Towards a Hypothetical Learning Trajectory for business and marginal functions.

For my doctoral dissertation, I conducted a pilot and two iterations of a design based research study in order to generate a Hypothetical Learning Trajectory (HLT) for business calculus students being introduced to business functions and their marginals. The effectiveness of the proposed guided reinvention tasks was measured by comparing the hypothesized learning to the observations from recordings of students working in pairs, their written solutions, and a project they worked on individually. The data analysis suggests that, while not perfect, the HLT and tasks allowed students to meet most of the learning goals. I also suggest subsequent refinements to the latest version of the materials for a potential future iteration. (Received September 11, 2019)