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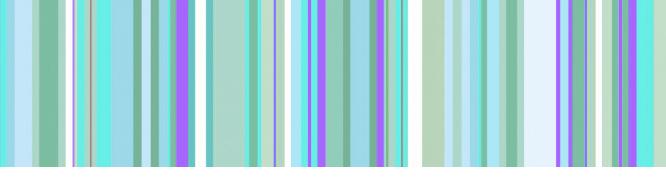
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Diving Below the Surface:

A Layered Approach to Teaching Online Source Evaluation through Lateral and Critical Reading

Andrea Baer and Daniel G. Kipnis

Introduction

As online environments have in many ways changed how information (including misinformation) is created and distributed, many educators have recognized a need for teaching new strategies for evaluating online sources for credibility and potential bias. Educators like Mike Caulfield and research groups like the Stanford History Education Group (SHEG) have stressed the need for "lateral reading," a habit of fact-checking when initially evaluating a source.[1] When reading laterally, a person doesn't spend extensive time initially examining what a source says about itself; instead, they quickly move off of the site in question to look at what others have said about the source and determine if that source is worth a closer read. Lateral reading is a vital first step to checking a source's credibility,

particularly when the credibility or motivations of a source's creators are unclear. It's also an important part of critical reading in everyday life.

The value of lateral reading was made evident in SHEG's 2019 study, in which professional fact-checkers, who regularly practice "lateral reading," far outperformed history professors and undergraduate college students in identifying misleading information.[2] SHEG's Civic Online Reasoning curriculum helps many middle and high school teachers integrate lateral reading strategies into curricula. In higher education, Mike Caulfield's work on web literacy, in particular his book *Web Literacy for Student Fact-Checkers* and his SIFT strategy, offers helpful models for lateral reading.[3]

Despite lateral reading's seeming simplicity (moving off a webpage to find other coverage), if done formulaically, it's not nearly as effective as if done with critical thought. For example, once you've left the webpage in question, what do you search for and what do you click on? How do you read the sources you use to investigate the source in question? Personal beliefs and biases can also powerfully influence how accurately a person evaluates a source. As research on confirmation bias illustrates, people tend to give less scrutiny to sources that fit with their pre-existing beliefs than they do to sources that challenge those beliefs.[4] Done well, lateral reading requires a range of complex analytical and metacognitive reading skills and strategies. If you dig more deeply into SHEG and Mike Caulfield's extensive work on lateral reading, this becomes evident. However, overviews of lateral reading tend to neglect how multi-layered *critical* lateral reading really is.

Research on students' web evaluation skills suggests that the range of critical reading strategies that are part of lateral reading are usually not taught explicitly. In contrast, some studies indicate that students are taught checklist approaches to evaluating online sources that focus on superficial features of a website (e.g., CRAAP, RADCAB).[5] A checklist mentality can prevent students from engaging in more critical reading and evaluation of sources.[6] The complexities of web evaluation point to the need for teaching lateral reading as a kind of critical reading that involves analysis of a source's larger context and purpose as well as metacognitive reflection.

In this chapter, we—two academic public services librarians who liaise with different disciplinary areas (the humanities/social sciences and life sciences)—discuss a scaffolded approach to teaching web source evaluation that brings together lateral and critical reading strategies. (Though lateral and critical are not mutually exclusive categories, critical thinking that ideally occurs during lateral reading is often not taught explicitly.) More specifically, we share our experience with developing an online tutorial on lateral reading and evaluating students' analytical reading practices while they completed the tutorial. Finally, we discuss pedagogical takeaways useful for teaching lateral reading and critical source evaluation in a range of contexts.

Critical Reading Connection

We refer to "lateral reading" and "critical reading" as distinct concepts because the two do not necessarily go hand-in-hand, though skillful lateral reading involves critical reading (or what we call "critical lateral reading"). *Critical* lateral reading involves more than the

mere act of moving off a page to see what others say; a reader also has to think critically about the extent to which they trust other sources and why, and they have to draw connections (or notice disconnects) among different sources. When individuals engage in critical lateral reading, they use the web as a web. In other words, they recognize the interconnected and intertextual nature of (online) sources and the need to investigate sources and verify content, rather than taking things at face value. Taking advantage of the web as a web, they engage with a network of information sources that can be used for further inquiry and investigate the social and rhetorical contexts in which information sources are created and shared.

