



Orientations of prospective teachers toward students' family and community



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HIGHLIGHTS

- Beliefs about families' attitudes and actions influencing learning of mathematics.
- Beliefs about PSTs as learners of children and families they will teach.
- Steps PSTs might take to draw on family and community resources in classrooms.

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ABSTRACT

Teacher educators need an awareness of orientations that prospective teachers (PSTs) hold about children's families and communities, so that they can support PSTs in developing positive perspectives and addressing deficit perspectives. Orientations expressed by 20 PSTs while in preK-8 mathematics methods courses are examined. Results from interviews indicate that PSTs recognize the importance of connecting with parents, understanding home and community practices, and building on these practices to support children's mathematical learning. They also, however, exhibit inconsistent perspectives, at times indicating a lack of understanding as to why some families appear to be less able to support students' academic efforts.

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1. Introduction

Research on equity in education highlights the fact that the population of students in public schools in the U.S. is growing more

diverse, while teachers continue to be predominantly White and middle-class, with backgrounds and lived experiences different from those of their students (Howard, 1999; Nieto, 2004). This gap in lived experiences between teachers and their students is not unique to the U.S.; it is a challenge in many countries (e.g., Alba, 2005; Ball, 2000; Bender-Szymanski, 2000; Florian, Young, & Rouse, 2010; Graue & Brown, 2003; Kohler & Hannaford, 2002; Lander, 2001; Mills, 2009; Verkuyten & Thijs, 2002). In this article, we report on data gathered as part of a larger project called Teachers Empowered to Advance Change in Mathematics (TEACH MATH). The overall goal of the TEACH MATH project is to transform preK-8 mathematics teacher preparation so that new generations of teachers will be equipped with powerful tools and strategies to increase mathematics learning and achievement in our nation's increasingly diverse public schools.

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We examine the orientations toward students' family and community that a group of prospective teachers (PSTs) brought to their studies of how to teach mathematics.⁶ If teacher educators (TEs) understand the range of orientations PSTs might hold regarding their students, then it stands to reason that TEs will be better equipped to support PSTs in developing positive and productive orientations toward children and families. Although other researchers have focused on supporting PSTs in confronting the privilege many bring to teacher preparation (e.g., Cochran-Smith, 1995; Kidd, Sánchez, & Thorp, 2008; Mueller & O'Connor, 2007; Sleeter, 1993), little work has focused on how PSTs are oriented toward viewing students' home and community knowledge bases specifically with regard to mathematics. This paper aims to uncover and create awareness of these orientations.

2. Theoretical perspectives

Our research is informed by two complementary strands of research. One strand considers research about PSTs' orientations with regard to family, culture, and community. The other strand examines the importance of attending to culture and students' home and community knowledge in teacher education and mathematics education. We provide a brief overview of each area in turn.

2.1. Orientation of PSTs toward family, community, and culture

Research has repeatedly documented that PSTs bring limited experience with students and families from cultural, racial, and linguistic backgrounds different from their own (Bleicher, 2011; Silverman, 2010; Taylor & Sobel, 2001), and that PSTs' beliefs and assumptions about students from diverse backgrounds are often ones that could undermine students' learning (Bleicher, 2011; Sleeter, 2001). For example, Bleicher (2011) surveyed 95 PST candidates prior to a field experience in a diverse urban community and in response to open-ended survey items, found that almost one-third of PSTs expressed fears about "trying to relate to people who are not like me" or "who come from a different background" (p. 1174). Similarly, Kidd et al. (2008) indicated that many PSTs enter teacher education with deficit views of children from ethnic minority groups. PSTs often hold assumptions about and are unaware of others' cultures (as well as their own culture), including not understanding the influence that culture can have on families' beliefs, values, and child-rearing (Kidd et al., 2008). PSTs also tend to be unaware of social inequalities associated with race and ethnicity, and this lack of awareness can lead PSTs toward deficit perspectives and blaming families for children's performance in school (Kidd et al., 2008). A study by Foote (2009), for example, found that teachers often place responsibility for school success in the home and with the family.

