A Semester Project for Introduction to Statistics Using Student-Generated Data

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Abstract

As the world becomes more and more “quantitatively oriented,” knowledge of Statistics becomes vital for all college graduates. The number of students taking introductory statistics courses at community colleges has increased over the past decade. The American Statistical Association (ASA) has developed a framework for statistics education in K-12 as well as at the college level. This framework, the Guidelines for Assessment and Instruction in Statistics Education (GAISE) for colleges was published in 2010. In this article, we outline a project-based learning approach for a statistics course that has been conducted at Harford Community College (HCC) since the spring of 2012. We highlight specific characteristics that can be readily utilized in any introductory statistics class. The principal objective of this approach was the incorporation of GAISE precepts to create interest and promote involvement of students in data collection, presentation, analysis, and interpretation. The catalyst for this objective was using data that was generated by the students. Students were the drivers of the effort, and worked together in teams. They essentially taught themselves, with the instructors acting primarily as coaches and advisors. Survey results near the end of the course indicated that learning did occur, students’ interest were robust, their grades improved, and they had fun.

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