Contextualizing Sources

Behind the practice of critical lateral reading is an understanding that sources are created by people, groups, and organizations with varying and often complex purposes, motivations, and perspectives. Critical lateral readers approach sources with a healthy degree of skepticism. They take the time to investigate the context and motivations behind a source or its creator by seeking additional (and trustworthy) coverage and comparing that coverage with the original source. Throughout this process of contextualization and analysis, the reader asks questions like, What is this source about? What do I know about this topic or issue? Who created it and why? Does what the source in question says about itself (or about the issue) align with what others say? The specific questions that one asks during this investigation may vary depending on the source.

Metacognition

Critical lateral readers also practice and build metacognitive skills that help them think critically about their cognitive processes, including their reading and analysis. Broadly speaking, metacognition can be understood as "thinking about thinking," which includes awareness of, reflection on, and investigation into one's thought and learning processes. More specifically in the context of lateral reading, metacognition skills include

- asking the right questions in order to learn more about a source's credibility/ or an author's motivations;
- strategically selecting which sources to use for further research; and
- increasing awareness of how one's own beliefs, biases, perspectives, and experiences may influence their view of a source.

METACOGNITION, LATERAL READING MOVES, AND SIFT

As is evident in the metacognitive skills listed above, critical lateral readers exercise an awareness of the cognitive processes and actions that they are taking in order to evaluate sources. As students develop their lateral reading skills, they ideally reflect on how they have evaluated online sources in the past while also trying out aspects of lateral reading to which they are introduced. Mike Caulfield's SIFT acronym is a helpful acronym for key lateral reading moves.[7] SIFT offers a brief set of vocabulary for thinking and talking more deliberately about the cognitive processes and actions behind critical lateral reading.

As we explain in the early part of our tutorial, SIFT prompts certain kinds of thinking about one's online reading and evaluation process. Later in the chapter, we explain SIFT in more detail.

Teaching Strategies

As we have mentioned, our tutorial's structure is informed by our initial experiences with teaching lateral reading to undergraduate students. It is also designed with the understanding that the simple act of moving off a webpage to see what others say about a source is a crucial first step of lateral reading, but it is only the beginning.

The critical thinking that lateral reading ideally involves may not be automatic for many students. During a pilot of our tutorial, as we analyzed students' written descriptions of their process, we noticed that many students had challenges with moving beyond a mechanistic approach to lateral reading and engaging in critical source analysis. They needed more guidance on what questions to ask in order to contextualize sources and assess their credibility.

To help students further develop their critical lateral reading skills, we took a scaffolded approach to designing our tutorial. Scaffolding involves designing sequenced learning experiences that help students continually build on and strengthen their understanding and abilities, largely through instructor modeling, student practice, and feedback. This scaffolding is evident in the tutorial's main components, as described below. Our tutorial was designed as a stand-alone module for first-year undergraduate students and not for a specific course(s). In fall 2020, we piloted the tutorial with 141 first-year business students. We offer a certificate of completion at the end of the tutorial, which students can provide to faculty who wish to have students complete the tutorial in conjunction with a particular course.

Our tutorial has an Attribution Share-Alike Creative Commons (CC) license, which allows for sharing and redistribution of our material in any medium or format. (Please see the Teaching Resources section for the tutorial link.) Adopters can remix, transform, and build upon our work. Other academic institutions, including high schools, community colleges, and universities, have adopted our guide. Assigning a CC license to our toolkit has been an effective means of communicating our willingness to partner and share our work with the librarian community. Our greatest success with outreach has been working with librarian liaison colleagues who have developed close relationships with their faculty. Additional outreach efforts include presenting at national conferences and events.[8]

Pre-Activity

Students begin the tutorial by completing an evaluation exercise in which they assess the trustworthiness of two websites, using a scale of 1–4 (1=not at all credible, 2=mostly not credible, 3=mostly credible, 4=highly credible) and then describing their evaluation process. The four-point scale is intended to challenge the false dichotomy of "good" and "bad" sources.

