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Analyzing Elementary Students' Mathematical Explanations and Attention to Audience with Screencasts

Friday, October 31, 2014  
1:00-2:00 pm  
6475 Alvarado Road, Room 218

RSVP: https://crmse.wufoo.com/forms/crmse-colloquia/ or  
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Abstract: Reasoning and constructing mathematical explanations for an audience have become increasingly important activities in elementary classrooms with the implementation of reform oriented curriculum and standards. Mobile learning tools and applications have allowed for greater accessibility to students’ thought processes and their explanations as they solve problems. One such technology, screencasts, allows students to generate multimedia presentations of their solution strategies. Using clinical interviews (Ginsburg, 1997), I interviewed 9 students between the ages of 7 and 10 as they generated screencasts to solve multiplication and division problems on a mobile tablet. Using a self-created Screencast Observation Rubric, I analyzed 45 student-generated screencasts to investigate the characteristics of their explanations. I found that students assumed teacher personas for their screencasts and evidence suggests screencasts could serve as a proxy audience.