

EXPERIMENTAL PSYCHOLOGY: GENERAL PSYCH 25000 — Credit Hours: 4.0

LESSON PLAN:

Thinking Critically about Scientific Representation in the Media
2 Hour Lesson

INSTRUCTORS:

Katie Willgoths & Stacey Morales

Prior to Class:

N/A — Students will be working on their Paper 1: Squirrel Behavior Lab outside of class.

Relevant Course Learning Objectives:

- [LO1] Think like a researcher by using evidence to assess the accuracy of claims that you encounter in daily life.
- [LO5] Demonstrate collaborative skills that go beyond the classroom and will be useful throughout your life, such as navigating peer feedback, working as a group to solve problems, engaging in debates using scientific evidence, and presenting shared projects with peers.

Lesson Learning Objectives:

By the end of this class period, students will be able to:

- distinguish between legitimate journalism and disinformation in popular press
- explain how scientific journalism can be represented both accurately and inaccurately
- identify and explain the sections of a research study and their components

Description/Resources to be posted on Brightspace

During today's activity, we will think critically about how science is represented in popular media sources by evaluating the way a scientific journal article is represented in a popular media article. More specifically, we will examine how the scientific journal article "Long-term analysis of a psychoeducational course on university students' mental well-being" by Hobbs and colleagues (2024), published in *Higher Education*, is represented in the popular media article, "Seven scientifically proven ways to help you improve your happiness - full list" by journalist Graeme Murray, reported in *The Mirror*. <https://www.mirror.co.uk/news/health/seven-scientifically-proven-ways-help-32434991>

You will be split into four groups and use a Google Form to fill out questions for your assigned section. Please use the links below to access these materials:

- Scientific Journal Article: [Hobbs et al. \(2024\)](#)

Hobbs, C., Jelbert, S., Santos, L. R., & Hood, B. (2024). Long-term analysis of a psychoeducational course on university students' mental well-being. *Higher Education*, 1-13. <https://doi.org/10.1007/s10734-024-01202-4>

- Popular Media Article: [Murray \(2024\)](https://www.mirror.co.uk/news/health/seven-scientifically-proven-ways-help-32434991) . <https://www.mirror.co.uk/news/health/seven-scientifically-proven-ways-help-32434991>

Murray, G. (2024, March 30). Seven scientifically proven ways to help you improve your happiness - full list. *Mirror*. <https://www.mirror.co.uk/news/health/seven-scientifically-proven-ways-help-32434991>

- [Google Form](#)

Teaching Plan:

- Mindfulness Activity (2-minutes)
 - Body Scan:
 - Scan body for pain, tension, or anything out of the ordinary. Take a deep breath.
- Warm-Up Activity (10-minutes)
 - Minute Paper — How is science represented in the popular media?
 - Think-Pair-Share
- Review Scientific Journal Article Abstract (20-minutes)
 - As a class, review abstract of Hobbs et al. (2024)
 - Ask students to circle unfamiliar or confusing words individually
 - (e.g., *psychoeducational, positive psychology, well-being, sampling bias, provision, mechanisms*)
 - Ask students to summarize abstract in their own words individually
 - (e.g., *this paper examines whether undergraduate students who took a positive psychology class experienced higher levels of happiness than their peers*)
 - Ask students to input unfamiliar words into a word cloud generator so that it remains anonymous, e.g., <https://www.wordclouds.com/>
 - Discuss potential definitions and explanations of these words.
 - Breakdown the article together by asking students to share their summaries.
- Breakout Group Activity (60-minutes)
 - Students count-off by fours and get into groups; assign each group a research section:
 - Group 1: Background Information
 - Group 2: Methodology
 - Group 3: Results
 - Group 4: Discussion
 - Groups investigate how the information in their assigned section from the scientific journal article is represented in the popular media article.
 - Each group answers four leading questions in Google Form to assist their investigation.
 - Groups can move on to another section if they finish early.
- Class Discussion with Answers Written on Board (25-minutes)
 - Project answers from Google Form to whiteboard for easy discussion.
 - Each group shares their findings about their respective sections with the class.
 - As a class, discuss:
 - Do you think this scientific research was correctly represented in the media?
 - How can we, as a society (including researchers and media), work to represent science more accurately? Answers may include:

- Make science more easily accessible by committing to publish in open-access journals (available free of charge without restrictions or other barriers)
- Share a 'press-release' that minimizes the use of scientific jargon in conjunction with article publication
- As researchers, have a willingness to connect with interviewers, and as interviewers, make a commitment to include comments from the authors.
- Review Homework Expectations (3-minutes)

Homework

Continue working on your final submission for Paper 1: Squirrel Behavior Lab. Remember to use feedback from peers and professors while revising. Submit the final draft on Brightspace by Sunday, October 14, 2024, at 11:59pm, as a document (.doc or .docx) using APA formatting.

CONTENT OF GOOGLE FORM

During today's activity, you will be asked to think critically about how science is represented in popular media sources by evaluating the way a scientific journal article is represented in a popular media article.