At the time of this writing, the tutorial is designed so that when students complete the pre-activity, they are given a unique anonymous identifier when accessing the activity. This number is randomly generated from the online Qualtrics form, and students are informed that they will need to provide this number in order to access each subsequent activity and receive their certificate of completion. (Because this process has been confusing to some students, in an updated version of the tutorial, we will ask individuals to use their email addresses as unique identifiers. The email addresses will be kept confidential.) The pre-activity helps us to check students' prior knowledge and to activate their current thinking about evaluating sources. The websites used for this activity—the American College of Pediatricians and the American Academy of Pediatrics—are also evaluated in Mike Caulfield's videos, "Online Verification Skills—Video 1: Introductory Video and "Online Verification Skills—Video 2: Investigate the Source," which we show students later in the tutorial.[9] These websites appear on the surface to be professional and credible, but if one reads laterally, they will hopefully quickly learn that only one of these sites is trustworthy.

Introducing Key Concepts and Practices

After the pre-activity, we introduce several key concepts and frameworks that serve as "touchstones" throughout the tutorial. These are particularly useful for students in unlearning ineffective and outdated strategies for online source evaluation that they often have been taught.

CLICK RESTRAINT

The first concept we introduce is click restraint. Readers exercise click restraint when they do not immediately click on the first search results. Instead, they scan a search results page, looking at things like the title, source description, and featured sections, before deciding which links to click.[10] This helps readers get a fuller picture of the coverage available on that source before venturing down too many "rabbit holes." They can then make better choices about which sources will be the most useful. (For example, web pages from the original source will often be on search results pages but usually won't give a reader a view of what others say about that source.) Click restraint is a regular practice of fact-checkers, who recognize that often the first search results may not be the most reliable ones and instead look for more trusted coverage.

SIFT

While click restraint is specific to engaging with search results and linked text, SIFT is an acronym for the overall process of lateral reading. The following explanation of SIFT comes from our tutorial:[11]

1. **STOP.** Pause and ask yourself if you recognize the information source and if you know anything about the website or the claim's reputation.
2. **INVESTIGATE the source.** Take a minute to identify where this information comes from and consider the creator's expertise and agenda. Is this source

worth your time? Look at what others have said about the source to help you with these questions.

3. **FIND trusted coverage.** Sometimes it's less important to know about the source and more important to assess its claim. Look for credible sources; compare information across sources and determine whether there appears to be a consensus.

4. **TRACE claims, quotes, and media back to the original context.** Sometimes online information has been removed from its original context (for example, a news story is reported on in another online publication or an image is shared on Twitter). If needed, trace the information back to the original source in order to recontextualize it.

METACOGNITION AND READING ABOUT "HOT" TOPICS

The first part of SIFT, Stop, may initially seem less central than other components that require more time, but the practice of pausing when first encountering a source is vital to checking one's own emotional and cognitive responses before drawing conclusions about a source. This pause provides an important space for a reader to shift into the more critical frame of mind that is necessary for effectively contextualizing and evaluating a source.

Critical readers make this pause because they understand that personal beliefs and confirmation bias powerfully influence how people respond to and evaluate sources, especially in online environments in which people so often experience information overload as they encounter a large amount of information in a short amount of time. Pausing at the start of evaluating a source gives the reader a moment to notice if they are having a strong emotional reaction to a source and, if they are, to consider why. This slowing down helps a reader to practice metacognition and better positions them for considering if their own views about an issue may influence their reading and/or if the source's creator may be using rhetorical strategies that evoke certain emotions. In short, by pausing, the reader can consider more reflectively the significance of any emotional reaction they may have to the source.

The practice of slowing down and checking one's emotions is especially valuable for online source evaluation because sources that require a more careful evaluation are often on topics about which people may have strong pre-existing views (e.g., vaccines, traditional/alternative medicine, government/economic policies). Confirmation bias and other cognitive biases are more likely to influence one's thinking when engaging with such topics. But increased awareness that our beliefs influence how readily we accept or dismiss claims and evidence that affirm or challenge those beliefs may help people counteract these cognitive biases.

Our tutorial, by drawing attention to the role of confirmation bias on source evaluation and reminding students of the importance of pausing and noticing when they are having a strong emotional reaction, nudges students to pause and reflect throughout the lateral reading process. We also model an observational and fact-based analysis of sources, acknowledge what we do and don't know about a given source, and reserve initial value judgments. While these efforts are not enough to overcome all of the potential negative

effects of confirmation bias, they are a starting point for cultivating greater awareness of how beliefs and perspectives influence people's reading and evaluation processes.

