*Psych Labs:* Lexical Decisions Experiment

INFORMATION FOR INSTRUCTORS

**Purpose of This Project:** After completing this project, your students should have a better understanding of the difference between independent variables and dependent variables, as well as the use of t-tests to test the effect of an independent variable on a dependent variable. Your students will also gain some familiarity with the use of reaction time as an index of cognitive processing. This project also provides a good opportunity to review the concept of hemispheric specialization (the “divided brain”).

**Project Resources** **Page** — https://facultypsy.hope.edu/psychlabs/exp/lexical/resources.html

**Preparation for Data Collection**

1. Distribute the Lexical Decisions Data Sheet to each student. Tell students how they can access the link to the Lexical Decisions Experiment on the ***Psych Labs*** project website — https://facultypsy.hope.edu/psychlabs/exp/lexical/index.html

2. Establish a due date for completing the data collection and announce a date when the pooled results will be available.

3. Explain that students will receive their own individual results at the end of the experiment session. They should copy those results into the table on their data sheet and should then graph their performance on the top graph of the data sheet.

4. Explain that, when the pooled results become available, students should copy the group results for use in their own Lab Report and graph the pooled results on the bottom graph of the data sheet.

**Statistical Analysis:**  When data collection has ended, visit the project resources page and view the summary of results for the current semester, or download the full dataset in CSV format and perform the appropriate analyses. You will need to refer to the Data Codebook on the resources page. Remember to exclude data records with Course Section = 0.

**Background Readings:** Two readings (in PDF format) are available on the ***Psych Labs*** project website. One (Springer & Deutsch, 1998) is an excerpt from a book on hemispheric differences. The second is a research article (Waldie & Mosley, 2000) that used a lexical decision task. In addition, you should direct your students to read the appropriate material about hemispheric specialization (“divided brain” and “brain and language”) from the textbook you are using.

Springer, S., & Deutsch, G. (1998). *Left brain, right brain (5th Edition).* New York: Freeman.

Waldie, K. E., & Mosley, J. L. (2000). Hemispheric specialization for reading. *Brain and Language, 75,* 108-122.

**Instructions for Writing the Lab Report:** At your discretion, you may choose to have students write and submit a full typed lab report (using a report template document or a set of detailed instructions), or have students prepare a simpler lab report by filling in a worksheet. In either case, before they begin writing the report, they should have 1) the statistical results from the pooled survey data, 2) guidelines for the report from you in the form of a report template, detailed instructions, or a worksheet.