

Assignment 2 – Understanding Research Design & Measurement **(/30 marks)**

Submission Format

Your submission should not exceed 3-4 pages in length.

Ensure that you organize your responses by article type (non-experimental, experimental) and clearly number your responses so graders know what question you are answering at all times. As a general rule, use the number of marks allotted to each question as a guide for how much information you should include. Your responses should be succinct but clear; point form answers are certainly acceptable so long as you are able to clearly convey your meaning in that format.

Once complete, you will need to upload a final PDF document through eClass under “Assignment 2”.

Assignment Learning Outcomes

1. Use online databases to locate and obtain electronic copies of research articles
2. Create APA style citations for research articles
3. Synthesize information about an article’s purpose and research question(s)
4. Identify details about different research designs from real research examples
5. Propose new approaches to designing a research study based on real research examples

Instructions

From the lists of articles on below, choose **two** -- **one** from the **non-experimental** list, and **one** from the **experimental** list. You will need to locate and download copies of each article and then answer the questions listed on pages 2-3 for each respective article you select.

(Hint: make sure you are answering the non-experimental questions for the non-experimental article, and the experimental questions for the experimental article, see page 2-3 for questions).

For ease of grading, please organize your assignment into two clear sections, one for each article, and number all your responses based on the corresponding question you are answering.

Choose 1 of these Non-experimental Articles

“An Active-learning Approach to Fostering Understanding of Research Methods in Large Classes” by Jennifer Lacosse, Sarah E. Ainsworth, Melissa A. Shepherd, Michael Ent, Kelly M. Klein, Lauren A. Holland-Carter, Justin H. Moss, Mark Licht, and Barbara Licht. *Teaching of Psychology*, Volume 44, Issue 2, 2017

This article compares two approaches to teaching a research methods class in psychology, and the impact to students’ learning.

“Biases in Attention for Social Stimuli in Children are Associated with Patterns of Infant Attachment: A Brief Report” by Paul Meinz, J. Bruce Morton, David R. Pederson, and Greg Moran. *Social Development*, Volume 26, Issue 1, 2017

This article explores the relationships between infant attachment behaviours and 7-8 year old children’s attention to social stimuli.

“Maternal Sensitivity During the First 3 ½ Years of Life Predicts Electrophysiological Responding to and Cognitive Appraisals of Infant Crying at Midlife” by Jodi Martin, Jacob E. Anderson, Ashley M. Groh, Theodore E. A. Waters, Ethan Young, William F. Johnson, Jessica L. Shankman, Jami Eller, Cory Fleck, Ryan D. Steele, Elizabeth A. Carlson, Jeffrey A. Simpson, and Glenn I. Roisman, *Developmental Psychology*, Volume 54, Issue 10, 2018

This article is a longitudinal study that examines the influence of individuals' early childhood experiences on their reactions to infant crying at age 39 years.

“Are People Attracted to Others Who Resemble Their Opposite-sex Parents? An Examination of Mate Preferences and Parental Ethnicity Among Biracial Individuals” by Marie E. Heffernan, Jia Y. Chong, and R. Chris Fraley. *Social Psychological and Personality Science*, Volume 10, Issue 7, 2019.

This article tests the common assumption that people tend to be attracted to potential romantic partners who resemble their opposite-sex parent.

Choose 1 of these Experimental Articles

“Emotional and Behavioural Effects of Participating in an Online Study of Non-suicidal Self-injury: An Experimental Analysis” by Jennifer J. Muehlenkamp, Lance P. Swenson, Kristen L. Batejan, and Stephanie M. Jarvi. *Clinical Psychological Science*, Volume 3, Issue 1, 2015

This article explores the potential negative effects of participating in online research about non-suicidal self-injury.

“Active Learning in Research Methods Classes is Associated with Higher Knowledge and Confidence, though not Evaluations or Satisfaction” by Peter J. Allen and Frank D. Baughman. *Frontiers in Psychology*, Volume 7, 2016

This article compares two approaches to teaching a research methods class in psychology, and the impact to students' learning and experience.

“Pain as Social Glue: Shared Pain Increases Cooperation” by Brock Bastian, Jolanda Jetton, and Laura J. Ferris. *Psychological Science*, Volume 25, Issue 11, 2014

This article makes comparisons of interpersonal relationship building across pain vs. no pain conditions.

“Rational Snacking: Young children's Decision-making on the Marshmallow Task is Moderated by Beliefs about Environmental Reliability” by Celeste Kidd, Holly Palmeri, and Richard N. Aslin. *Cognition*, Volume 126, 2013

This article examines how environmental variations of reliability influence children's delay of gratification abilities.

