Abstract: Since 2001 mathematics majors and future mathematics teachers at Brock University learn to design, program (‘code’), and use interactive computer environment for the investigation of a mathematics concept, conjecture, theorem, or application through a sequence of three courses, called Mathematics Integrated with Computers and Applications (MICA). In this presentation, we discuss our study focused on students’ learning experience in these computational thinking courses. Using a case study design, we analyzed the work (14 projects) of an undergraduate mathematics student throughout her three MICA courses. Results suggest that the student experienced deep understanding of the mathematics involved, and that she appropriated programming as a tool for engagement in mathematics.

This work is one of our studies grounding our ongoing five-year long SSHRC-funded research.