Teaching Information Evaluation with Lateral Reading

Session #1: The What and the Why

Welcome!

I'm Jenny Dale (she/her/hers) and I'm the Information Literacy Coordinator at UNC Greensboro. I also serve as the liaison to five academic programs:

- Classical Studies
- Communication Studies
- English
- Media Studies
- Women's, Gender, and Sexuality Studies

Land acknowledgement

I acknowledge that the land on which I live and work has long served as the site of meeting and exchange amongst a number of Indigenous peoples, specifically members of the Keyauwee, Catawba, Eno, Sappony, Shakori, and Saura Nations. I also acknowledge the long history and lasting legacies of slavery on these lands.

What we'll cover today

- Traditional approaches to teaching online source evaluation
- What lateral reading actually is
- Mike Caulfield's work on lateral reading
- Research on lateral reading as an instructional intervention
- Lateral reading in information literacy programs

First, a quick poll!

Please use the QR code to the right or head to www.menti.com and enter the code **7966 9234** to answer two questions!

Traditional approaches to teaching online source evaluation

Teaching source evaluation

"Most current approaches to teaching skills of critical evaluation feature a rubric or checklist used to help guide students through the process of evaluating the credibility of sources and information online" (Ostenson, 2014, p. 35).

Photo by Glenn Carstens-Peters on Unsplash

Common evaluation frameworks

- At my institution, we frequently use:
  - ABC (Authority, Bias, Currency)
  - ABCD (Authority, Bias, Currency, Documentation)
  - CRAAP (Currency, Relevance, Authority, Accuracy, Purpose)

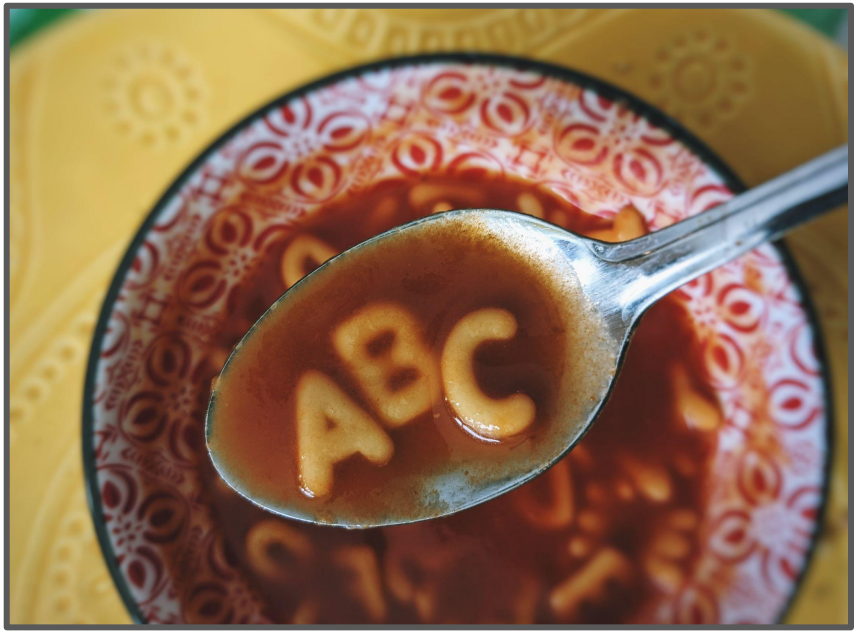


Photo by Sigmund on Unsplash

Other evaluation frameworks

- There are many others:
  - CARS (Credibility, Accuracy, Reasonableness, Support)
  - AAOCC (Authority, Accuracy, Objectivity, Currency, Coverage)
  - RADAR (Rationale, Authority, Date, Accuracy, Relevance)
- Most pair an acronym with a set of questions

Word cloud generated by https://wordart.com/create

The limitations of checklists

- These checklists probably aren't enough.
- "While these tools bring an important emphasis to qualities of credibility, they can be too limited in scope and may not adequately address the evolving nature of the Internet and the information delivered through this medium" (Ostenson, 2014, p. 35).

The limitations of checklists

"Now, you might think a person filling out this exhausting battery of questions would make a good decision on what is credible and what is not. But research suggests otherwise. In fact, what we know from studies of expertise in many fields is such exhaustive holistic assessments can make the evaluator *more* prone to error" (Caulfield, 2018, "Recognition is Futile").

