

Scientific Literacy in a Psychology Curriculum Module

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Table of Contents

[Analyzing Media Reports of Psychological Research 3](#_Toc360008351)

[Designing an Observational Study 4](#_Toc360008352)

[Designing an Experimental Study 5](#_Toc360008353)

[Designing a Survey Study 6](#_Toc360008354)

[Designing a Qualitative Study 7](#_Toc360008355)

[Analyzing Research Methods in Media Reports of Psychological Research 8](#_Toc360008356)

[Guidelines for Evaluating the Credibility of Sources 9](#_Toc360008357)

[APA Citation Style Exercise 11](#_Toc360008358)

[Plagiarism Activity 14](#_Toc360008359)

[Finding Information – Scavenger Hunt 17](#_Toc360008360)

[Research Report Search 21](#_Toc360008361)

[Research Report Search – Version 2 24](#_Toc360008362)

[Scientific Writing Comparison 27](#_Toc360008363)

[Research Report Search – Version 3 29](#_Toc360008364)

[Media Report & Research Methods Comparison 32](#_Toc360008365)

[Module Rubric 33](#_Toc360008366)

# Analyzing Media Reports of Psychological Research

Answer the following questions using the assigned article.

1. What are the steps of the scientific method?
2. Summarize the article in a couple of sentences – what did the researchers do and what did they conclude?
3. Based upon this media report, do you believe the researchers followed the scientific method in conducting this research? Why/why not?
4. Do you believe the reporter has written a credible summary of this research study? Why/why not?
5. What is the title of this media report?
6. Who wrote this media report?
7. Where was this media report published?
8. When was this media report published?

# Designing an Observational Study

Imagine you are a psychologist. You hypothesize that students who study with peers learn better than students who study individually. You need to create an observational study to test your hypothesis. Design a study by answering the following questions:

1. Define your population -- who are the students you are interested in studying? Elementary school students, college students, etc.
2. How will you collect a sample of students?
3. How will you know if students who study with peers are studying more effectively than students who are studying alone?
4. How will you observe students studying with peers?
5. How will you observe students studying alone?

# Designing an Experimental Study

Imagine you are a psychologist. You hypothesize that students who study with peers learn better than students who study individually. You need to create an experimental study to test your hypothesis. An experiment has a dependent variable (what you measure) and an independent variable (what you manipulate). Design an experimental study by answering the following questions:

1. Define your population -- who are the students you are interested in studying? Elementary school students, college students, etc.
2. How will you collect a sample of students?
3. How will you know if students who study with peers are studying more effectively than students who are studying alone? Will students take an exam, report how much they think they learned, etc.? (This is your dependent variable, it is what you are measuring.)
4. How will you manipulate studying alone and studying with peers? What experimental conditions, or groups, will you create?
5. How will you assign students to the conditions/groups?

# Designing a Survey Study

Imagine you are a psychologist. You hypothesize that students who study with peers learn better than students who study individually. You need to create a survey and collect survey data to test your hypothesis. Design a survey and a study by answering the following questions:

1. Define your population -- who are the students you are interested in studying? Elementary school students, college students, etc.
2. How will distribute your survey to students?
3. What are two questions you can ask about students’ habits regarding their studying with peers and studying alone?
4. What are two questions you ask about how well students have learned after studying with peers and studying alone?
5. What are two demographic questions (questions about the student) you could ask?

# Designing a Qualitative Study

Imagine you are a psychologist. You hypothesize that students who study with peers learn better than students who study individually. You need to conduct a qualitative study to test this hypothesis. Qualitative research focuses on capturing participants’ experiences – not on collecting numerical data. Open-ended questions are asked, which means that there are no response options and no right/wrong answers. Design a qualitative study by answering the following questions:

1. Define your population -- who are the students you are interested in studying? Elementary school students, college students, etc.
2. How will you collect a sample of students?
3. What method will you use to capture students’ experiences – survey, interview, focus group?
4. What are two open-ended questions you can ask about students’ habits regarding their studying with peers and studying alone?
5. What are two open-ended questions you ask about how well students have learned after studying with peers and studying alone?