Modeling Concepts and Practices

Alongside the tutorial's introduction of click restraint and SIFT are brief videos through which those concepts and related practices are put into action. As mentioned previously, we provide modeling of lateral reading through two brief videos from Mike Caulfield: "Online Verification Skills — Video 1: Introductory Video" and "Online Verification Skills — Video 2: Investigate the Source."[12]

After these video demonstrations, we provide more in-depth modeling through the use of text and screenshots as we walk students through our process of evaluating a website from the AutismOne conference using SIFT.[13] One thing we learned through using our tutorial over time is to keep in mind the living nature of the internet: sometimes websites and web links will become defunct, as happened with the link to the AutismOne Conference page. We decided that rather than revise the tutorial with a new website example, we would use an archived version of the webpage captured by the Internet Archive's Wayback Machine. Within the tutorial, we explain our use of the archived webpage.[14] This explanation further challenges the false dichotomy of good/bad sources, as we acknowledge that web sources of varying quality may be removed. The fact that a website no longer lives on the web is not necessarily a "red flag." Readers may wish to view our tutorial for a more in-depth view of our approach to modeling, but we will highlight here a few examples of our modeling that serve as more concrete illustrations of how we articulate our mental processes.

The first step of SIFT, as mentioned previously is: **STOP.** Pause and ask yourself if you recognize the information source and if you know anything about the website or the claim's reputation. This act of pausing is a time to consider a source's context, including from where the source comes and with what topics or issues it engages. Examining the webpage, we note that its content is about a presentation given at the AutismOne Conference. We then reflect on what we do and don't know about this source, the conference, and the related issues. The following two paragraphs offer an example of how we explain our thought process:

> We don't immediately know anything about the conference or its reputation. We do know that the causes of autism have been heavily debated by groups who oppose vaccinations and that the wide consensus in the medical profession is that vaccinations do not cause autism and are essential to preventing the spread of life-threatening illnesses. Early scientific research that suggested a link between vaccinations and autism has since been found to be highly flawed, and the general scientific consensus is that there is no link. However, many groups still believe vaccinations are a cause of autism.

> Given that this source is on a topic that is contentious among some groups, we may need to evaluate this source more carefully. Who is the author/

creator? What is their level of knowledge/expertise on this topic? Is the source based on rigorous scientific research? We'll want to keep such questions in mind as we apply SIFT and the Four Moves.[15]

As the text above reflects, the first step of SIFT can actually involve numerous mental processes and questions that vary depending on the specific source and the surrounding context. There is no single formula for how to approach a source, and as we have discussed previously, checklist approaches to source evaluation that include long lists of questions have not proved to be effective teaching strategies. At the same time, the overall questions that we ask about this source in order to contextualize it (e.g., where it "lives" online, who is behind the creator and their background, what evidence is presented) will be useful for evaluating many sources.

As we move through other parts of SIFT, we continue this kind of modeling. Among the mental processes and actions that we demonstrate are:

- Contextualizing a source: Where is this from? With what issues does it engage? (as demonstrated in the sample text above)
- Assessing what we know and don't know about a source and where we are most likely to find additional information that will provide us with the context that we're currently missing
- Drawing connections between what students previously observed and what they will now practice with a new example
- Running a search in Google for "AutismOne Conference Wikipedia," reviewing the overall search results, and determining sources to select for further investigation (this mirrors the "Wikipedia trick" that Caulfield demonstrates in his video "Online Verification Skills—Part 2: Investigate the Source")
- Thinking flexibly about what sources and what strategies may lead to trusted coverage (e.g., asking how much can be learned by investigating an individual author/creator vs. the organization or publication behind the source; asking to what extent to investigate the author/creator vs. the claim being made)
- Consulting a second source: continuing our deeper investigation by looking for additional coverage and again considering the motivation(s) behind the information being presented

Following our modeling of evaluating AutismOne Conference, we conclude by summarizing key points and takeaways.[16] A common thread of these takeaways is the importance of being sensitive to context and being flexible with one's search and evaluation strategies. These understandings will hopefully guide students as they put lateral reading skills into action.

Practice

After we have modeled our evaluation of the AutismOne Conference page, students have an opportunity to practice lateral reading while evaluating the trustworthiness of another online source, Minimumwage.com. (The Stanford History Education Group has also used this website for much of its research on online source evaluation.)[17] As with the

pre-activity, students are asked to use the same 4-point scale and to explain their reasoning and the evidence that supports their assessment.

