

1154-J5-2047      **Yvonne Lai\*** (yvonnexlai@unl.edu), **Jeremy Strayer** (jeremy.strayer@mtsu.edu) and **Cynthia Anhalt** (canhalt@math.arizona.edu). *Purposeful use of simulations of teaching practice to uncover Mathematical Knowledge for Teaching.*

Our project (MODULES<sup>2</sup>) has developed curriculum materials that incorporate simulations of secondary teaching practice (SoPs) for use in university mathematics courses. (MODULES<sup>2</sup> stands for Mathematics of Doing, Understanding, Learning, and Educating for Secondary Schools.) Our purpose is to address teachers' perceived disconnect between undergraduate mathematics and their future teaching practice. SoPs are written and video assignments where pre-service secondary teachers respond to a description of a teaching situation, including sample secondary student work. In this presentation, we provide examples of these SoPs, the kind of mathematical work that the teachers have done prior to being assigned these simulations, the feedback that they receive, and how these fit together to help the course instructor see opportunities for teachers to refine their MKT. We also discuss how lessons learned about designing SoPs and the curriculum materials via 2 years of Plan-Do-Study-Act cycles, a heuristic for documenting tests of change. Through these cycles, we as project developers examine how instructors have used the materials, what pre-service teachers have produced, and what this tells us about improving and clarifying curriculum materials, including SoPs. (Received September 17, 2019)