# Analyzing Research Methods in Media Reports of Psychological Research

Answer the following questions using the assigned article.

1. What was the research study about – what did the researchers conclude?
2. Do you believe the reporter has written a credible summary of this research study? Why/why not?.
3. What research method did the researchers use?
4. Who was the population?
5. Who was in the sample?
6. What materials were used to collect data?
7. List at least two questions you have about this research study or the results.
8. What is another method researchers could use to determine how age at first sexual intercourse is related to/affects happiness in future relationships? State your hypothesis, population, sample and describe materials you might use.

# Guidelines for Evaluating the Credibility of Sources

Use the internet to find the answers to these questions. Some of the information may be difficult to find, as secondary research reports do not always include an author, or the author’s name might be common. Websites that end in .org, .edu, and .gov tend to be more credible than sources that end in .com; however, this is not always true. Often the less information that is available, the less credible your source may be.

Source

* Who is the author of the media report? What is this person’s background, what credentials or education does she or he hold, and what articles has she or he written previously and for whom?
* Who conducted the study that is summarized in this media report? What is this person’s background, what credentials or education does she or he hold, and what articles has she or he written previously and for whom?

Quality

* Is the method of the research study clearly described, including the sample included in the study?
* Are statements of fact supported with documented evidence and sources that are authoritative?
* What is the goal of this media report? Are there any links in the report to consumable goods or services?
* Does the reporter make assumptions and draw conclusions based upon the research study? Do they appear to be valid and based upon scientific rigor?
* Does the author of the media report suggest that the audience take action as a result of the research study?
* Does the media report contain objective language that is formal, free of bias, and free of colloquialisms?
* Is the media report clearly written, well organized, and free of spelling and grammar errors?

Frantz, P. (2012). Critical evaluation of information sources [Library guide]. Retrieved from <http://libweb.uoregon.edu/guides/findarticles/credibility.html>

# APA Citation Style Exercise

1. Given the following information, create an APA style reference citation for an empirical research article.

Title of the article: Sexuality and exercise motivations: Are gay men and heterosexual women most likely to be motivated by concern about weight and appearance?

Title of the journal: Sex Roles

Authors: Sarah Grogan, Mark Conner, and Helen Smithson

Year article published: 2006

Volume: 55

Pages: 567-572

1. Revise the sentences below, including an in-text citation in which the authors are cited in parentheses. The authors of the article are Grogan, Conner and Smithson as described in #1 above.

Researchers conducted a study to investigate whether sexual orientation impacts motivations to exercise. The researchers hypothesized that gay men and heterosexual women would be more likely to be motivated to exercise for appearance reasons.

1. Revise the sentences below, including an in-text citation where the authors’ names are used as part of the sentence. The authors of the article are Grogan, Conner and Smithson as described in #1 above.

Analyses indicated that compared to heterosexual men, gay men exercised less frequently, were more likely to exercise for appearance reasons, and were less likely to exercise for enjoyment or competition. Heterosexual women were more likely to exercise to control weight than both heterosexual and gay men. There were no differences between heterosexual and lesbian women on motivations to exercise or frequency of exercise.

1. Given the following information, create an APA style reference citation for an empirical research article.

Title of the article: To hook up or date: Which gender benefits?

Title of the journal: Sex Roles

Authors: Carolyn Bradshaw, Arnold S. Kahn, Bryan K. Saville

Year article published: 2010

Volume: 62

Pages: 661-669

1. Revise the sentences below, using “et al.” in an in-text citation (either in parentheses or as part of the sentence). The authors are Bradshaw, Kahn, and Saville as described in #4 above.

In this study, researchers investigated the perceived risks and benefits to dating versus hooking up among heterosexual college students. Typically, dating is seen as more risky and stressful for men than hooking up. Women play a more passive role in dating and traditionally experience more benefits and less stress compared to men. Men tend to experience more benefits from hooking up than women. Therefore, the authors hypothesized that women would be more likely to choose dating over hooking up, especially when there is the possibility for a relationship. Men would be more likely to choose hooking up over dating when given the choice.