Research has also shown that PSTs tend to enter teacher preparation programs with traditional models of teacher–family interactions that mirror the ways that their own families participated in schools (i.e., teachers informing families about students'

progress, parents attending school-sanctioned events) (Graue, 2005; Graue & Brown, 2003). Graue and Brown (2003) surveyed 130 PSTs and found that many envisioned "traditional" family-school relationships where parents were passively involved in school-sponsored events. They also suggested that PSTs may perceive some parents as not caring about school (Graue & Brown, 2003), rather than considering differences that may exist between school and home practices (Zevenbergen, 2000).

Taylor and Sobel (2001) found that while PSTs felt a responsibility to address the learning needs of diverse groups of students, they also felt that teachers were not necessarily responsible for practices, such as home visits, that would help them to learn more about students' backgrounds and out-of-school experiences. Moreover, Graue (2005) found that PSTs tend to devalue the knowledge of parents and families as overly subjective, as compared to their own trained, "objective" knowledge of teaching. Taken together, these orientations are problematic, as they may impede opportunities for PSTs to build relationship with and learn from families, opportunities that are critical given many PSTs' limited experiences with and deficit-orientations toward students and families from diverse cultural, racial, and ethnic backgrounds.

A limitation of many of these studies is that they have focused on PSTs' ideas about diverse groups of students and families in general, rather than more content-specific perspectives on connections between students' background and experiences and their mathematics learning. Examining the extent to which these orientations hold true for PSTs studying how to teach mathematics is important, as mathematics is often looked at as culture free, making outside-of-school experiences seem less relevant (Ladson-Billings, 1997; Nasir, Hand, & Taylor, 2008). We do not mean to suggest that shared cultural, linguistic, racial or socioeconomic backgrounds among PSTs and their students necessarily result in productive orientations toward students' homes and communities, nor that all PSTs enter teacher education programs with deficit orientations toward children from non-dominant groups. For example, we know from research on practicing teachers that there are those who hold positive orientations toward students unlike themselves (e.g., see Ladson-Billings, 2001). Our point is that PSTs have varied prior experiences with diverse populations and communities; those experiences inform their orientations.

2.2. Intersections of family and community orientations in teacher education and mathematics instruction

TEs are in a position to step in to help PSTs become aware of their orientations. Mason (2008) describes the role of TEs as one of educating awareness, both so teachers are more cognizant of their own knowledge and beliefs, and so that they are prepared to understand the knowledge and beliefs of their students. The experiences and orientations that PSTs bring to schools, and to their dealings with students and families, are important factors in developing their instructional practices. To develop an understanding and appreciation of children's lived experiences and the resources available to them in their homes and communities, some PSTs may need to reorient their thinking about students, particularly those who are unlike them (Bartell, et al., 2013; Graue & Brown, 2003; Zevenbergen, 2000). In this way, teachers can begin to understand the value of and make connections between mathematics content and what students already know (including knowledge from cultural practices within students' homes and communities), rather than looking at the home and community from a deficit perspective (Aguirre, 2009; Kitchen, 2005; Vandeyar, 2008).

⁶ We use orientations to indicate the perceptions, beliefs, and dispositions that PSTs bring to the study of mathematics. For example, in order to support our understanding of beliefs, we draw on Philipp's (2007) notion of beliefs as "understandings, premises, or propositions about the world that are thought to be true. Beliefs might be thought of as lenses that affect one's view of some aspect of the world or as dispositions toward action" (p. 259). Dispositions and perceptions contribute to the lens one uses as well. Furthermore, Gates (2006) helps us to understand the socially constructed nature of teacher beliefs about mathematics and mathematics teaching and learning. We apply his lens by examining PSTs' orientations relating to students' families and communities as they surface in the social context of the mathematics methods classroom.

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