Supporting Prospective Secondary Mathematics Teacher Learning About Student Reasoning: Rationale, Goals, and Strategies

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Recent work associated with developing video-based online learning modules to support prospective secondary mathematics teacher (PSMT) learning about secondary students mathematical reasoning will be shared. The current project is a continuation of work conducted over the last two years and involves developing and piloting additional video-based online modules at Boise State, then revising and implementing the modules at nine other institutions. Each module incorporates short video clips of middle or high school students working on a mathematical task and is designed for use in undergraduate mathematics courses. Video-based modules make it possible to purposefully select episodes of students expressing their thinking (i.e. case studies) around important ideas, something that cannot be controlled in a typical field experience. But why incorporate the learning of secondary students mathematical ideas into math classes for future teachers? And what is the goal of doing such? These questions will be addressed using samples from the modules and an illustration of the module development process. Ultimately, the aim is to iteratively improve the design of the modules, and in turn PSMT learning, through a cycle of design experiments. Conjectures associated with PSMTs completion of the module series will be shared, along with preliminary results of analysis.

This work is an ongoing collaboration with the following individuals: Patrick Lowenthal (Educational Technology), Michele Carney (Curriculum & Instruction), Tatia Totorica (IDoTeach), and Jason Libberton (Regional Math Specialist).

Time: Thursday, 09/14/2017, 1:00-2:00pm
Location: ILC 404
Refreshments: at 12:45pm in MB226