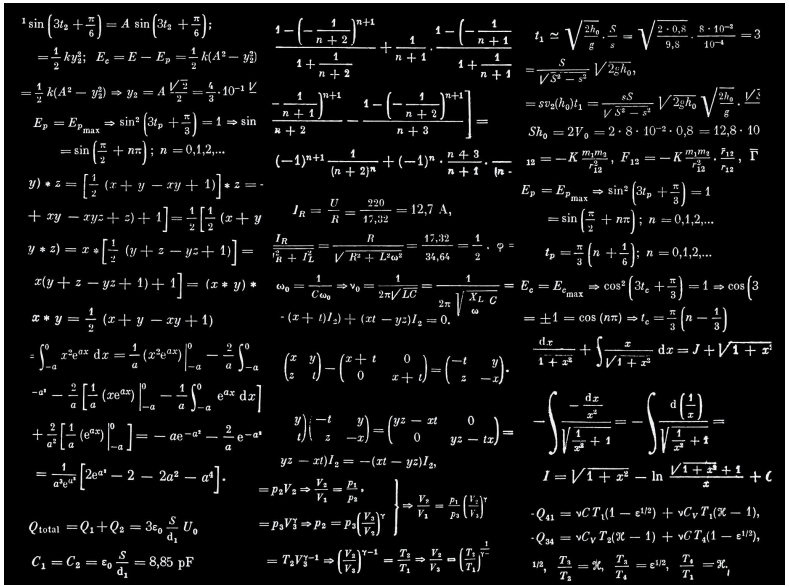


Photo by Dan-Cristian Pădureț on Unsplash

So, by those arguments...

Checklist approaches are both too much and not enough, too complex and too simplistic.

Spotlight on CRAAP

- This is “the most ubiquitous tool for teaching web credibility at the college level,” according to Wineburg, et al. (2020).
- “When the CRAAP method was first deployed nearly 20 years ago, the world was still making the transition from Web 1.0 to Web 2.0. Most online content was meant to be consumed, not interacted with, altered, changed, and shared. CRAAP was developed in a time when *you found information*, before the dramatic shift to *information finding you*” (Bull et al., 2021).

Photo by Jason Leung on Unsplash

Where these approaches fall short

- They can encourage our learners to focus too much on superficial features of a source - the domain name, the appearance, the use of links, etc.
- They rely on close reading of the source without encouraging learners to learn more about that source
- They typically focus on a single source of information rather than the larger system in which that source exists
- They're developed by experts but taught to novices

As an audience of experts...

Please fill out one more quick Mentimeter question by using the QR code to the right or heading to www.menti.com and entering the code **6615 8834**

Wineburg et al. (2020) found that...

- College students “struggled” to identify a satirical news story and a cloaked website and
  - “Focused exclusively on the website or prompt, rarely consulting the broader web
  - Trusted how a site presented itself on its About page
  - Applied out-of-date and sometimes incorrect strategies (such as accepting or rejecting a site because of its top-level domain)
  - Attributed undue weight to easily manipulated signals of credibility - such as an organization’s non-profit status, its links to authoritative sources, or ‘look’” (p. 3).

Photo by K8 on Unsplash

“Students learned what we taught them”

“Alarmingly, students’ approach was consistent with guidelines that can be found on many college and university websites. Sometimes these materials are just plain wrong. Sometimes they are incomplete. Sometimes they are so inconsistent that they offer scant guidance for navigating the treacherous terrain of today’s internet” (Wineburg et al., 2020, p. 3).

Breakstone et al. (2021), found that:

- High school students experienced similar struggles with information evaluation tasks
- Most didn't notice that a climate change website was actually funded by a fossil fuel company
    - "...the vast majority of students remained glued to the site itself, drawn in by its top-level domain (.org), the recency of its updates, and the sheer quantity of information it included" (p. 509).

Photo by Annie Spratt on Unsplash

What *is* lateral reading?

Wineburg & McGrew's research

- Working as part of the Stanford History Education Group, these researchers designed a study "to investigate how experienced Internet users arrive at judgments of trustworthiness online," with the goals of determining how these users judge credibility of unfamiliar sources as well as the "strategies or heuristics" these users employ "to effectively find reliable information" (Wineburg & McGrew, 2019, p. 5).

Wineburg & McGrew (2019)

- Research design
  - Three participant groups: PhD Historians (n=10), professional fact checkers (n=10), and Stanford University undergraduate students (n=25).
  - All participants were asked to engage in six online tasks focused on “evaluating digital sources that addressed social and political issues” (p. 6). Three of the tasks were analyzed, and I’ll focus on two.
  - Researchers used a think-aloud protocol and captured audio from participants as well as screen captures of their approaches.

