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Girija S Nair-Hart* (girija.nair-hart@uc.edu), Girija Nair-Hart, 4200 Clermont College Drive, Batavia, OH 45103. *Concept Modification: A Teaching Experiment.*

I investigated cognitive processes that facilitate concept modification in Calculus II students by means of a small scale teaching experiment which was informed by the constructivist theory of learning. According to this theory, students learn best when they actively construct knowledge. Piaget stated that students' minds are not blank slates and that residues from previous incomplete concept images complicate the proper accommodation of new concepts. Therefore, to facilitate concept reform, students need to process the information and reach equilibrium by themselves. During my research, I realized that the process of knowledge equilibration could be expedited through a series of actions that pose cognitive conflict. I argue that concept modification could materialize if students are given the opportunity to interact with the concepts from multiple perspectives and then engage in refining that knowledge through debate and negotiation of meanings. I propose that by modifying traditional classroom settings to that of a constructivist classroom, students could be motivated to actively construct and refine mathematics knowledge. During the presentation, I will provide details of perceived concept modification by describing the events that occurred during a problem solving exercise. (Received August 13, 2013)