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Yaomingxin Lu* (luyaomingxin@gmail.com), 1903 W Michigan Ave, Kalamazoo, MI 49008-5248. *Developing Undergraduate Students' Understanding of Variability through the Use of Dynamical Statistical Software.*

A major component of statistical thinking involves understanding and describing variability in data (Moore, 1990). Advances in technology allow for the development of tasks that can engage students more readily in data analysis. In particular, dynamic statistics software has made it easier for the learners to move from learning about descriptive statistics procedures such as calculating the standard deviation, to a more conceptual understanding of variability. This presentation will discuss the teaching innovation of implementing dynamical statistical software, TinkerPlots, in a statistics content course for education majors. Two cases of student pairs working on an exploration task using TinkerPlots will be discussed. In both cases, the use of TinkerPlots had dynamically engaged the students with the data while thinking about spread with the use of different plots and tools. Thus, this tool helped their understanding of different aspects of variability move forward. My findings support the notion that the ways students visualize concepts directly impact the ways in which they understand such concepts. It is essential to continue to investigate what sense students make of these visualizations intended to support students. (Received September 08, 2020)