Task 1: Bullying

- Context: Participants compared two web pages about bullying in schools, one from the American College of Pediatricians and one from the American Academy of Pediatrics
  - American Academy of Pediatrics: founded in 1932; has more than 66,000 members and 450 staff.
  - American College of Pediatricians: “a splinter group that in 2002 broke from the Academy over the issue of adoption by same-sex couples”; small membership; labeled as a hate group by the Southern Poverty Law Center.
    - Wineburg & McGrew (2019), p. 9

Task 1: Bullying

- Participants were asked to evaluate the sites for trustworthiness and to make an explicit comparison based on perceived reliability (Wineburg & McGrew, 2019, p. 10).
- Results:
  - Fact checkers were 100% successful in identifying the AAP site as more reliable
  - Historians were 50% successful
  - Stanford undergrads were 20% successful (p. 11)

Task 1: Bullying

- “Fact checkers’ success was closely tied to what we think of as taking bearings, a concept borrowed from the world of navigation… When navigating unfamiliar terrain, first gain a sense of direction” (Wineburg & McGrew, 2019, p. 13).

Photo by Anastasia Petrova on Unsplash

- In this example, taking bearings meant leaving each landing page to learn more about it

Task 1: Bullying

- Students, on the other hand, “rarely took bearings when landing on an unfamiliar site. Nine out of the 25 never left the original site; those that did tended to click on links that spoke to a personal interest rather than a search designed to find out more about the organization behind the website” (Wineburg & McGrew, 2019, p. 15).
- Students’ reasoning for “conferring trustworthiness” included scientific presentation, usefulness (including amount of information provided), graphic design, and organization’s apparent authority (indicated by name, logo, and url) (p. 16).

Task 2: Minimum Wage

- Context: Participants were asked to evaluate an article from minimumwage.com for up to five minutes.
    - If participants had not found the organization that sponsors the site (the Employment Policies Institute) in that time, they were given three more minutes figure out who is behind the site
- Minimumwage.com and their parent organization's website "are the handiwork of Berman and Company, a Washington, DC-based public relations firm that lobbies on behalf of the restaurant and hotel industries" (Wineburg & McGrew, 2019, p. 18).

Task 2: Minimum Wage

- Results: “Without prompting, and in less than a minute, the fact checkers learned that EPI was minimumwage.com’s parent (See Figure 4; M = 51 s, SD = 43 s). Historians took nearly four times as long (M = 3 min, 40 s, SD = 2 min). Six of the 10 needed to be prompted to find EPI. Among the three groups, students took the longest to get to EPI: an average of 5 minutes and 18 seconds (SD = 1 min, 24 s); the overwhelming majority of students (four fifths) needed prompting” (Wineburg & McGrew, 2019, p. 18).

Lateral reading (Wineburg & McGrew, 2019)

- Fact checkers “employed a powerful heuristic for taking bearings: lateral reading. Fact checkers almost immediately opened up a series of new tabs on the horizontal axis of their browsers before fully reading the article” (p. 19).
- “When reading laterally, fact checkers paid little attention to features of a website like its appearance or contents. Instead, they quickly leapt off the landing page to open new tabs. Fact checkers, in short, learned most about a site by leaving it” (p. 31)
    - The authors distinguish between lateral reading and the “close reading” approach to literacy included in Common Core State Standards

Mike Caulfield and lateral reading

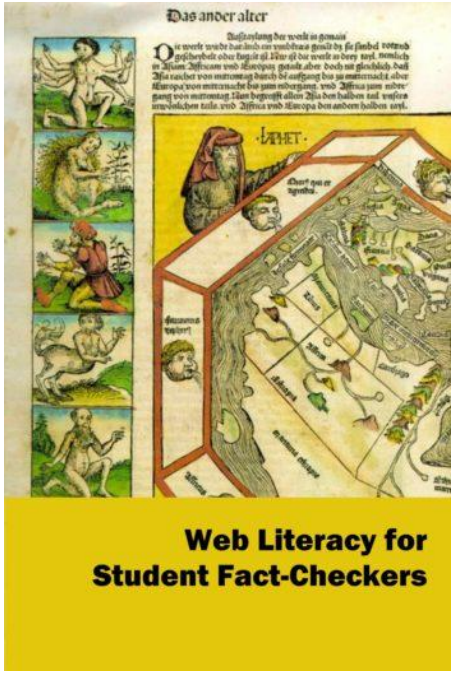
Who is Mike Caulfield?