Feedback and Final Reflection

Finally, students receive feedback on their practice as they read about how we analyzed Minimumwage.com. We model our thought process here much like we did when evaluating the AutismOne Conference webpage. After evaluating Minimumwage.com, students complete a reflection in which they compare their evaluation process with ours and consider if they would change anything about it.

Discussion

Our most extensive assessment of the tutorial thus far is from fall 2020, when first-year business students completed the tutorial as part of their coursework. While we plan to discuss our assessment findings in greater detail in a future publication, for the purposes of this chapter we will share our overall findings, which are based on data from 141 students who agreed to participate in our study. We compared students' evaluation processes at the start of the tutorial (the Pre-Activity) and at the end of the tutorial (the Evaluation Exercise and the Post-Activity Reflection). In our analysis, we looked for evidence of students' various evaluation strategies, and in particular for evidence of lateral reading and the accuracy and depth of students' evaluations. Overall, students improved their abilities to engage in lateral reading and to evaluate online sources. At the same time, short interventions like this thirty- to forty-minute tutorial are only a first step that needs to be built upon with further opportunities for practice and feedback. After completing the tutorial, many students still employ less effective "checklist" evaluation strategies that they have likely been taught over the years (e.g., placing excessive weight on a web domain as an indicator of authority and relying heavily on a source's "About" page for accurate information about the source). Some who engaged in lateral reading still struggled to do so *critically*—that is, after leaving the website in question identifying those sources that are more likely to give them better insight into that website, and more broadly knowing what kinds of questions to ask about the website or its creator/s.

As mentioned previously, during the Pre-Activity, students are asked to evaluate the credibility of two web sources on a 1–4 scale (with 4 being the most credible).[18] Though one of the Pre-Activity sources is highly credible (American Academy of Pediatrics) and the other is highly questionable (American College of Pediatricians), both websites would pass the CRAAP checklist, as they have the superficial markers of a credible source. One needs to either have prior knowledge about the organizations behind these sources or to investigate them briefly in order to see that only one of them is trustworthy.

As might be expected, if people do not use lateral reading strategies, there was little difference in students' evaluations of the two sources. The large majority of students concluded that both sources were either mostly credible or highly credible. Most students, in explaining their evaluation process, described "checklist-like" evaluative criteria that

are commonly taught and yet not very effective (e.g., examining the web domain, "About" page, and design and layout).

Students' evaluative and reading practices offer further insight into their learning and their needs for future learning. Our findings show that by the end of the tutorial, roughly 40 percent of students showed evidence of at least some degree of lateral reading—that is, students moved off the website in question and sought out other sources, even if sometimes the additional sources consulted were not used in the most effective way. While this is a clear improvement from the start of the tutorial, it was not as great as we had hoped for. The fact that we did not see a higher degree of lateral reading at the end of the tutorial could be due in part to some students moving through the tutorial without engaging with all its content. An additional factor may be the unlearning that needs to occur before students apply lateral reading with greater consistency and skill: if students have been taught over many years to evaluate online sources primarily through surface features like domain name and professional layout, those habits are likely to continue without ongoing practice with alternative strategies.

Our data also indicates that lateral reading at its most basic level—moving off a webpage to find other coverage—is not enough on its own to ensure critical evaluation and reading. On the upside, among the students who used lateral reading, the majority (approximately 70 percent) engaged in what we call "*in*-depth analysis," through which they investigated aspects of the source—like purpose and motivation—that helped them gain insight into the source's credibility. However, about a quarter of those who described lateral reading moves demonstrated what we call "surface" analysis: they sought other coverage but did not appear to ask the critical questions that would provide a better understanding of a source's credibility. Though in our modeling of (critical) lateral reading we demonstrated "depth" analysis that includes consideration of a source's purpose or a creator's motivation, this guidance was not sufficient for prompting many students to transfer these skills to their evaluation of Minimumwage.com. Students likely need more extensive practice and guidance with critical lateral reading in order for interventions like this one to have a larger impact. Other lateral reading research like that of Stanford History Education Group (SHEG) similarly suggests that brief interventions can make a modest difference while more integrated and extended efforts are needed for greater change.[19]

With this in mind, we are in the process of developing subsequent tutorials on lateral reading that give more focused attention to critical source analysis. These tutorials will include more in-depth modeling, guidance, and practice opportunities that encourage critically investigating sources by analyzing their context and purpose and asking critical questions.

