Intro to Psych
McMurray

Experimental Design Project

Due: Monday, September 15th

Psychologists use many different methods in their study of behavior and mental processes. One of the methods they use is the experiment. The biggest advantage of an experiment over other research methods is the ability to carefully control variables and determine cause and effect by comparing two groups.

For this project, you will do engage in *doing* psychology with your chosen partners! Your project is to design and describe an experiment using a question that you and your partner devise. In your answer you should formulate a hypothesis and include a description of each of the following:

A. HYPOTHESIS:
- What is a "**hypothesis**"?
- What is your hypothesis about the specific research topic above? Remember to write your hypothesis in the form of a statement.

B. SUBJECT SELECTION/SAMPLING:
- What is the **population** you are interested in studying?
- Who will be the **subjects** in your experiment? How will you choose them?
- How many subjects will you have and why is the number important?
- How will you avoid **sample bias**?

C. INDEPENDENT VARIABLE:
- Define the term "**independent variable**".
- What is the independent variable in your experiment?

D. DEPENDENT VARIABLE:
- Define the term "**dependent variable**".
- What is the dependent variable in your experiment?

E. EXPERIMENTAL GROUP:
- Define the term "**experimental group**".
- What is the experimental group in your experiment?
- Describe the treatment or procedure that this group will get.

F. CONTROL GROUP:
- Define the term "**control group**".
- What is the control group in your experiment?
- Explain how this group will be treated differently than your experimental group.

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G. <u>POTENTIAL CONFOUNDING VARIABLES:</u>

- Define the term "**extraneous variables**".
- Think of at least two extraneous variables and explain how they might potentially impact the results of your experiment.

H. <u>METHOD OF REDUCING EXPERIMENTAL BIAS</u>:

- Define the term "**experimental bias**".
- Describe at least one way that you would control experimental bias in your experiment.

Expectations and grading:

Hypothesis	• Explanation of a hypothesis is accurate • Hypothesis written as a statement • Hypothesis fits the research question	/2.5
Sample	• Population is clearly identified • Method of subject selection is clear • Sample bias is controlled	/2.5
Independent Variable	• Definition of IV is accurate • IV is clearly identified and suitable for the research question	/2.5
Dependent Variable	• Definition of DV is accurate • DV is clearly identified and suitable for the research question	/2.5
Experimental Group	• Definition of Exp. Group Is accurate • Exp. Group is clearly identified • The treatment for Exp. is clearly explained	/2.5
Control Group	• Definition of Control Group Is accurate • Control Group is clearly identified • The difference between treatment in the Exp. Group and Control Group is clearly explained	/2.5
Extraneous Variables	• Definition of Ext. Variables is accurate • Two Ext Variables are identified • Potential impact clearly explained	/2.5
Experimental Bias	• Definition of Exp. Bias is accurate • Identified one method of control	/2.5
Description and Design	• Experiment is clearly described • Method fits the research question	/2.5
Form and Style	• Proofread-free of grammatical and spelling errors • Typed and double-spaced	/2.5
Total		**/25**