

The effect of statistical coursework on preservice secondary teacher understanding of, and efficacies and attitudes toward, statistics learning: The case of Betty

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### **ABSTRACT**

In this qualitative study, I describe the characteristics of Betty, a senior undergraduate mathematics education major, who has never completed a full course in statistics either in high school or at the undergraduate level. To investigate and to provide perspective on Betty's characteristics, Betty and five of her cohorts were administered a series of surveys, which measured statistical understanding, self-efficacy, and attitudes. The participants also developed and presented a statistics lesson and were then interviewed to investigate their confidence in the implementation of their statistics lesson. The results indicate that the lack of a complete statistics course may have contributed to Betty's confidence in her ability to learn statistics, her low confidence levels in her ability to currently perform statistical analyses, her weak understanding of statistical concepts, her unwillingness to take risks on statistical knowledge surveys, and her lack of confidence in her lesson plan.