An Investigation of Student Perceptions of Linear Algebra Modules.

In this report we examine students’ perceptions of the implementation of carefully designed curriculum materials (called modules) in linear algebra courses at three different universities. The curricular materials were produced collaboratively by STEM and mathematics education faculty as members of a professional learning community (PLC) over several years. We have described the development and implementation of these materials elsewhere. Our focus here is on more detailed analysis of comments that student participants made in response to survey questions about the impact on their engagement, perceived learning, self-confidence, and notions of the broader nature of mathematics.

The Linear algebra In New Environments (LINE) project—partially supported by the National Science Foundation—was designed to promote a reflective, collaborative culture of teaching and learning among STEM discipline faculty. The project integrates (a) the study of important mathematical content, (b) the use of applications, and (c) reflection on mathematical learning theories by faculty and students in the context of an advanced undergraduate linear algebra course. (Received September 16, 2013)