

Meeting: 1003, Atlanta, Georgia, MAA CP G1, MAA Session on Drawing on Our Students' Thinking to Improve the Mathematical Education of Teachers

1003-G1-728 **Tracie M. McLemore-Salinas*** (salinastm@appstate.edu), Department of Mathematical Sciences, 233 Walker Hall, Boone, NC 28608. *A Penny for Your Thoughts: Exploring How Pre-Service Teachers Think About Elementary Mathematics*. Preliminary report.

In this study, I explore the thoughts of pre-service elementary school teachers through journal writing and interviews to determine the nature of their beliefs about elementary mathematics. I also discuss the results of instructional methods that I have employed based on those findings. Students included in the study are those enrolled in the mathematics content courses for elementary teachers that I teach. My analysis of students' journals and interviews focused primarily on the way in which students viewed elementary mathematics. Questions asked include how students use mathematical definitions, rely upon mathematical "rules," and recognize the depth of elementary mathematics. Answers to these questions are sought in students' replies to journal prompts and informal, semi-structured interviews. Instructional methods employed as a result of reviewing students' work include utilizing short discussions of relevant educational news at the beginning of class, presenting examples of questions posed by elementary students for consideration, and having students create diagrams depicting interrelated topics in mathematics. The results of these instructional methods are presented along with suggestions on improving and extending their effectiveness. (Received September 28, 2004)