Best Practices or Recommendations

The Introduction to Lateral Reading tutorial is a useful starting point for teaching critical analysis and reading of online sources, but it is not the endpoint. Best practices that have shaped this tutorial include the following:

- **Scaffolding**. Scaffolding involves designing sequenced learning experiences that help students continually build on and strengthen their understanding

and abilities, largely through instructor modeling, student practice, guided feedback, and activities of increasing complexity. Scaffolding is evident in the tutorial's main components and structure (the pre-activity, introducing key concepts and practices, modeling practices and concepts, practice, feedback, and reflection).

- **Metacognition**. Along with scaffolding, metacognition is an important component in our tutorial design. We encourage metacognition largely through describing and modeling our critical evaluation and reading processes and then inviting students similarly to reflect on and articulate their thought processes and actions when completing tutorial activities.
- **Cognitive load**. In designing our tutorial, we limited the amount of content and concepts that we present at a given time, providing students opportunities to process, apply, and reflect on a limited number of interconnected concepts. This is an important part of scaffolding. By reducing the amount of content that is presented, we help students to engage with that content in more depth and to develop their understanding of complexity and nuance.
- **Unlearning.** Our fall 2020 findings suggest that the checklist evaluation practices that many, if not most, students have been taught over many years are not easily unlearned. Though in the initial iteration of the Introduction to Lateral Reading tutorial we did not explicitly address common conceptions about evaluating online sources (for example, the perceived significance of a web domain or a professional layout), in revisions of the tutorial, we will give more time early in the tutorial to addressing these common misunderstandings.
- **Integrated approaches.** Our study findings, like other lateral reading research, demonstrate that while short interventions are an important beginning, they should only be that, a beginning. Critical evaluation and critical reading are skills that develop over time and with ongoing practice. Teaching about them must therefore be a collaborative, integrated, and ongoing effort among educators across contexts and throughout students' educations.

Conclusion

Piloting our tutorial has strengthened our belief that most undergraduate students need to continue to receive further guidance on critical source evaluation, coupled with time to practice and receive feedback. Critical thinking and source evaluation skills are relevant far beyond a college curriculum. The ability to understand accurate information, particularly in areas like public health, news, and current events, are hallmarks of an engaged and strong civil society and will serve all global citizens. Our work in teaching lateral reading is one step toward fostering a more informed population that practices healthy skepticism with critical investigation and thought.

Teaching Resources

- Online LibGuide "Evaluating Online Sources: A Toolkit" by Andrea Baer and Dan Kipnis. https://libguides.rowan.edu/EvaluatingOnlineSources.
  The guide offers simple, evidence-based strategies for evaluating the credibility of online sources as well as reading critically. It draws on the work of Mike Caulfield and the Stanford History Education Group and has a Creative Commons Attribution-NonCommerical-Share-Alike 4.0 International license.
- *Web Literacy for Student Fact-Checkers* by Mike Caulfield. Published January 8, 2017. https://webliteracy.pressbooks.com/.
  This self-published book by Mike Caulfield is a practical guide for the student fact-checker. It is a clear, accessible, and helpful introduction for researchers and students who want to learn more about seeking the truth on the web and has a Creative Commons Attribution 4.0 International license.
- Civic Online Reasoning website by the Stanford History Education Group. Started in 2014. https://cor.stanford.edu/.
  This extensive website includes free lessons and assessments for educators to adopt in their classes. It is aimed primarily at middle and high school students, though materials may be adapted for other audiences like college students.

