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Got Misinformation?

Critically Evaluating Sources for Credibility, Accuracy, and Usefulness

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NUTRITION INFORMATION

Popular reporting on scholarly research findings often removes essential context and simplifies complex ideas, sometimes resulting in misinformation. This activity introduces students to this issue by having them evaluate several sources all based on the same scientific study. Depending on the context, this activity may or may not be preceded by a short lecture on the basics of source evaluation. This activity can be adapted to fit any discipline.

LEARNING OUTCOMES

Students learn the importance of identifying the original source of information and how to track it down. They also gain an understanding of how varied information creation processes result in different types of sources.

COOKING TIME

20–30 minutes (will vary based on number of sources provided; more time will be required if students don't read sources ahead of the session)

NUMBER SERVED

50–100 students (can be easily adapted for smaller groups)

INGREDIENTS AND EQUIPMENT

- Sources (you can use the examples given here or select your own)
 - ◊ 1 scholarly article reporting the results of research in a relevant discipline
 - Hanks, Andrew S., David R. Just, and Brian Wansink. "Chocolate Milk Consequences: A Pilot Study Evaluating the Consequences of Banning Chocolate Milk in School Cafeterias." *PLoS ONE* 9, no. 4 (2014). <https://doi.org/10.1371/journal.pone.0091022>.
 - ◊ 3–4 popular sources based on the scholarly study
 - Freedhoff, Yoni. "No, Banning Chocolate Milk in Schools Didn't Backfire." *U.S. News & World Report*, April 22, 2014. <https://health.usnews.com/health-news/blogs/eat-run/2014/04/22/no-banning-chocolate-milk-in-schools-didnt-backfire>.
 - Oppenheimer, Mark. "Let Them Drink Chocolate." *New York Times*, April 19, 2014. <https://nyti.ms/QImDyi>.
 - MacVean, Mary. "Removing chocolate milk from schools caused plain milk to be wasted." *Los Angeles*

Times, April 18, 2014. <http://www.latimes.com/science/sciencenow/la-sci-sn-school-chocolate-milk-20140418-story.html>.

- National Milk Producers Federation. "Chocolate Milk Ban in Schools Backfires." Accessed July 5, 2018. <https://www.nmpf.org/chocolate-milk-ban-in-schools-backfires/>.
- Google Doc with link sharing enabled (provide a shortened link in class and/or have the instructor post the link in the LMS). Template available at <https://goo.gl/W47EDW>.
- Technology
 - ◊ Computers, laptops, or mobile devices for students to use
 - ◊ Projector or other display

PREPARATION

- Sources
 - ◊ Select 1 scholarly source and 3–4 related popular sources, or use the ones provided in the ingredient list above.
 - ◊ Distribute the popular sources to students to read ahead of the session. (If this is not possible, be sure to account for the time in class that will be needed for students to read the sources.)

Template

Look at the sources listed below. As you evaluate each source, add your notes to the table. Here are a few questions to consider:

- What do you think about the source?
- Would you trust the information in it? Why/why not?
- Would you cite it in a paper for a class? Why/why not?
- Where did the author(s) get their information?

Sources

1. <http://www.latimes.com/science/sciencenow/la-sci-sn-school-chocolate-milk-20140418-story.html>
2. <https://nyti.ms/QImDyi>
3. <https://www.nmpf.org/chocolate-milk-ban-in-schools-backfires/>
4. <https://health.usnews.com/health-news/blogs/eat-run/2014/04/22/no-banning-chocolate-milk-in-schools-didnt-backfire>

	Source 1	Source 2	Source 3	Source 4
Group 1				
Group 2				
Group 3				

classroom, checking in with groups on their progress. Also pay attention to the collaborative note-taking doc to monitor progress. If needed, prompt students to move on to the next article.

3. Bring the students back together for a class-wide discussion.
4. Review each source, asking for volunteers to summarize their group’s discussion. If needed, prompt by asking students to expand on particular comments from the Google Doc. Incorporate information about how to find the original scholarly source into the discussion. Other issues to highlight: bias, information lifecycle, the connection between how information is created and what type of need it satisfies, and capabilities and constraints of popular and scholarly sources.
5. Wrap up the discussion by summarizing students’ points and reiterating the importance of identifying the original source of information in any context.

- Collaborative note-taking
 - ◊ Create a Google Doc with activity instructions, links to popular sources, and a table with columns for each of the popular sources.
 - ◊ Set sharing permissions to “Anyone with the link can edit.”
 - ◊ Create a shortened link and/or ask the instructor to post the link in the LMS.
- Classroom technology
 - ◊ Confirm that students will have access to computers, laptops, or mobile devices for the session.

- ◊ Confirm that the classroom has a computer with internet access and a projector or other display.

COOKING METHOD

1. Open the Google Doc on the instructor’s computer and have students open it on their devices.
2. Have students work in small groups for 10–20 minutes to evaluate the popular sources, making notes in the Google Doc. While they work, circulate through the

ALLERGY WARNINGS

- When sharing the Google Doc, be sure to set the permissions to “Anyone with the link can edit.”
- As with any large class, distraction during small-group work is a potential problem. Circulating through the room to observe and interact with the groups helps to alleviate this issue.
- Live collaborative note-taking documents are susceptible to immature students adding inappropriate or offensive

content. The authors have not personally experienced this issue.

- When typing in the shared doc, students may accidentally delete the instructions or links to sources, so it's a good idea to have a back-up copy just in case.

CHEF'S NOTES

- For small, advanced groups where time constraints are less of a concern, students can select their own popular information sources that are relevant to the course.
- This activity can be adapted for use in an environment with no student computers, but the benefits of having students actively backtrack from the popular sources to the scholarly source will be lost. If adapting for use without student computers, the shared Google Doc can be replaced with flip-charts or whiteboards.
- In upper-level courses, the study used as an example in this recipe provides an opportunity for students to gain a more nuanced understanding of authority in scholarly publishing. While the legitimacy of this study has not been called into question, other articles by the lead author of the study have been retracted or had corrections and warnings added. For more information, see <https://retractionwatch.com/2017/12/28/another-retraction-appear-cornell-food-scientist-brian-wansink/>.

ADDITIONAL RESOURCES

For added context regarding how to teach students about types of sources, see:

Jankowski, Amy, Alyssa Russo, and Lori Townsend. "It Was Information Based': Student Reasoning When Distinguishing Between Scholarly and Popular Sources." *In The Library With The Lead Pipe*, May 16, 2018, <http://www.inthelibrarywiththeleadpipe.org/2018/it-was-information-based/>.