, primarily Latino neighborhoods in the Southwest of the U.S. We center on the voices of the mothers that participated in our study so that they are the ones who explain the difficulties they faced as they tried to help their children learn mathematics and what resources they drew from to overcome these difficulties. This is consistent with the use of a critical communicative framework (Gómez, Latorre, Sánchez, & Flecha, 2006). From this methodological point of view we emphasize the interpretations that the people directly involved in the research, that is the parents themselves, make of the dynamics that explain how Latino families take charge of their children's mathematics education. As Hidalgo (2005) writes, "I take the position that the more one knows about the contexts of Latino/as lived experiences, the better one may understand their processes of adaptation and change" (p. 378).

We individually interviewed sixteen mothers from the two schools. We transcribed and analyzed all the information collected by video and/or audio recording. In order to analyze the information we used grounded theory (Glaser & Strauss, 1967) with the purpose of inductively bringing up the themes the mothers considered to be relevant.

Results

In this paper we report on the three main barriers that the mothers mentioned and on the kinds of strategies that they used to overcome them.

Differences between Schooling in Mexico and in the US

The participating mothers in this study pointed out that they encountered many barriers when trying to help their children with mathematics homework. One of the difficulties relates to the differences between Mexican and U.S. educational systems, as the quote below shows. One of the mothers, Lucrecia, is reflecting on when her daughter first started attending school in the U.S. upon her arrival from Mexico:

Lucrecia.- It seems like she gets a little upset, at the beginning when it was very easy for her because she already knew it then it was like if, and the teacher used to say that she got distracted since she had already studied that, so she knew it already, that's why she didn't take it seriously, and so it seems like she got upset.

Tensions between Different Forms To Do Mathematics

This is in part related to the previous barrier. Several mothers commented on how they learned mathematics when they went to school and that this was very different from how their children are learning now. This mother, for instance, comments on the conflict with her daughter when she tries to help her with her homework:

Laura: With my daughter Yahaira, they taught her one way and they taught me a different way, but it's the same answer. It's what I tell Yahaira, I explain it to her one way, and they explained it to her a different way. I tell her, "but look, it's the same answer."

Issues of Language

Some mothers mentioned that their limited knowledge of English made it hard for them to help their children with homework: "Every once in a while I cannot explain (it) to her because I know almost no English" (Selena). Another side of this language issue is when the children themselves do not know English well. In some cases this leads to resistance and rejection towards the school, as this mother recalls when they first arrived to the U.S., "It was all in English. And then I started being proactive and, I said, no, poor children, because they were traumatized. They didn't want to go to school anymore, they wanted to go back to Mexico, and it was everyday that they cried..."

Strategies To Overcome These Barriers

The mothers in our study were resourceful at finding ways to help their children learn mathematics. In general this desire to "help their children" is a source of motivation for the mothers to look for resources in their communities. Some mothers we interviewed take mathematics classes to get to know the local educational system. Other mothers study English; they ask their own children to translate the homework questions for them, or they look for help from the teachers or other people in the community, as we can see from the following quotes:

Jacinta. - But on Thursday, I am going to take a math class because there are problems that I don't know how to solve. And the teacher invited me on Thursday afternoon at five to teach me what they are teaching to him, so that I can help him.

Loli. - Now I know little bit more the procedures and what she is teaching, and I feel more, like with more freedom to help her, because before... "You are not helping me. You better move away, Mum. You better go away." And yes, it is true; if I don't help her, why be a hindrance? But now I understand better than before... How did I do at the beginning? I had spider webs because I couldn't get anything in any way, now I started to remember a little, all because [these classes].

Some mothers looked for support through their networks (family, friends, community), for example by sending their children to other friends' houses (or family' houses), who already know English well, to work together on the homework. Other mothers made use of the local community centers (e.g., Boys and Girls club) to seek assistance with homework for their children: "sometimes when she [her daughter] is not able to do it, she calls her cousin. Or she also brings the homework to the club." [Noelia]

Discussion

Our study adds to the work that highlights the resources, the knowledge, the caring, and the resiliency present among Latino working-class parents (Delgado Gaitan 2001; Valdés 1996), but with a specific focus on mathematics education. We are therefore guided by a theoretical approach that highlights the understandings these families have that allow them to advocate for their children. Our analysis shows that cultural elements such as language and the educational experience in another country are key aspects that affect how much mothers can help their children. In the case of the Latino families in our study, we observe that not knowing English or how to solve a specific mathematics homework problem may constitute obstacles for the collaboration between parents and children. This makes the school-family connection more difficult to attain and, according to other studies (Elboj et al, 2002), this connection is one of the key components for academic success. Yet, our study also shows that Latino mothers actively look for ways to fight against these difficulties that are of a more structural nature. Through community resources (attending workshops, English classes, mathematics classes, civic centers in the community, etc.) and their own families / friends (asking other family members for help on English translations, sometimes even their own children), those parents work towards overcoming these difficulties and try to look for ways of inclusion.

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