

HEAD START PRESCHOOL EDUCATORS' CONCEPTIONS OF MATHEMATICS LEARNING AND TEACHING

Paul N. Reimer

AIMS Center for Math and Science Education
preimer@aimsedu.org

Ralph T. Putnam

Michigan State University
ralphp@msu.edu

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Mathematics education leaders and national organizations have called for improved training and professional development for early childhood educators (Ginsburg, Lee, & Boyd, 2008; NAEYC & NCTM, 2010). To address these calls, our research group is designing and implementing a collaborative professional development (PD) model to support preschool mathematics teaching that builds on children's mathematical thinking and play. The PD involves 25 Head Start educators in whole-group learning sessions, video-club discussion, collaborative activity design, and classroom coaching.

Throughout the PD we are attending to teachers' development of new ways of thinking, being, and acting in classroom interactions. In this poster, we focus on two research questions: (a) how do these Head Start teachers conceptualize children's mathematics learning and development? And (b) how do these teachers conceptualize their role in supporting children's mathematical development?

We interviewed teachers at the beginning of the school year to explore their perspectives. The teachers discussed and provided examples of their mathematics teaching practice and their views of their roles and children's learning. We analyzed 11 transcribed interviews using an inductive coding approach. Teachers most often identified their roles in classroom activity as *Instructor* (64%) and *Nurturer* (55%). Four of the 11 teachers (36%) described their role as *Facilitator*; three (27%) made comments coded as *Observer*. Teachers made fewer comments overall related to children's learning, with 45% describing learning as *Engagement*, 36% learning as *Active*.

Teachers' emphasis of instructor and nurturer roles over facilitator and observer roles suggests assumptions about the locus of the generation of mathematical knowledge (Platas, 2015). Whether teachers assume a facilitative role or are active participants with children, teachers' self-positioning influences the structure of mathematical interactions in their classrooms (Graue et al., 2015) and can inform professional development efforts toward play-based pedagogy.

References

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