- Director of blended and networked learning at Washington State University Vancouver.
- “An early believer in the idea of civic digital literacies, his work in this area intensified in spring of 2016. His February 2017 work, *Web Literacy for Student Fact-Checkers*, won the Merlot Award for best open learning resource in the ICT category. He was a runner up in the Rita Allen/RTI International Misinformation Solutions Award (2018).”

(from Caulfield’s About page)

Web Literacy for Student Fact-Checkers

- Open textbook, first published in 2017
- Outlined a different approach to source evaluation called **Four Moves and a Habit** which was more focused on things to *do* than things to *look for*
- Created for the Digital Polarization Project



Four Moves and a Habit

1. Check for previous work
2. Go upstream to the source
3. **Read laterally**
4. Circle back

The habit: check your emotions.

How Caulfield explains lateral reading

Caulfield (2017, ch. 16):

- "...good fact-checkers read 'laterally,' across many connected sites instead of digging deep into the site at hand."
- "Lateral readers don't spend time on the page or site until they've first gotten their bearings by looking at what other sites and resources say about the source at which they are looking."
- "Only when they've gotten their bearings from the rest of the network do they re-engage with the content. Lateral readers gain a better understanding as to whether to trust the facts and analysis presented to them"

Connecting back to SHEG

In *Web Literacy for Student Fact-Checkers*, Caulfield specifically references "Sam Wineburg's Stanford research team" as the original group recommending lateral reading (2017, ch. 16). He's referencing Wineburg and McGrew's research, which was not yet published in the *Teachers' College Record* but had been summarized and shared through SHEG.

A shift to SIFT

In two blog posts in May and June 2019, Caulfield proposed an acronym that slightly reframed the moves: SIFT.

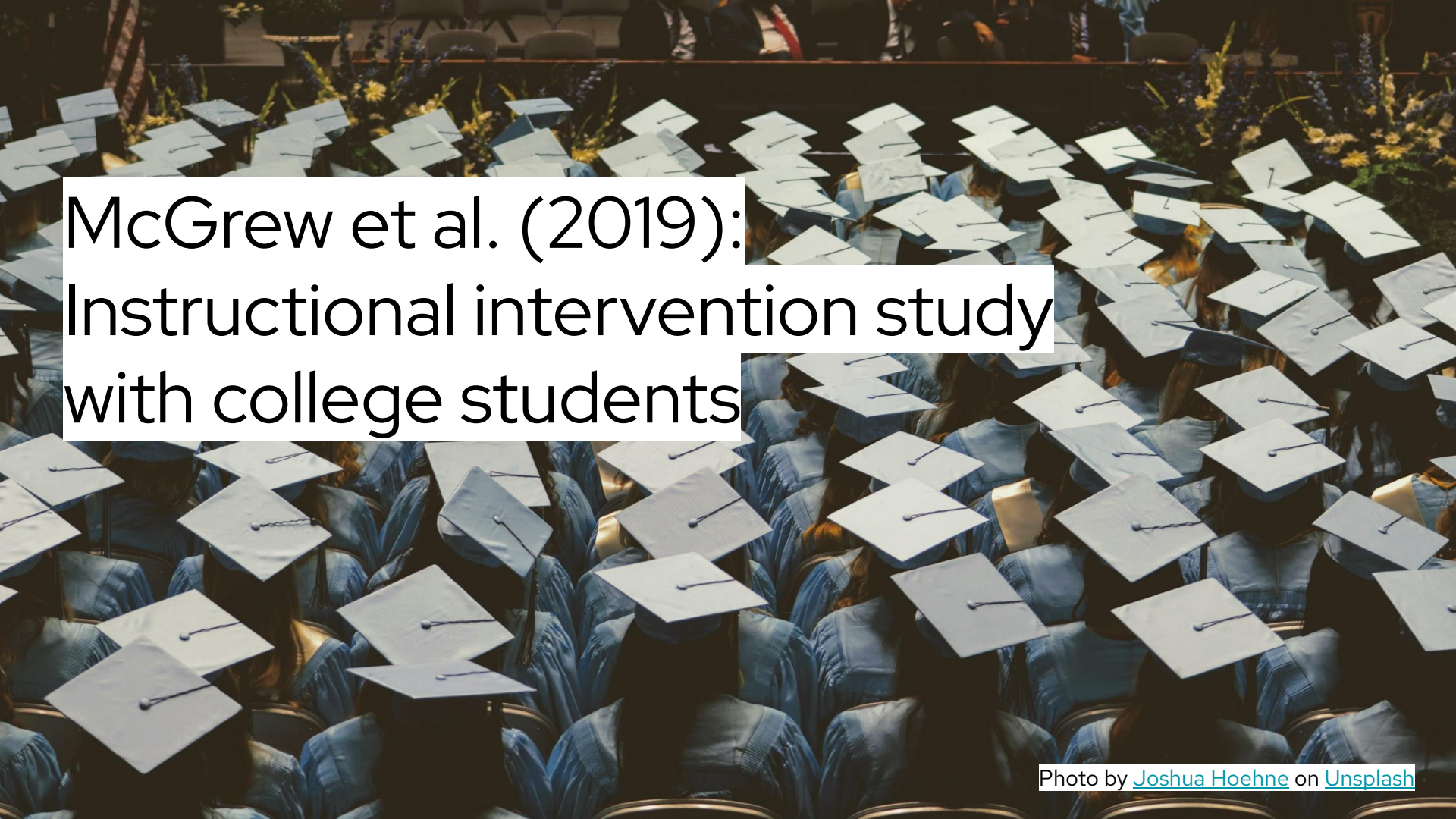
- Stop
- Investigate the source
- Find better coverage
- Trace claims, quotes, and media back to the original context
    - (Caulfield, 2019, “Introducing SIFT”)

