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V. Rani Satyam* (satyamvi@msu.edu). *Developmental and Affective Takes on Undergraduates Learning How to Prove.*

Students struggle in learning how to prove; prior research has looked at their struggles and strategies but not as much is known about how these change during the learning process. In addition, not much is known about the affective (attitudes, beliefs, emotions) side of proving. The purpose of this work is to examine the cognitive and affective factors involved in how undergraduates learn how to prove: how their problem solving relative to proving develops and what kinds of satisfying moments, marked by intense positive emotional reactions, they experience. Interviews were conducted with $N = 11$ undergraduates in a transition to proof course at four points across a semester. Each session consisted of proof construction tasks administered as a think-aloud and a semi-structured interview about satisfying moments they experienced in relation to the course. Findings suggest growth in what students do when stuck and show various types of satisfying moments with potential eliciting factors. This work has implications for the design of introduction to proof curricula and construction of tasks designed to bring about positive relationships with mathematics. (Received September 26, 2017)