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Generality-construction processes of undergraduate students.

This session will present results of a study examining the ways that undergraduate students in mathematics-intensive majors engage in the process of constructing mathematical generalities. The research design involved developing a framework for problematizing the construction of generalities, leading to the development of three types of tasks: characterizing tasks, in which individuals are asked to construct general statements regarding the elements of a given collection; populating tasks, in which one is asked to construct a collection of objects, each of which satisfies a given general statement; and reconstructing tasks, in which one is given a mathematical generality and asked to adapt it to a broader domain. Participants for this study were mathematics majors and mathematics education majors, each of whom were within three semesters of completing their degree programs.

Major findings include descriptions of the varied approaches that were observed across participants and the impact of the use of specific cases as compared to the use of generic representations in the development of generalities. (Received September 20, 2016)