Photo by TUAN ANH TRAN on Unsplash

SIFT and lateral reading

“The Four Moves have undergone some tweaking since I first introduced them in early 2017. The language has shifted, been refined. We’ve come to see that lateral reading is more of a principle underlying at least two of the moves (maybe three)” (Caulfield, 2019, “Introducing SIFT”).

Does instruction focused on lateral reading really work?



McGrew et al. (2019): Instructional intervention study with college students

Photo by Joshua Hoehne on Unsplash

McGrew et al. (2019): The study

- “This pilot study investigated whether a short, focused curriculum intervention could improve university students’ ability to accurately assess the credibility of digital information” (p. 488).
- “Participants (n = 67) were students in four sections of a ‘critical thinking and writing’ course, a one-semester class that met the university’s general education requirement” at a public university on the U.S. West Coast (p. 489).
- Treatment and control groups

McGrew et al. (2019): The intervention

- Treatment group received two 75 minute instructional interventions during class time, taught by two of the researchers (p. 491):
  - Session 1 introduced “the three questions of civic online reasoning: Who is behind this information? What’s the evidence? and What do other sources say?” and was primarily focused on that first question, providing a demonstration of lateral vs. vertical reading followed by practice time for students
  - Session 2 focused on the other questions - What’s the evidence? and What do other sources say?

McGrew et al. (2019): The results

- There was a statistically significant difference in the change between pre-test and post-test results between the treatment and control groups (p. 492).
- “The intervention in this study was modest in scale: two class sessions that totalled a mere 150 min in a 15-week semester course. Although statistically significant, student gains were also modest. Treatment classrooms outperformed control classrooms, but their performance nonetheless left room for improvement. Still, there is cause for optimism” based on qualitative responses (p. 493).

McGrew et al. (2020): The conclusion

"Rather than trying to squeeze everything about online credibility into 150 min of instruction, we taught students to use a small number of flexible heuristics that can be applied across a range of digital contexts (Caulfield, 2018). Students showed consistent progress in learning these heuristics and improved in their evaluation of online sources. These results make us optimistic about the malleability of university students' Internet skills" (p. 495).

Attention conservation

- Breakstone et al. (2021) note that “Under conditions of limited attention, the most crucial decision to make is where to allocate it. Above all else, lateral reading is an act of *attention conservation*” (p. 512).

