ENGAGING STUDENTS BY WORKING WITH REAL-LIFE SURVEY DATA CONCERNING COVID-19 PANDEMIC

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INTRODUCTION

Statistical activities that enable students to use a familiar context during analysis allow them to experience the value and relevance of grappling with data to explain the outcomes and patterns that emerge. Moreover, statistics classrooms that provide students with opportunities to learn from each other, understand important statistical ideas, practice communicating statistical language, and discuss and think about the context of problem they investigate will foster students' learning about statistics.

INCORPORTATION OF A RELEVANT COURSE PROJECT

Motivated by research in statistics education about the importance of the role of context in making sense of data and the positive effects of incorporating collaborative course projects into statistics courses for making a meaningful learning experience for students, we included a scaffolded semester-long collaborative data project in an intermediate statistics service course. Students in small groups worked on analyzing survey data collected from university students about their willingness to get the COVID-19 vaccine.

STUDENTS' PERCEPTIONS

Students' perceptions about statistics were collected at the beginning and end of the course. Our analysis of these quantitative data revealed that by the end of the course, on average, students had more positive perceptions about their feelings toward statistics, their competence in doing statistics, and the difficulty about the subject of statistics. Upon analyzing the qualitative responses, the following themes emerged: real life/relevance; practical/applied skills; communication; understanding; and scientific literacy. Students appreciated that the nature of the data was relevant to their real-life situations and the inferences made about the data were concerned with a similar university student population. They felt the course project supported their communication skills in statistics since they were actively engaged throughout the term discussing various aspects of the course project with their peers, enabling them to grow as a learner. They also expressed that the course project enabled them to stay motivated in the course as well as apply and transfer the skills they learned outside the course when they needed to make sense of scientific articles and communicate findings in their field of study.

CONCLUSION

Statistical problems that are presented within relatable contexts can encourage relevant questions for learners to investigate. We recommend that statistics educators consider developing an engaging collaborative learning experience and model the relevance of learning statistics to students' lives more broadly. The contextual approach to teaching statistics allows exploration of a variety of data familiar to the learners, enabling them to explain certain outcomes and patterns that emerge from data, to think beyond the data, and to critically question statistical information. Moreover, students will be empowered to recognize and understand wider issues pertaining to their everyday lives. Furthermore, we recommend that statistics educators focus on building a sociable class community that fosters statistical collaboration and communication among students since individual learning can be amplified through interactions with peers in collaborative learning environments. In doing this, students will be more likely to enjoy and put in the effort needed to learn statistics, will be more likely to realize the value, relevance, and worth of learning statistics, and will be more likely to use statistics after they leave their statistics course.

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