Non-experimental Article Questions (15 marks)

Your answers to questions 1 thru 5 for each article will be graded for accuracy; your answers to questions 6 and 7 for each article will be graded based on the rubric provided on page 4 below.

1. What is the APA citation for this article? **(1 mark)**
2. Briefly (in 3-4 sentences maximum) summarize the study's general aim, research question(s) or purpose, and identify the main study variables (i.e., the ones that are of most interest to the researcher as per their question(s)/hypothesis(es), not potential confounding variables or control variables that may have also been included) **(2 marks)**

3. How was each main variable measured? Make sure you indicate the *type of measure* that was used (self-report, behavioural, physiological) as well as stating/naming the exact measure used in your answer. **(2 marks)**
4. For each main variable's measurement approach, what support does the research provide for the measure's reliability *and* validity? **(2 marks)**
5. Identify the type of non-experimental approach used in this study. (e.g., survey/self-report, case study, quasi-experimental, observational, some combination, etc.) **(1 mark)**
6. This is where you get to be creative! Consider the general aim or goal of this research study and propose a new way that you could design a research study to pursue this general aim or goal. This could include a swap to an experimental design (if appropriate given the nature of the question and variables under study), changes to the measurement approach, changes to sampling procedure, or any combination thereof, etc., so long as it is somehow different from the original design in the article. Your response will be graded based on the rubric on page 4. **(5 marks)**
7. Briefly describe one advantage and one disadvantage of the new study design you have proposed to conduct the study compared to the original design. Your response will be graded based on the rubric on page 5. **(2 marks)**

Experimental Article Questions (15 marks)

Your answers to questions 1 thru 5 for each article will be graded for accuracy; your answers to questions 6 and 7 for each article will be graded based on the rubric provided on page 4 below.

1. What is the APA citation for this article? **(1 mark)**
2. Briefly (in 3-4 sentences maximum) summarize the study's general aim, research question(s) or purpose **(1 mark)**
3. What are the IV(s) and DV(s) in this study? **(2 marks)**
4. How were the IV(s) and DV(s) measured? **(2 marks)**
 - a. For the IV(s) it is ok to simply state the different levels of the variable.
 - b. For the DV(s) make sure you indicate the type of measure (self-report, behavioural, physiological) as well as a brief description of the exact measure used in your response.
5. Was this a between-subjects or within-subjects experimental design? Explain your reasoning. **(2 marks)**
6. This is where you get to be creative! Consider the general aim or goal of this research study and propose a new way that you could design a research study to pursue this same general aim or goal. This could include a swap to a non-experimental design, changes to the measurement approach, etc., so long as it is somehow different from the original design in the article. Your response will be graded based on the rubric on page 4. **(5 marks)**
7. Describe one advantage and one disadvantage of the alternative way you have proposed to conduct the study compared to the original design. Your response will be graded based on the rubric on page 5. **(2 marks)**

Grading Rubric for Questions 6 and 7

(Note: the same rubric will be used to grade your answers regarding the non-experimental article and the experimental article)

	Exceptional (90-100%)	High Quality (80-89%)	Acceptable (50-79%)	Below Expectations (below 50%)
Proposed new methodology <i>(#6, /5 marks)</i>	<p>The new methods proposed are appropriate given the nature of the variables and research question. The new methods are clearly and succinctly described in sufficient detail that the reader has a full understanding of how the data would be collected. These methods represent a clear and obvious change from the original study design (i.e., entirely new measures proposed, change in overall design if appropriate, etc.).</p>	<p>The new methods proposed are appropriate given the nature of the variables and research question. They are described in some detail, but some information is lacking that makes the new data collection process a bit unclear. The methods represent a moderate change from the original study design (i.e., change to multiple measures, or change to overall design if appropriate, etc.).</p>	<p>The new methods proposed may partly inappropriate, given the nature of the variables and research question. Alternatively, the new methods may be appropriate, but the description is lacking in detail such that the reader cannot envision data collection process. The new methods may also be only a very minor change from the original study design (i.e., only change in some measures, etc.).</p>	<p>The new methods proposed are inappropriate given the nature of the variables and research question. Or, extreme lack of clarity in description of methods makes the reader unable to understand the data collection process.</p>
Advantage & disadvantage <i>(#7, /2 marks)</i>	<p>Advantage & disadvantage are clearly, succinctly, and accurately outlined. They are specific to the proposed methodological changes, and logically thought-out.</p>	<p>Advantage & disadvantage are accurate for the given methodological changes. They are stated clearly but may less insightful than in the exceptional rating.</p>	<p>Advantage & disadvantage are mostly accurate for the given methodological changes. However, they are stated generally rather than specific to the methodology proposed.</p>	<p>Advantage & disadvantage are inaccurate for the methodological changes proposed, or missing entirely.</p>