1. Given the quote below, revise the sentences below the quote so that your version includes a quote from the actual article.

Quote from page 668: “Although women and men checked similar benefits and risks for both the traditional date and for hooking up, women more than men perceived that, in dating, a woman risked losing a friendship and being more interested in her partner than he was in her.”

Results of the surveys showed that women were more likely to prefer dating over hooking up compared to men. If women and men were under the impression that they could form a long-term relationship with an individual, then both women and men preferred dating over hooking up.

1. Given the following information, create an APA style reference citation for a news article without an author from a magazine, retrieved online. Note that this article was retrieved from the online magazine and not the print magazine (APA style is different for each).

Title of the article: People More Likely to Guzzle Beer Served in Curved Glasses

Title of the magazine: US News & World Reports

Author: None given

Posted: September 4, 2012

Website: <http://health.usnews.com/health-news/news/articles/2012/09/04/people-more-likely-to-guzzle-beer-served-in-curved-glasses>

# Plagiarism Activity

Read the abstract below and then the example paraphrases below. Decide whether each one is plagiarism or not and state your reasoning.

Lesch, M. F., & Hancock, P. A. (2004). Driving performance during concurrent cell-phone use: Are drivers aware of their performance decrements? *Accident Analysis & Prevention, 36*, 471-480.

Prior research has documented the manner in which a variety of driving performance measures are impacted by concurrent cell-phone use as well as the influence of age and gender of the driver. This current study examined the extent to which different driver groups are aware of their associated performance decrements. Subjects' confidence in dealing with distractors while driving and their ratings of task performance and demand were compared with their actual driving performance in the presence of a cell-phone task. While high confidence ratings appeared to be predictive of better driving performance for male drivers (as confidence increased, the size of the distraction effects decreased), this relationship did not hold for females; in fact, for older females, as confidence increased, performance decreased. Additionally, when drivers were matched in terms of confidence level, brake responses of older females were slowed to a much greater extent (0.38 s) than were brake responses of any other group (0.10s for younger males and females and 0.07 s for older males). Finally, females also rated the driving task as less demanding than males, even though their performance was more greatly affected by distraction. These results suggest that many drivers may not be aware of their decreased performance while using cell-phones and that it may be particularly important to target educational campaigns on driver distraction towards female drivers for whom there tended to be a greater discrepancy between driver perceptions and actual performance.

Example 1:

This current study examined the extent to which different driver groups are aware of their associated performance decrements. Subjects’ confidence in dealing with distractors while driving and their ratings of task performance and demand were compared with their actual driving performance in the presence of a cell-phone task (Lesch & Hancock, 2004).

What, if anything, is wrong?

Example 2:

“This current study examined the extent to which different driver groups are aware of their associated performance decrements. Subjects’ confidence in dealing with distractors while driving and their ratings of task performance and demand were compared with their actual driving performance in the presence of a cell-phone task” (Lesch & Hancock, 2004, p. 471).

What, if anything, is wrong?

Example 3:

This current study looked at associated performance decrements for different driver groups. The drivers’ actual driving performance in the presence of a cell-phone task was compared with their confidence in dealing with distractors while driving and their ratings of task performance and demand (Lesch & Hancock, 2004).

What, if anything, is wrong?

Example 4:

This study examined how different driver groups were aware of their associated performance decrements. The actual driving performance with the presence of a cell-phone task was looked at in comparison to the drivers’ confidence rating in dealing with distractors (Lesch & Hancock, 2004).

What, if anything, is wrong?

Example 5:

This study examined how aware people were of their driving performance both with and without the added distraction of a cell phone (Lesch & Hancock, 2004). The researchers also looked at if age or gender had any impact on driving performance. Men, of all ages, who were more confident in their ability to deal with distraction were found to be better drivers. Inversely, older women who said they were confident in dealing with distraction were actually less competent drivers. The researchers compared the reaction times for drivers with the same confidence ratings and found that older women had the slowest brake times compared to any other group. Women also thought that the test was easier than men did. The results tell us that the use of a cell phone while driving may be more distracting than people realize.

What, if anything, is wrong?

