MICROSOFT EXCEL VS SPSS IN AN INTRODUCTORY BUSINESS STATISTICS COURSE

Pam Boger
Ohio University, United States
boger@ohiou.edu

Statistics courses are “coming alive”. The days of merely introducing one analysis after another in a sterile environment are fading. Hands-on experience with real data is bringing life to the statistics classroom. Creating opportunities to work with data and explore analyses puts forth the question, “Which software package should we use?” Is Microsoft Excel the chosen software since it is on most laptops? How does it compare to a software program specifically designed for statistical analysis, such as SPSS?

Students in two classes of elementary business statistics participated in a study to compare the ease of creating and understanding the output produced by Excel and SPSS. Both classes completed the assignments using Excel, as well as SPSS, with the order of presentation counterbalanced between the two classes. Students recorded the time required to obtain an output using Excel and SPSS. Using a 5-point Likert scale, students rated the ease of use and ease of output interpretation for both SPSS and Excel. In addition, the students indicated which output was used to answer the assigned questions which accompanied each assignment and required output interpretation. The students were also encouraged to provide feedback regarding the use of the software as well as the clarity of the assignments. The final project for the students required them to analyze data using the analyses learned throughout the course. The students were required to complete their projects using SPSS or Excel; the student’s choice was recorded.

The four computer assignments completed by the students followed the sequence of topics in the textbook, Statistical Techniques in Business and Economics by Lind, Marchal and Mason. The first assignment was an introductory assignment designed to acquaint the student with the software. It consisted of obtaining descriptive statistics, creating graphs, transforming data to logarithms, and sorting data. The second assignment consisted of an independent t-test and a one-way ANOVA. Multiple regression, including dummy variables, was required for the third assignment. Finally, a Chi-Square Test of Independence was performed for the final assignment. As mentioned previously, all assignments were completed using SPSS and Microsoft Excel with the order of the software counterbalanced between the two classes.

The proposed poster will exhibit the results of our study. The outcomes will be displayed for each of the four assignments. Results will include descriptive statistics, results of a dependent t-test comparing times, and graphs.