Photo by Geran de Klerk on Unsplash

McGrew & Byrne (2021): Instructional intervention study with high school students

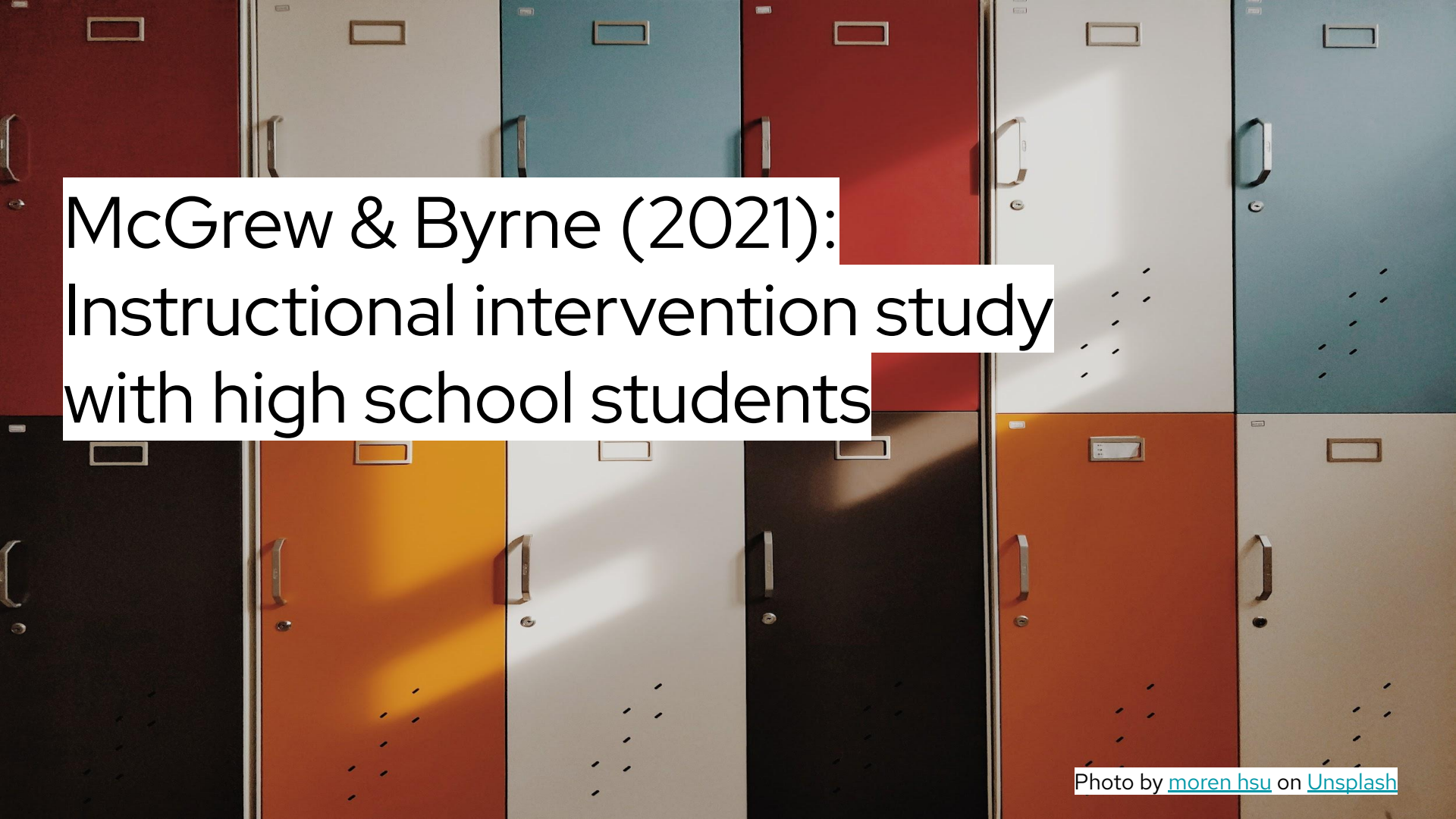


Photo by moren hsu on Unsplash

McGrew & Byrne (2021): The study

- “This study investigated a six-lesson instructional intervention designed to teach high school students to evaluate online sources. Specifically, we asked how students’ abilities to raise questions about and investigate online sources changed after a series of lessons in evaluating digital content” (p. 457).
- Participants (n=420) were students at “a comprehensive public high school in an urban area on the West Coast of the U.S.” in the 2018-2019 school year (p. 461).