# Finding Information – Scavenger Hunt

PsycINFO

1. Imagine that you hypothesize that teachers influence the grades that students earn. Begin your advanced search by typing **grades** and **teacher** into the search boxes. Uncheck the box “suggest search terms” if it is automatically checked. Enter “grades” in the top box and “teacher” in the box below it so they are connected by **and.**  How many results did you find? Skim the titles (in blue font) and see if any of the results might fit your topic.
2. Begin to narrow your topic and your search. Select only peer-reviewed articles, written in English, and articles that describe empirical studies. Change the field term next to “grades” and “teacher” so that PsycINFO searches for grades and teacher as subject headings/keyword identifiers. How many results did you find? Skim the titles (in blue font) and see if any of the results might fit your topic. Click on an article that looks like it might be relevant and read the abstract and the subject terms below the abstract. What subject terms might help you narrow your search further?
3. Modify the search terms (keeping the criteria [peer-reviewed, empirical & English] as described above) to **academic achievement** and **teacher attitude.** How many results did you find? Skim the titles (in blue font) and see if any of the results might fit your topic.
4. Click on the title of an article that looks like it might be related. Read the abstract and then scan down the screen to read the words listed under Subject. Based upon what you see there, what additional keywords could you use to help you modify your search?
5. Try the search again; this time enter **academic achievement** and **teacher expectation.**  How many results did you find? What does clarifying your key terms and adding key terms do to your search results?
6. Start a new search, this time looking at whether individuals who see someone model aggressive behavior, perform that behavior themselves. Enter **aggression** and **modeling** as subject/keyword identifiers**.** Keep the limitations of peer-reviewed, empirical study, and English. How many results did you find?
7. Try the search again, Enter in **aggress\*** and **model\*.**  How many results did you find? What does adding an asterisk (\*) to the end of a word do to your search?
8. Clear the keywords out of the search boxes. Keep the limitations of peer-reviewed, empirical study, and English. In the search boxes, type in **Bandura** and then change the field term that is searched to “Author.” What do you find?
9. Click on an abstract that looks like it might have information relevant to a research report on aggression and modeling. After reading the abstract, scroll to the bottom of the page and read the titles listed under **References**. See if there are any additional sources listed that might be relevant. Find at least one, click on **Abstract** and then copy and paste the title of that article and the abstract here:

Google Scholar (<http://scholar.google.com>)

1. Imagine you’re interested in learning more about the accuracy of eyewitness testimony. Go to Google Scholar and type in the keywords **memory** and **eyewitness**. How many results did you find? Skim the titles and see if any of the results might fit your topic.
2. Try again, this time using **and** to connect your keywords. How many results did you find? Skim the titles and see if any of the results might fit your topic.
3. Add the words **and** **testimony** after eyewitness and see how many results you find.
4. In the search box at the top of the page, click on the down arrow. In the box that says “without the words,” type in **children** and do the search again. How many results did you find? Skim the titles and see if any of the results might fit your topic.
5. Do another advanced search; this time in the box marked “return articles authored by” enter **Loftus.** How many results did you find? Skim the titles and see if any of the results might fit your topic.
6. Click on a title that looks like it might have relevant information. After reading the abstract and determining whether the article or book is relevant, type the reference below in APA style and copy and paste the abstract here:
7. Go to your library website and do a search for the title of the book or the journal in which the article was published. Does the library own that resource? If so, copy and paste the location of the resource below. If it is not, state that it is not available.

# Research Report Search

Review the article titled “Effects of Environmental Factors on the Health of College Students” (citation below) and complete the following questions:

Robinson, K. (2005). Effects of environmental factors on the health of college students. *Psi Chi Journal of Undergraduate Research, 10*(1), 3-8.