Notes

1. Mike Caulfield, *Web Literacy for Student Fact Checkers*, self-published, 2017, https://webliteracy. pressbooks.com/; Joel Breakstone et al., "Students' Online Civic Reasoning: A National Portrait," Stanford History Education Group & Gibson Consulting, 2019, https://purl.stanford.edu/ gf151tb4868; Sarah McGrew et al., "Can Students Evaluate Online Sources? Learning from Assessments of Civic Online Reasoning," *Theory & Research in Social Education* 46, no. 2 (2018): 165–93; Sarah McGrew et al., "Improving University Students' Web Savvy: An Intervention Study," *British Journal of Educational Psychology* 89, no. 3 (2019): 485–500; Sam Wineberg et al., "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, CA: Stanford History Education Group, Stanford University, 2020), accessed January 29, 2021, https://purl. stanford.edu/mf412bt5333.
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4. Joseph Kahne and Benjamin Bowyer, "Educating for Democracy in a Partisan Age: Confronting the Challenges of Motivated Reasoning and Misinformation," *American Educational Research Journal* 54, no. 1 (2017): 3–34; Milton Lodge and Charles S. Taber, "The Automaticity of Affect for Political Leaders, Groups, and Issues: An Experimental Test of the Hot Cognition Hypothesis," *Political Psychology* 26, no.3 (2005): 455–82; Charles S. Taber and Milton Lodge, "The Illusion of Choice in Democratic Politics: The Unconscious Impact of Motivated Political Reasoning," *Political Psychology* 37 (2016): 61–85; Brian E. Weeks, "Emotions, Partisanship, and Misperceptions: How Anger and Anxiety Moderate the Effect of Partisan Bias on Susceptibility to Political Misinformation," *Journal of Communication* 65, no. 4 (2015): 699–719.
5. Mike Caulfield, "A Short History of CRAAP," *Hapgood* (blog), September 14, 2018, https://hapgood. us/2018/09/14/a-short-history-of-craap/.
6. Sam Wineburg et al., "Educating for Misunderstanding."
7. Caulfield, "SIFT (The Four Moves)."

8. Andrea Baer and Daniel G. Kipnis, "SIFTing and Four-Moving Online: Opportunities and Challenges with Teaching Lateral Reading through an Online Module" (presentation presented at LOEX Conference, online, November 7, 2020), https://rdw.rowan.edu/lib_scholarship/19; Andrea Baer and Daniel G. Kipnis, "Teaching Online Source Evaluation: Going Beyond CRAAP Using Lateral Reading" (presentation presented at the New Jersey Library Association College and University Section (CUS) Summer Workshop, online, July 1, 2020), https://rdw.rowan.edu/lib_scholarship/21; Andrea Baer and Daniel G. Kipnis, "Teaching Lateral Reading with an Online Tutorial: Preliminary Study Findings" (presentation presented at Challenges to Digital Literacy Education, Stanford Cyber Center Policy, Stanford University, online, December 2, 2020), https://rdw.rowan.edu/lib_scholarship/27; Andrea Baer and Daniel G. Kipnis, "Unpacking Lateral Reading through Practice and Reflection: Metacognitive Strategies of Critical Source Evaluation" (presentation presented at Information Literacy Summit, online, April 30, 2021), https://rdw.rowan.edu/lib_scholarship/30; Andrea Baer, Daniel G. Kipnis, Rachel Flynn, and Yan He, "Trust, Criticality, & the Open Web: Three Approaches to Teaching Lateral Reading" (presentation presented at ACRL Conference, online April 13, 2021), https://rdw.rowan.edu/lib_scholarship/29.

9. CTRL-F, "Online Verification Skills — Video 1: Introductory Video," June 29, 2018, Educational video, 3:13, https://www.youtube.com/watch?v=yBU2sDlUbp8; CTRL-F, "Online Verification Skills — Video 2: Investigate the Source," June 29, 2018, Educational video, 2:44, https://www.youtube.com/watch?v=hB6qjIxKltA.

10. For a useful video on click restraint, see: "How to Find Better Information Online: Click Restraint," Stanford History Education Group, video, 2:19, February 6, 2020, https://www.youtube.com/watch?v=gbPEiCGxVVY&feature=youtu.be.

11. Andrea Baer and Daniel G. Kipnis, "Evaluating Online Sources through Lateral Reading: An Introduction" (tutorial), accessed November 23, 2022, https://libguides.rowan.edu/tutorial-evaluatingonlinesources1.

12. CTRL-F, "Online Verification Skills—Video 1"; CTRL-F, Online Verification Skills—Video 2."

13. Kerri Rivera, "38 Children Recovered in 20 months with MMS," Autism One Conference (archived by the Wayback Machine, Internet Archive), https://web.archive.org/web/20201029014845/http://www.autismone.org/content/38-children-recovered-20-months-mms.

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