McGrew & Byrne (2021): The intervention

- Six lessons were created, all "designed to teach aspects of *civic online reasoning,*" including lateral reading
  - The first instructional module, "Who is behind the information?" consisted of two lessons focused on lateral reading
- The other lessons focused on evaluating and verifying evidence, verifying social media claims, and click restraint

(p. 461)

McGrew & Byrne (2021): The method

- Students took a pre-test before any of the lessons and a post-test after all six were completed
- McGrew & Byrne primarily focused on two test questions for their analysis - one on author evaluation and one on website evaluation
  - The website evaluation task required lateral reading

McGrew & Byrne (2021): The analysis

- Stage one focused on coding written responses using inductive coding to describe the strategies students used (p. 463)
- Stage two “was designed to describe the change in students’ propensity and ability to focus their evaluations on the sources of information—to engage in sourcing” (p. 464)

Photo by Cookie the Pom on Unsplash

McGrew & Byrne (2021): The results

"To successfully complete the Website Evaluation task, students needed to investigate the sponsoring organization of the website and locate information tying it to industry interests, thus calling the reliability of the information into question. From pre- to post test, students showed more evidence of using (or attempting to use) strategies to investigate the source of the website and were less likely focus on features unrelated to source reliability (see Figure 4)" (p. 466).

McGrew & Byrne (2021): The results

- Percentage of students who were able to successfully read laterally increased from 0 to 5%
- Percentage of students who attempted to read laterally but weren't fully successful went from 1% to 18%
- Percentage of students who investigated within the site (looking for the About page, etc.) increased from 9% to 21%
- Sourcing: "Forty-seven percent of students engaged in more sourcing on the posttest on one or both tasks (see Figure 5)."

(pp. 466-467)

So, does it work?

Signs point to yes!

Does it work?

Signs point to yes!

BUT!

Does it work?

Signs point to yes!

BUT!

It’s not the all powerful, one true approach to online source evaluation.

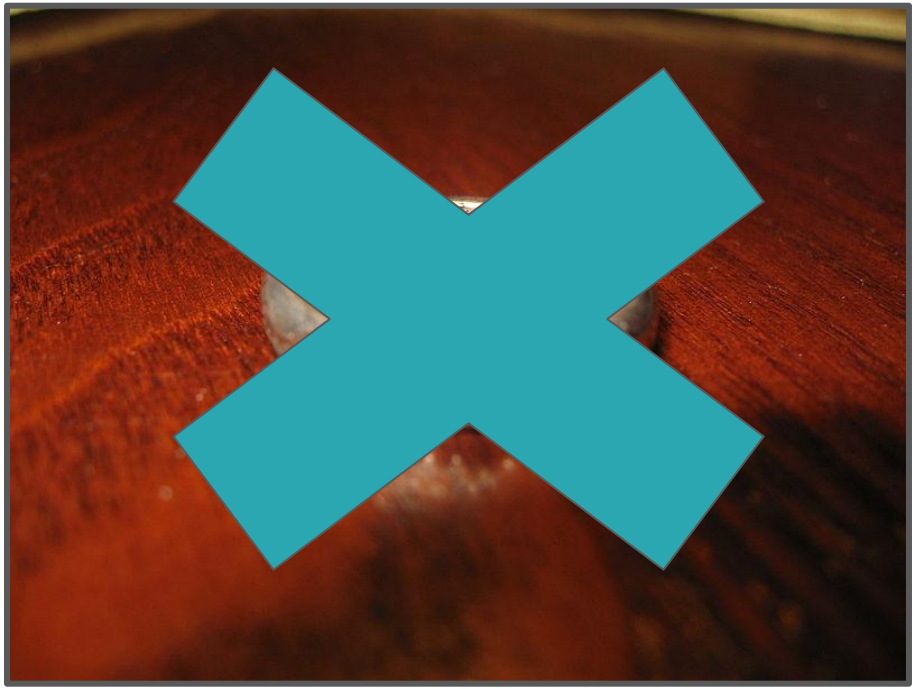
Image credit: The One True Ring by Mike Wutzler from Wikimedia Commons [Used under a Creative Commons Attribution-ShareAlike 3.0 Unported (CC BY-SA 3.0) license]

Does it work?

Signs point to yes!

BUT!

It’s not the all powerful, one true approach to online source evaluation.



Lateral reading in information literacy programs

What can we do?

- Look at our synchronous instruction as well as our asynchronous instructional materials (LibGuides, tutorials, websites, etc.) to see where we can integrate strategies like lateral reading into our approaches
  - Lim (2020) engaged in a content analysis of 17 academic library guides focused on fake news and only two of those guides provided information about lateral reading

A networked approach

- In a forthcoming article from *College & Research Libraries*, Ziv and Bene categorized library guides based on whether they used a checklist approach or a networked approach.
  - "The networked approach separates assessments of credibility into two decisions. First, is the website worth further examination? Second, if so, how should one interpret the information on the site?" (Ziv & Bene, 2021, p. 6).