1. Source information: Who did the research and wrote this research report? In what year was this research published? In what journal was the research report published?
2. What reasons does the author give for conducting this research study?
3. According to Robinson, what did Hamrick, Cohen, and Rodriguez (2005) conclude about social support and college students’ health?
4. What is locus of control?
5. How is social support related to loneliness in college students?
6. The introduction ends with a hypothesis, or a prediction, about what Robinson will find in the study. What is the hypothesis?
7. Describe the participants in the study - what were the participants’ demographic characteristics? Based on upon the information provided about the sample, who is the population the author is focusing upon?
8. What variables are being studied?
9. What materials did the author use in this study?
10. What procedure did the author use in this study to collect data?
11. What do you think about how the participants in this study were treated? Were they treated ethically? Why or why not? Did the benefit of participating outweigh any risks they may have encountered as a result of participating? Why or why not?
12. What kind of data was presented in the results section? Were there averages (means), correlations, or statistical tests? (You can just write down the letters that symbolize the tests and statistics – the statistical tests will be explained to you in class.)
13. What did the author find – what was concluded from the data analyses? Was the hypothesis supported?
14. What are some of the limitations to the study that the author noted?
15. What are some of the author’s suggestions for future research studies that can follow up this study?
16. What terms are difficult to understand?
17. What questions do you have about this article?
18. What do you think about this research – would you apply the results to yourself?

# Research Report Search – Version 2

Review the article titled “Comfortably Numb: Desensitizing Effects of Violent Media on Helping Others” (citation below) and complete the following questions:

Bushman, B. J., & Anderson, C. A. (2009). Comfortably numb: Desensitizing effects of violent media on helping others. *Psychological Science, 20,* 273-277.

1. Source information: Who did the research and wrote this research report? In what year was this research published? In what journal was the research report published?
2. What reasons do the authors give for conducting this research study?
3. Briefly summarize previous research that has been conducted on this topic.
4. The Introduction ends with a hypothesis, or a prediction, about what the authors will find in the study. Using your own words, what is the hypothesis?
5. Describe the participants in the study - what were the participants’ demographic characteristics? Based on upon the information provided about the sample, who is the population the authors are focusing upon?
6. What variables are being studied?
7. What materials did the authors use in this study?
8. What procedure did the authors use in this study to collect data?
9. What do you think about how the participants in this study were treated? Were they treated ethically? Why or why not? Did the benefit of participating outweigh any risks they may have encountered as a result of participating? Why or why not?
10. What kind of data was presented in the results section? Were there averages (means), correlations, or statistical tests? (You can just write down the letters that symbolize the tests and statistics – the statistical tests will be explained to you in class.)
11. What did the author find – what was concluded from the data analyses? Was the hypothesis supported?
12. What are some of the limitations to the study that the authors noted?
13. What are some of the authors’ suggestions for future research studies that can follow up this study?
14. Why are the results of this study important, according to the authors?
15. What kind of research method was used?
16. Did the researchers state that there was a cause-and-effect relationship among the variables? Was this appropriate (yes or no)?
17. What is one weakness of using this research method to answer the research question?
18. What terms are difficult to understand?
19. What questions do you have about this article?
20. What do you think about this research – would you apply the results to yourself?

# Scientific Writing Comparison

The following are elements of your writing that you should attend to when writing reports in the sciences (not just psychology).

Compare the empirical article titled “Effects of Environmental Factors on the Health of College Students” by Robinson (2005) with the media report “Feeling Depressed? This May Be the Thing You Need to Feel Happier (Hint: It's Not Money)” by Lexi Petronis.

Petronis, L. (2012, June 25). Feeling depressed? This may be the thing you need to feel happier (Hint: It's not money). *Glamour*. Retrieved from http://www.glamour.com/health-fitness/blogs/vitamin-g/2012/06/feeling-depressed-this-may-be.html

Robinson, K. (2005). Effects of environmental factors on the health of college students. *Psi Chi Journal of Undergraduate Research, 10*(1), 3-8.

|  |  |  |
| --- | --- | --- |
|  | **Robinson (2005) Scientific Writing** | **Petronis (2012)Non-Scientific Writing** |
| 1. Tone. What is the writer’s attitude toward the audience? Is it formal or informal?
 |  |  |
| 1. Word choice. Does the author use slang or colloquialisms? What kind of terminology is used?
 |  |  |
| 1. Sentence structure. Are the sentences long and complex or short and simple?
 |  |  |
| 1. Brevity. Does the author describe things simply or with many adjectives and figurative language?
 |  |  |
| 1. Other work/sources. Does the author use many quotes or are sources paraphrased? How does the author refer to other sources?
 |  |  |
| 1. Citations. Does the author cite other sources? How are those sources cited?
 |  |  |