For this activity, you will examine how the scientific journal article "[Long-term analysis of a psychoeducational course on university students' mental well-being](#)" by Hobbs and colleagues (2024), published in *Higher Education*, is represented in the a popular media article, "[Seven scientifically proven ways to help you improve your happiness - full list](#)" by journalist Graeme Murray, reported in *Mirror*.

Click on the blue hyperlinks above to access each article.

Using this Google Form, each group will be asked to answer four questions for their section. Please elect someone in your group to write and submit your answers in this form. Only one person per group needs to submit it.

By the end of today's class, you will be able to:

- *distinguish between legitimate journalism and disinformation in popular press*
 - *explain how scientific journalism can be represented both accurately and inaccurately*
 - *identify and explain the sections of a research study and their components*
1. Group member names (first and last for each)
 2. Please select your assigned section to access your group's questions:
 - Group 1: Background Information
 - Group 2: Methodologies
 - Group 3: Results
 - Group 4: Implications

Article Citations:

- Hobbs, C., Jelbert, S., Santos, L. R., & Hood, B. (2024). Long-term analysis of a psychoeducational course on university students' mental well-being. *Higher Education*, 1-13.
<https://doi.org/10.1007/s10734-024-01202-4>
- Murray, G. (2024, March 30). Seven scientifically proven ways to help you improve your happiness - full list. *Mirror*. <https://www.mirror.co.uk/news/health/seven-scientifically-proven-ways-help-32434991>

REPRESENTATION OF BACKGROUND INFORMATION

To evaluate how the media article represents relevant background information discussed in Hobbs et al. (2024), please answer the questions below. To do this, please read Hobbs et al. (2024) first, then try to find the information in *The Mirror*.

Please answer your group's questions as thoroughly and as clearly as possible. Responses to this form will be projected on the board following the activity for a class discussion.

1. Reference Hobbs et al. (2024), please write down relevant information (such as which journal the study was published in, the name and affiliation of the authors, any funding support). Is this information included in *The Mirror*?
2. Read the abstract and introduction of Hobbs et al. (2024). In your own words, provide a summary of the background information discussed. Does *The Mirror* include this information?
3. What did Hobbs et al. (2024) hypothesize? Does *The Mirror* article clearly state the study's hypothesis/es?
4. Overall, do you think that the popular media article accurately explains why this study is important?
 - Yes
 - No

REPRESENTATION OF METHODOLOGIES

To evaluate how the media article represents the methodology used in Hobbs et al. (2024), please answer the questions below. To do this, please read Hobbs et al. (2024) first, then try to find the information in *The Mirror*.

Please answer your group's questions as thoroughly and as clearly as possible. Responses to this form will be projected on the board following the activity for a class discussion.

1. Locate the participants section of the methodology of Hobbs et al. (2024). In your own words, describe their characteristics (include number, age, gender, and who they are). Now compare this to the information provided in *The Mirror*? Is it accurate? What is missing?
2. What are the independent and dependent variables in this study? Read the methods section and identify them. Remember the independent variables are often thought of as the "cause" and the dependent variable measures its effect. Are these accurately described in the media article?
3. According to Hobbs et al. (2024), what is the experimental manipulation? Is it accurately described in the media article?

4. Overall, do you think the popular media article accurately describes the methodologies used?
 - Yes
 - No

REPRESENTATION OF RESULTS

To evaluate how the media article represents the results of Hobbs et al. (2024), please answer the questions below. To do this, please read Hobbs et al. (2024) first, then try to find the information in *The Mirror*.

Please answer your group's questions as thoroughly and as clearly as possible. Responses to this form will be projected on the board following the activity for a class discussion.

1. Identify the analysis used in Hobbs et al. (2024). Does *The Mirror* describe the analyses that were used to evaluate data? If so, is the description accurate?
2. What are the main results of Hobbs et al. (2024)? Please read the abstract/discussion and results section. Were the hypotheses supported? Does the media article accurately convey this info?
3. Does the title of the popular media article correctly represent the findings of the original article? Is it appropriate?
4. Overall, do you think the popular media article accurately shares the results of the study?
 - Yes
 - No

REPRESENTATION OF IMPLICATIONS

To evaluate how the media article represents the implications of the results of Hobbs et al. (2024), please answer the questions below. To do this, please read Hobbs et al. (2024) first, then try to find the information in *The Mirror*.

Please answer your group's questions as thoroughly and as clearly as possible. Responses to this form will be projected on the board following the activity for a class discussion.

1. Read the abstract and the discussion section of Hobbs et al. (2024). What do the study authors describe as limitations of the study? Write these in your own words. Are these limitations mentioned in *The Mirror*?
2. Read the abstract and the discussion section of Hobbs et al. (2024). What do the study authors describe as potential directions for future research? Write these in your own words. Are these future directions mentioned in *The Mirror*?
3. Read the abstract and the discussion section of Hobbs et al. (2024). What do the study authors describe as potential impacts of this research on society? Write these in your own words. Are these impacts mentioned in *The Mirror*?
4. Overall, do you think the popular media article accurately describes the implications of the study (i.e., how the findings of this study influence society)?
 - Yes
 - No