Teaching statistics to undergraduate social science majors presents a number of challenges including making the material relevant to students from a variety of majors and keeping students actively engaged in the learning process.

In an attempt to help students realize the relevance of this course to their major(s), their future career(s) and their interactions with numerical data in their everyday lives.

In an attempt to increase student interest, engagement, and retention of the types of statistical knowledge and skills needed for students to be successful in their academic and professional careers. At Capital University, SOSCI 210 – Social Sciences Statistics is required for Athletic Training, Exercise Science, Criminology, Pre-Physical Therapy, Psychology, Social Work and Sociology majors. It also fulfills the General Education Quantitative Reasoning requirement of the university. During the fall 2011 semester, 93% of students enrolled in my two sections of this course reported taking the course to fulfill a major or general education requirement.

One of the goals of my course re-design was to create opportunities for students to appreciate the knowledge and skills (a psychology department learning goal) to their major(s), their future career(s) and their interactions with numerical data in their everyday lives. The following activities were designed to meet this goal.

### Why is statistics required for your major?

Universities and departments put a lot of time and thought into curricular design and have very clear reasons for each of their general education and major requirements. Despite this, it is clear that students are not always aware of the reasoning behind these requirements and often see the requirements as “boxes to check” on their way to getting their degree.

In an attempt to help students realize the relevance of this course to their major, I assigned the following brief writing activity during the first day of class:

The following are some typical student responses:

- So that I can understand the results of studies that I will have to do in future classes.
- So that I know how to figure out if an exercise program that I create is working for my client.
- So that I can understand the science behind the theories that we talk about in my other classes.

These responses reflect an appreciation for the knowledge and skills to be learned as well as the application and integration of the material.

### Statistics in Your Profession

In an attempt to help students realize the relevance of this course to their future professional careers, I assigned the following brief writing assignment during the fifth class meeting:

Students work on this assignment in groups with other students with the same major. After identifying the variable and measure of central tendency, each group presents their variable to the class.

The following are some examples of variables identified by students with different majors.

### Student Evaluations of Activities

On semester evaluations, in response to a prompt to indicate how helpful specific learning activities were in obtaining the learning objectives of the course:

- 57.70% of students indicated that the brief papers were either “somewhat helpful” or “very helpful.”
- 84.86% of students indicated that the newspaper activity was either “somewhat helpful” or “very helpful.”

Student evaluations of the overall quality of the course and the instructor as well as evaluations of how well the course met specific learning objectives are not yet available for the fall 2011 semester.

### Student Performance

Although the activities presented here represent a small subset of the changes made to the structure and content of this course, they likely played a part in the significant improvements in overall student performance seen this semester as compared to student performance in two sections of the class I taught last year.

On average, student exam grades were 6.72 points higher this semester than student exam grades from 2010-2011, (t75=2.23, p<.05).

Overall course grades were 10.02 points higher this semester than overall course grades from 2010-2011, (t75)=3.01, p<.01.