

Dialogue: moving students from reference to critical data literacy

This skit was developed by the data librarians at UC Berkeley for training our colleagues. The goal is to help librarians visualize how they might move from data reference to engaging students in critical data literacy. Feel free to adapt and re-use with attribution to the authors, Jamie Wittenberg, Anna Sackmann, and Celia Emmelhainz (CC-BY)!

Dialogue: From reference to data literacy

Student: I read about a study that says you only need to exercise for one minute a day. Where can I get that?

Librarian: Okay, I can help you find peer reviewed articles. Can you tell me more about what you read?

Student: The science showed that if you exercise for one minute, it's like exercising for 45 minutes. I read about it [online](#).

Librarian: Let's see if we can find the article this references
(<http://journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0154075>).

Oh, I see that it was published in PLOS ONE. This is a great journal because the authors are expected to publish their data along with their findings. Let's take a look at their protocol and conclusion:

“Twelve weeks of brief intense interval exercise improved indices of cardiometabolic health to the same extent as traditional endurance training in sedentary men, despite a five-fold lower exercise volume and time commitment.”

Student: So what does that mean?

Librarian: They're claiming that a short period of interval exercise builds health as well as longer periods of exercise. But wait—before you cite this, it's always good to try and look more closely at their data and whether it supports those results.

[They look at the data together]

Student: Oh, so... [squints]... it looks like they exercised for 10 minutes, with a few short 20-second intervals in between. So... [crestfallen] it's not really just one minute, then?

Librarian: And look—[points]—they define fitness as reduced insulin sensitivity, higher respiratory fitness, and the health of skeletal muscles. Fitness may be more than that. Why don't we also check the sample size and who was included in the study?

Student: [looks again] It looks like the people who did interval training were also younger and taller than the control group who exercised for a longer amount of time. [Thinking] Does that make a difference?

Librarian: Great observation—that's a methodological question, and something that an expert in Kinesiology could tell you more about. Why don't I help you to access a few more resources on this, and you can email your professor about the methodology?

In this dialogue, the librarian helps the student move from online news back to the original research article, and even to examine or locate the actual data (if available) and methodology used. This is one way to help students with 'critical data literacy,' moving back from the popular media to investigate sources more closely. Simply pointing out data and methodology can help them be more observant in the future.

Source: <http://databrarians.org/2016/09/dialogue-moving-students-from-reference-to-critical-data-literacy/>
As of May 10, 2017