

1077-M1-796      **Kimberly Cervello Rogers\*** ([cervello@msu.edu](mailto:cervello@msu.edu)), B2 North Kedzie Lab, East Lansing, MI  
48824. *The Proof is in the Practice? Graduate Teaching Assistants and Future Teachers.*

Proof is vital for developing and conveying knowledge, but prospective teachers of elementary grades (PTEs) have limited experiences constructing and using proofs. As one means for addressing this lack of experience, six sections of a Geometry content course specifically designed for PTEs were the setting for my dissertation. I examined how six graduate teaching assistants (TAs) engaged PTEs in reasoning and proving (RP) and how TAs' beliefs about RP illuminate their instructional decisions around RP-tasks. RP-tasks are tasks with potential to engage PTEs in RP-processes (e.g., generating or evaluating conjectures or proofs). I observed 82 RP-tasks implemented during 42 classroom observations from spring 2011 semester and conducting eight interviews with each TA. Findings indicate that TAs engaged PTEs in a range of RP-processes. For a plurality of observed tasks, however, opportunities for PTEs to engage in RP were decreased. A decrease in RP-opportunities typically occurred when TAs provided a conjecture or justification instead of allowing PTEs to generate them. Analyses of the classroom and interview data indicate there are multiple factors that supported or inhibited how TAs implemented RP-tasks, which can inform professional development for college mathematics instructors. (Received September 12, 2011)