Pre-Survey

Please indicate your ability to successfully perform each task by selecting a single number from one to seven that best describes your level of confidence. The phrases below the numbers (1 = No Confidence and 7 = Total Confidence) are only guides. You can use these numbers or any of the numbers in between to describe your level of confidence. We would like to know how confident you are that you can successfully perform these tasks today.

Part 1. Managing Data



1. Find and evaluate appropriate data sets for a research project.
2. Ensure data collection is reliable across trials, raters, or equipment.
3. Construct a plan for managing data files.
4. Organize data to store and analyze in a computer system.
5. Analyze data according to their level of measurement and the research design.
6. Provide direction to computer specialists or statisticians on how to handle missing data.

Part 2. Analyzing Data



1. Perform commonly used statistical tests, such as chi-square, t-test, analysis of variance, correlations, and multiple regression.
2. Perform commonly used estimation techniques, such as confidence intervals, effect sizes, and statistical power.
3. Avoid the violation of statistical assumptions.
4. Use programming languages such as R and Python to generate plots and graphic images.

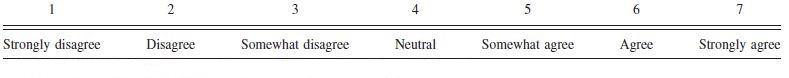
Part 3. Interpreting Data



1. Explain the outcome of given analysis in terms of the originally stated hypotheses or research questions.
2. Express appropriate methodological and theoretical cautions in interpreting results.
3. Identify limitations of a study.

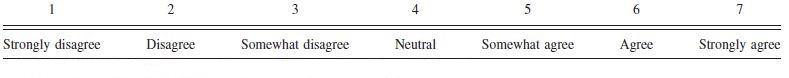
Post-Survey

Part 1. Please indicate the extent to which you agree with the following statements, using this scale:



1. The DataStory environment is a useful style of teaching and learning.
2. I would have learned the content better in a more traditional setting than through data stories.
3. The DataStory environment is inappropriate for graduate-level classes.
4. The style of this learning experience helped me learn data science.
5. Courses in other departments should use a DataStory approach to education.

Part 2. Please indicate the extent to which you agree with the following statements, using this scale:



1. A story-driven approach to instruction increased my interest in data science.
2. The narrative held my attention and enhanced my understanding of the content.
3. This learning experience was boring and did not motivate me.
4. I want to create a data story and feel empowered to do so.
5. Data stories are not for me.

Items in blue were derived from *Do they See it Coming? Using Expectancy Violation to Gauge Success of Pedagogical Reforms.*

Items in orange were taken from the *Clinical Research Appraisal Inventory*.