The Guidelines for Assessment and Instruction in Statistics Education (GAISE) report and the Statistics Education for Teachers (SET) report encourage a focus on the statistical process. However, not only do future elementary teachers often spend little time in statistics courses, previous research has shown a lack of textbooks for this demographic consistent with the guidelines. This study looked at the differences in students’ conceptual understanding of statistics and probability before and after approximately 15 contact hours within a mathematics content course for preservice elementary teachers, examining whether instruction focused on the statistical process and relating examples to teaching increased students’ conceptual understanding compared with the textbook-focused course. Students’ conceptual understanding was measured using the Levels of Conceptual Understanding of Statistics Test, as well as regular coursework. (Received September 26, 2017)