

# Theory Behind the Project

The theoretical basis for the proposed project rests on prior and current work in two U.S. Department of Education, OERI-funded projects --- The Funds of Knowledge for Teaching (Moll, González, & Civil, 1995) and Linking home and school: A bridge to the many faces of mathematics (Civil, González, & Andrade, 1996). These projects reject a deficit model for the education of minority, working-class children in which children and families lack adequate experiences and background for schooling. Instead, "by capitalizing on household and other community resources, we can organize classroom instruction [so that it] exceeds in quality the rote-like instruction that these children commonly encounter in schools" (Moll, Amanti, Neff, & González, 1992, p.132). The qualitative study of household characteristics in these two projects has consistently documented a wealth of resources and knowledge in working-class, minority families. Such "funds of knowledge" encompass farming, construction, use of herbs for medicinal purposes, mining, repair, budgeting, cooking, sewing, etc.

In our work with parents we have found research on adult education, especially that grounded on critical pedagogy, particularly useful (Benn, 1997; Frankenstein, 1989; Frankenstein & Powell, 1994; Harris, 1991; Knijnik, 1996). To make parents real partners in school education and to benefit from their intellectual resources, we have established two-way parent-school dialogues in which we obtain information on parents' everyday practices and experiences as well as on their values about their own mathematics and about their expectations for their children.

We are carrying out workshops in Tucson with a core group of working-class, Spanish speaking mothers where we engage them in two-way conversations about the teaching and learning of mathematics. On the one hand, these workshops enhance the participants' understanding of mathematics. In small groups, they work on reform-based activities and are encouraged to come up with their own approaches to solving problems. On the other hand, we learn what they think about mathematics as well as what their everyday uses of mathematics are. Throughout these workshops they show an eagerness to investigate and to learn. One reason why these women are participating is so they can help their children at home with school mathematics.

For the proposed project, our work with parents is also based on parental involvement research, in particular that which critically examines issues of power and perceptions of parents --- especially minority and working-class parents --- and presents alternative ways to think about parental involvement, ways that move away from stereotypes and deficit views and that give parents a voice in the process (Henry, 1996; Vincent, 1996). The proposed leadership opportunities for parents as well as the development of the Math for Parents mini-courses, in which we build on parents' mathematical funds of knowledge, reflect our commitment to giving parents a voice in the process. In the area of parental involvement in mathematics, we draw on work carried out in the United Kingdom (e.g., project IMPACT, Merttens & Vass, 1990; 1993 and project Paired Maths, Topping & Bamford, 1998), as well as in the U.S. (See list of resources). We are particularly influenced by the work of Julian Weissglass and colleagues in the development of Equity in Mathematics Education Leadership Institute (EMELI) and from the NSF-funded project Improving Mathematics Education in Diverse Classrooms (IMEDC). In our project, as in theirs, we see parents as active rather than passive participants. Our proposed

project reflects our awareness that, as Weissglass and Becerra (no date) write, "Often classes or programs for parents are one-way transmissions of information and materials from school to the parents. Rarely do parents, particularly those from groups under represented in mathematics, have an opportunity for their beliefs, ideas, and concerns to be heard. ... All parents need a safe place to share and explore their early experiences with schooling, their thoughts about their children's learning, and their attitudes toward mathematics." (p.2)

Although the focus is on parents, parental involvement is unlikely to succeed without teachers and school administrators being part of the process and supporting it. Thus, for the teachers and administrators in-servicing component, we will draw upon our prior work on teachers' ethnographic analysis of minority, working-class households (González, 1995). By engaging the teachers and other school personnel in the reading of, and listening to, ethnographic narratives collected through these projects and other sources, we will focus our discussions on the knowledge and resources in these households. As Merttens (1993) points out about the approach to parents and teachers in project IMPACT, the emphasis is on teacher discourse, and "into the rationalizations and accounts which teachers provide for parents and the wider community. It requires that teachers move away from a deficit model of parenting, that they question prevailing assumptions about the necessary skills base for 'quality' support in the home" (p. 30). The ethnographic accounts will allow us to question critically a view of parental involvement that stereotypes minority parents based on simplistic, easy to see, population characterizations (e.g., "Mexican-Americans") --- its food, its folklore, its mode of dress --- and ignores more hidden aspects, such as values and lived experiences.