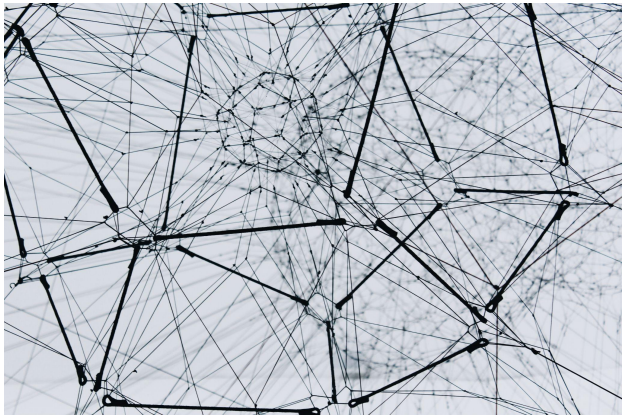


Photo by Alina Grubnyak on Unsplash

Comparing approaches (Ziv & Bene, 2021)

- 40% of guides analyzed used a checklist only approach, 56% used an inconsistent approach, and 4% (two institutions) used a networked only approach (p. 15).

- Example of a networked only approach
  - Rowan University - Evaluating Online Sources: A Toolkit
    - Includes content on lateral reading, click restraint, SIFT, and more

Thank you!

Please join me next week for a hands-on session focused on the “how” of teaching lateral reading!

Contact me at jedale2@uncg.edu
Find these slides at https://tinyurl.com/infobaselateral1

References

Breakstone, J., Smith, M., Wineburg, S., Rapaport, A., Carle, J., Garland, M., & Saavedra, A. (2021). Students' civic online reasoning: A national portrait. *Educational Researcher*, *50*(8), 505–515. https://doi.org/10.3102/0013189X211017495

Bull, A. C., MacMillan, M., & Head, A. J. (2021). Dismantling the evaluation framework. *In the Library with the Lead Pipe*. https://www.inthelibrarywiththeleadpipe.org/2021/dismantling-evaluation/

Caulfield, M. (2017). *Web literacy for student fact-checkers*. https://webliteracy.pressbooks.com/

Caulfield, M. (2018a, February 18). Recognition is futile: Why checklist approaches to information literacy fail and what to do about it. *Hapgood*. https://hapgood.us/2018/02/18/recognition-is-futile-why-checklist-approaches-to-information-literacy-fail-and-what-to-do-about-it/

Caulfield, M. (2018b, September 14). A Short History of CRAAP. *Hapgood*. https://hapgood.us/2018/09/14/a-short-history-of-craap/

Caulfield, M. (2019a, May 12). Introducing SIFT, a Four Moves Acronym. *Hapgood*. https://hapgood.us/2019/05/12/sift-and-a-check-please-preview/

Caulfield, M. (2019b, June 19). SIFT (The Four Moves). *Hapgood*. https://hapgood.us/2019/06/19/sift-the-four-moves/

Lim, S. (2020). Academic library guides for tackling fake news: A content analysis. *The Journal of Academic Librarianship*, *46*(5), 102195. https://doi.org/10.1016/j.acalib.2020.102195

References, continued

McGrew, S., & Byrne, V. L. (2021). Who Is behind this? Preparing high school students to evaluate online content. *Journal of Research on Technology in Education*, *53*(4), 457–475. https://doi.org/10.1080/15391523.2020.1795956

McGrew, S., Smith, M., Breakstone, J., Ortega, T., & Wineburg, S. (2019). Improving university students' web savvy: An intervention study. *British Journal of Educational Psychology*, *89*(3), 485–500. https://doi.org/10.1111/bjep.12279

Ostenson, J. (2013). Reconsidering the checklist in teaching internet source evaluation. *Portal: Libraries and the Academy*, *14*(1), 33–50. https://doi.org/10.1353/pla.2013.0045

Wineburg, S., Breakstone, J., Ziv, N., & Smith, M. (2020). *Educating for Misunderstanding: How Approaches to Teaching Digital Literacy Make Students Susceptible to Scammers, Rogues, Bad Actors, and Hate Mongers* (Working Paper A-21322; Stanford History Education Group). Stanford University. https://purl.stanford.edu/mf412bt5333

Wineburg, S., & McGrew, S. (2019). Lateral reading and the nature of expertise: Reading less and learning more when evaluating digital information. *Teachers College Record*, *121*, 1–40.

Ziv, N., & Bene, E. (2021). *Instructional approaches to spotting misinformation*. Stanford Digital Repository. https://purl.stanford.edu/qq566ny0539