Jacob T Klerlein* (klerlein@mtsu.edu), Department of Mathematical Sciences, PO Box 34, Murfreesboro, TN 37132. Using Open-Ended NAEP Items, Student Work, and Verbalization to Build Teachers' Mathematical Understanding. Preliminary report.

Listening to children's verbalizations of the process by which they solved a problem allows a prospective teacher insight into the power of the mathematics of children. Further, prospective teachers with particular orientations to listening also improve their own mathematical understandings. I will share activities and describe learning outcomes of the prospective elementary school teachers in my mathematics content course. Specifically, this commentary will focus on cases of prospective teachers solving an open ended NAEP item, analyzing associated student responses to further understand the mathematics concepts involved, listening to an audio recording of a child describing the process she used to solve the problem, and then determining a next problem to pose to the child. The prospective teachers' work products will be used as the basis for description of their developing mathematical understandings. (Received September 10, 2007)