

STUDENTS IN NEED OF AN ATTITUDE ADJUSTMENT?

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Disgruntled looks and horrifying stories are the first reactions we usually get when telling others we teach statistics. Due to this fact, one goal of statistics educators is to get students to see the value in learning statistics in the hopes they might gain some appreciation. Thus, over the past three semesters (Spring 2013 – Spring 2014) we have developed and refined a set of assignments aimed at having a positive impact on the students' perceptions of statistics in our introductory statistics classes at Northern Kentucky University and Winona State University. These assignments include having students assess the validity of a headline in the news, applying course content knowledge to a real-world scenario, or having students perform an investigative task. Below is an example stem for each type of question:

“Home births give babies a good chance” was a headline in the NZ Herald in 1990. The article then went on to report that babies are twice as likely to die during or sooner after a hospital delivery, than those from a home birth. The report was based on a simple random sample of home births and hospital births. Does this mean hospitals are dangerous places to have babies in Australia?

Suppose you work for Adidas and have just developed a new type of running shoe. You conduct a pilot study to determine whether runners are satisfied with the product and find statistically significant evidence that they are. What would be the implications/consequences of having made a Type I Error in this situation?

Watch the 4 most talked about commercials that aired during the Super Bowl. What characteristics do you think made them the most talked about? If you were to create a commercial to air during the Super Bowl, what characteristics do you think it needs to contain so that people are talking about it days later?

A tool that was used to measure students' perception of statistics was the Survey of Attitudes Towards Statistics (SATS) © (Schau 2003). This survey helps to measure students' attitudes (at both the beginning and end of the semester) in six key areas: Affect, Cognitive Competence, Value, Interest, Difficulty, and Effort.

The research presented in this poster focuses on why and how the questions evolved over the three semesters.

REFERENCES

- Schau, Candace, and Esma Emmioğlu. “Do Introductory Statistics Courses in the United States Improve Students' Attitudes?” *Statistics Education Research Journal*, Vol. 1, 2 Nov 2012.
- Schau, C. (2003a). Survey of Attitudes Toward Statistics (SATS-36). [Online: <http://evaluationandstatistics.com/>]