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Given the dramatic increase in recent years of linguistically and culturally diverse students in our schools, and given that a significant portion of this student population consists of Latinos/as—a population with disturbingly persistent under-achievement in mathematics, there is a need to expand our current notions of what knowledge and skills mathematics educators and teachers need. The issues of linguistically and culturally diverse students' learning revolve more around how to create effective learning environments and less around cultural or demographic factors (Moll & Diaz, 1987). Students from high poverty neighborhoods can still achieve academically if learning environments build on to their informal knowledge (including language) drawn from home and community (Valenzuela, 1999) and are modified so that key factors are in place to support students (Garcia, 1993).

What are some of these key factors? And what implications do they have for the preparation of teachers and for professional development? The following outlines some of those factors and discusses their implications.

1. Effective teachers of mathematics with Latino/Hispanic students recognize that they are developing the second language (English) at they same time they are teaching content (Khisty, 1997; 2001; 2002). They attend to how their own language is used orally and use it as a teaching tool to further students' conceptual development (Khisty & Viego, 1999; Khisty & Chval, 2002). Less effective teachers use ambiguous referents, have less clear oral articulation that can lead to misunderstandings, and they do not teach for meanings (Khisty, 1995)
2. Effective teachers of mathematics carefully create learning environments where students have many opportunities to hear and use language and negotiate meanings both linguistic and conceptual (Khisty, 1996). Teachers specifically create opportunities for students to communicate their knowledge through various modes and not just through their weaker academic language (Chval, 2001). They also attend to the social dynamics often associated with diverse students in mainstream contexts and carefully organize students so that linguistically and culturally diverse students are not segregated from other students nor are put in a lower status position because of language (Khisty, 1996). They recognize that the processes of mathematics discussions are not straight-forward (Kitchen, 2004; Moschkovich, 1999). Unfortunately, too many mathematics classrooms are organized so that students are passive learners (Brenner, 1998) who have to rely only on listening—which is often their weakest academic skill (Cummins, 1981).
3. Effective teachers of mathematics with Latino/Hispanic students develop literacy through the content (Chval & Khisty, 2001). They teach the language of mathematics including how to comprehend and write the specialized genre of mathematics word problems (Abedi & Lord, 2001; Celedon-Pattichis, 2003; 2004).

4. Effective teachers of mathematics draw on their knowledge of the research developed around teaching bilingual/bicultural students (e.g., Dalton, 1998; Echevarria, Vogt, & Short, 2000). They actively incorporate this knowledge into their thinking about teaching mathematics and executing lessons (Secada, 1996; Khisty, 2002)
5. Effective teachers genuinely redefine students' language and community as positive learning resources (Civil & Andrade, 2002; Moschkovich, 2002). They value students' language and knowledge and find ways to capitalize on it (Moschkovich, in press) even if they do not know the language. Less effective teachers tend to ignore, dismiss, or ridicule students' language and community (Morales, 2003).

The above suggests that in the preparation of teachers and professional development
a. More attention has to be given to the language of mathematics with its particular genres and specialized discourse, and how to create learning environments that positively utilize multilingual multimodal mathematics communication.
b. Attention must be given to what it means to learn in two languages and how one teaches the second language through the content; how to create environments that are sensitive to the role of languages in learning and issues of communicating in two languages. For example, teachers need to understand that it is not enough to simply have students work in groups, but that group work is also where students develop language skills and learn through other's talk—which, consequently, has to be comprehensible.
c. Attention must be given to developing deep understanding of how to integrate language and content development such that instruction does not become less effective through notions of simplistic strategies.
d. Lastly, attention must be given to finding ways to challenge teachers' beliefs about language so that they genuinely redefine it not as a deficit but as a positive learning tool from the children, family, and community.

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