Alyson E. Lischka* (alyson.lischka@mtsu.edu), 1301 E. Main Street, Box 34, Murfreesboro, TN 37132, and Candice M. Quinn. MODULE(S2) Project: Developing Prospective Secondary Mathematics Teachers’ Mathematical Knowledge for Teaching in College Geometry.

The MODULE(S2) Project (NSF-IUSE Award #1726723) is focused on developing mathematical knowledge for teaching (MKT) in College Geometry, Statistics, Abstract Algebra, and Modeling through simulations of teaching practice incorporated in materials for these courses. By engaging prospective teachers in simulations of teaching practice as they develop content knowledge, we strive to also develop the knowledge they need to leverage their understanding of upper level mathematical concepts while doing the work of teaching. We will share data and experiences from the pilot study of the Geometry materials which indicate that the materials allow for an increase in MKT along with growth in understanding of the content. Both quantitative and qualitative data in the study point to an increase of MKT among students engaged with the materials, specifically in understanding student thinking. Prospective teachers generated more specific descriptions of the mathematical concepts and produced questions that were more specific to the mathematical content after engaging with the materials than they did at the onset of the course. Future work includes further development of these modules and those for Statistics, Algebra, and Modeling along with assessment of the effectiveness of implementation. (Received September 12, 2017)