**Class Activities**

Chapter Five: Measures of Variability

Activity #1 (Group)

Have students do the following activity as a group:

In Class Activity #1 in Chapter Four, you worked as a group to collect data from a newspaper of your choice on the number of times that this newspaper reported on the Iraq War between your selected time frame.. Locate the data that you were instructed to save, and compute all appropriate measures of variability. Compare your results with other groups who collected data from other newspapers. What similarities and differences do you notice?

Activity #2 (Group or individual)

Have students do the following activity, individually or as a small group:

Take the data collected from Activities #2-3 in Chapter Four. Calculate the appropriate measures of variability for each of the variables you collected information on. Check your work by returning to the data that you entered into an SPSS datasheet, as you were instructed to save these data in the group exercises in Chapter Four. Use SPSS to compute the various measures of central tendency. Are these answers the same as those you calculated by hand? They should be. If not, revisit your work. Find any problem spots and redo your work.

Activity #3 (Group or individual)

Have students do the following activity, individually or in small groups:

Find a published U.S. Census report on the change in several variables of interest over time, such as the rate of violent crime, the percentage of Americans living in poverty, or unemployment rates. The *Statistical Abstracts of the United States* is one source for this information. Calculate the standard deviation for each data series (for example, if you had crime rates for each year from 2000-2007, you would have 8 data points, or 8 observations). Then answer the following questions:

a) Are the yearly changes generally greater or less than the standard deviation for each data series? What might this be telling you about the yearly fluctuations in the series? Why might one data series have less variability than others?

b) Compare your home state’s statistics with those from neighboring states. Did your state experience more or less fluctuation than other states? Why or why not? Explain the basis for your answer.

Activity #4 (Group)

Provide students with a handout of SPSS data that contains descriptive statistics on 3 scale variables. Ask students to get into groups of 3-4 and interpret the data. Next, provide students with a peer-reviewed research article that uses standard deviation or other measures of dispersion and have the students interpret the statistics within the context of an actual article. Students can understand measure of dispersion (or any statistic) in three ways: 1) by calculating it by hand as presented in the text, 2) by interpreting it from SPSS, and 3) by interpreting it from a research article. Each experience adds to the students’ understanding of how measures of dispersion are used and why they are helpful descriptive statistics.