# Research Report Search – Version 3

Review the article titled “The Power of Good Intentions: Perceived Benevolence Soothes Pain, Increases Pleasure, and Improves Taste” and complete the following questions:

Gray, K. (2012). The power of good intentions: Perceived benevolence soothes pain, increases pleasure, and improves taste. *Social Psychological and Personality Science, 3,* 639-647.

1. Source information: Who did the research and wrote this research report? In what year was this research published? In what journal was the research report published?
2. What reasons does the author give for conducting this research study?
3. Briefly summarize previous research that has been conducted on this topic.
4. The introduction ends with a hypothesis, or a prediction about what the author will find in the study. What is the hypothesis?
5. Describe the participants in the study - what were the participants’ demographic characteristics? Based on upon the information provided about the sample, who is the population the author is focusing upon?
6. What are the variables that are being studied?
7. What materials did the author use in this study?
8. What procedure did the author use in this study to collect data?
9. What do you think about how the participants in this study were treated? Were they treated ethically? Why or why not? Did the benefit of participating outweigh any risks they may have encountered as a result of participating? Why or why not?
10. What kind of data was presented in the results section? Were there averages (means), correlations, or statistical tests? (Based upon what you learned by summarizing previous articles, try to describe the statistical tests that were conducted.)
11. What did the author find – what was concluded from the data analyses? Was the hypothesis supported?
12. What are some of the limitations to the study that the author noted?
13. What are some of the author’s suggestions for future research studies that can follow up this study?
14. Why are the results of this study important, according to the authors?
15. What terms are difficult to understand?
16. What questions do you have about this article?
17. What do you think about this research – would you apply the results to yourself?

# Media Report & Research Methods Comparison

Answer the following questions using the assigned article.

* 1. Based upon what you can discern from the media report, what was the hypothesis?
	2. What population was the researcher focusing on, and who was in the sample?
	3. What research method was used?
	4. What conclusions were drawn, and were those conclusions appropriate for the research method?
	5. What are limitations to using this research method?
	6. Design an experiment that will answer this hypothesis, being careful to consider issues such as random assignment and confounding variables.
	7. Design an observational study that will answer this hypothesis, being careful to consider issues such as observer bias, lack of environmental control, and performance effects.
	8. Design an archival study that will answer this hypothesis, being careful to consider issues such as cohort effects, limitations on the data you can obtain, and the integrity of the data that is stored and retrieved.
	9. Design a qualitative study that will answer this hypothesis, being careful to consider issues such as limitations on sample size and the time intensive nature of the research.

# Module Rubric

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Masterful** | **Skilled** | **Developing** | **Underperforming** |
| **Research Report** |
| **Purpose of the study**  | Clearly and accurately describes purpose of the study. | Describes purpose of the study but lacks clarity or some accuracy. | Inaccurately describes purpose of the study. | Omits purpose of the study. |
| **Rationale for the study** | Clearly and accurately describes background research for what is known about the topic.  | Describes background research for what is known about the topic, but lacks some clarity or accuracy. | Inaccurately describes background research for what is known about the topic. | Omits background research. |
| **Hypothesis** | Clearly and accurately states the hypothesis. | States the hypothesis but lacks clarity or some accuracy. | Inaccurately states the hypothesis.  | Omits the hypothesis. |
| **Method** |
| **Participants** | Clearly describes participants with relevant demographic details. | Clearly describes participants, but either includes unnecessary demographic details or information or misses minor relevant details. | Does not clearly describe participants; omits several relevant demographic details.  | Does not clearly describe participants; omits all relevant demographic details. |
| **Materials/****Apparatus** | Identifies and describes with appropriate detail all items that were used. | Identifies all materials but occasionally provides either too much or too little information. | Omits somematerials. | Omits all materials. |
| **Procedure** | Describes what participants were expected to do and the order in which they did them. | Describes what participants were expected to do and the order in which they did them, but omits a few details.  | Describes what participants were expected to do and the order in which they did them, but omits critical details.  | Omits the procedure; it is unclear what participants did. |
| **Results & Discussion**  |
| **Results** | Clearly and accurately identifies the statistical test and states whether the hypothesis was confirmed or rejected. | Clearly and accurately identifies the statistical test and states whether the hypothesis was confirmed or rejected, but minor areas lack clarity.  | Identifies the statistical test and states whether the hypothesis was confirmed or rejected, but with some inaccuracy and lack of clarity. | Does not identify the statistical test; does not state whether the hypothesis was confirmed or rejected. |
| **Limitations** | Clearly and accurately describes limitations that the author(s) of the report identified; insightfully describes other limitations to the study that the author(s) omitted. | Clearly and accurately describes limitations that the author(s) of the report identified; does not offer other limitations. | Describes limitations that the author(s) of the report identified, but with some lack of clarity. | Omits limitations that the author(s) of the report identified. |
| **Future research** | Clearly and accurately describes future research suggestions that the author(s) of the report identified; insightfully describes future research suggestions that the author(s) omitted.  | Clearly and accurately describes future research suggestions that the author(s) of the report identified; does not offer other suggestions. | Describes future research suggestions that the author(s) of the report identified are described, but with some lack of clarity. | Omits future research suggestions that the author(s) of the report identified. |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Masterful** | **Skilled** | **Developing** | **Underperforming** |
| **Media Report** |
| **Summary** | Summarizes the media report accurately; cites the author of the media report appropriately. | Summarizes the media report but lacks clarity; cites the author of the media report appropriately. | Summarizes the media report unclearly; does not cite the author of the media report appropriately | Omits the summary. |
| **Evaluation of the Media Report** | Carefully evaluates the media report; describes the source of the report, the writer’s credentials, the validity of the writer’s assertions regarding the research study results, potential bias or ulterior motives, and the quality of the writing. | Thoroughly evaluates aspects of the media report, but may miss one of the following: critique of the author or sources, the author’s assertions regarding the results, potential bias, or quality of the writing. | Incompletely evaluates the media report and may miss more than one of the following: critique of the author or sources, the author’s assertions regarding the results, potential bias, or quality of the writing. | Simply summarizes but does not evaluate the media report. |
| **Synthesis** |
| **Comparison between Media Report & Empirical Article** | Thoroughly describes differences between the media report and the research article; includes clear and insightful suggestions for more effectively summarizing the media report. | Describes differences between the media report and the research article, but suggestions for more effectively summarizing the media report lack clarity. | Omits one of the following: differences between the media report and the research article or suggestions for more effectively summarizing the media report. | Omits both differences between the media report and research article and suggestions for more effectively summarizing the media report. |
| **Writing Style** |
| **Style, organization & clarity** | Writes complete, varied, interesting and grammatically accurate sentences that are free of punctuation and spelling errors. | Writes complete and grammatically accurate sentences; includes minor punctuation and spelling errors.  | Includes some errors in sentence structure, grammar, and spelling. | Includes major errors in sentence structure, grammar, and spelling. |
| **Scientific concepts & terminology** | Consistently uses appropriate science language and terminology; illustrates an accurate and thorough understanding of scientific concepts underlying the article. | Fairly consistently uses appropriate science language and terminology; illustrates some understanding of scientific concepts underlying the article. | Inconsistently uses science language and terminology; does not illustrate a clear understanding of scientific concepts underlying the article; may use slang. | Minimally uses scientific language and/or terminology; does not explain scientific terms; uses slang. |
| **Scientific writing** | Writes precisely and concisely; summarizes and paraphrases accurately all material, and cites references correctly in APA style.  | Generally writes precisely and concisely; summarizes and paraphrases all material, but with some lack of clarity or accuracy; has minor deviations from APA style.  | Does not write precisely and concisely; attempts paraphrasing, but it is too close to the original; has major deviations from APA style citations. | Does not write precisely and concisely; copies sentences & phrases directly from original source. Omits reference citations. |