



Framing Fake News: Misinformation and the ACRL Framework

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abstract: To address the growing problem of misinformation, librarians often focus on approaches tied to the frame “Authority Is Constructed and Contextual” from the Association of College and Research Libraries (ACRL) Framework for Information Literacy for Higher Education. The Framework, however, encompasses a much wider range of skills, abilities, knowledge practices, and dispositions that can be used to recognize and avoid misinformation in today’s complex media environment. This article does a close reading of the Framework to examine how librarians can apply it more fully when teaching research strategies, especially source evaluation. The authors propose that librarians take a holistic approach to the misinformation problem and promote critical thinking by incorporating concepts and dispositions from every frame in their instruction.

Introduction

The rise of misinformation in all its forms presents challenges and opportunities to those who teach college student researchers how to locate, evaluate, and use reliable, high-quality sources.¹ College students are frequently exposed to misinformation. In 2018, the Pew Research Center, an independent, nonpartisan organization that studies public opinion, found that 88 percent of 18- to 29-year-olds use social media,² where misinformation is widely distributed. Project Information Literacy, a national study of how young adults find and use information, reported that 89 percent of college students said that social media is their primary source of news.³ A study by Chris Leeder concluded that few college students accurately gauge their ability to identify a fake news story.⁴ Although students use social media frequently, they are often unaware that they may have not yet developed the skills and abilities needed to identify misinformation online. They may have been taught evaluation techniques that were developed for static, primarily print, sources,⁵ but much of today’s misinformation has been designed to evade these outmoded appraisal methods. This situation creates

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an urgent need for librarians and teachers to update and redesign source evaluation strategies, or to create and use new techniques flexible enough for the fast-evolving misinformation environment.

Librarians often address the growing problem of misinformation by focusing on the practices and dispositions in the frame “Authority Is Constructed and Contextual” from the Association of College and Research Libraries (ACRL) Framework for Information Literacy for Higher Education.⁶ While this frame is an obvious starting point to address the problem, strategies that consider only authority fail to give students enough tools to critically examine the wide range of sources they may use in their research or encounter in nonacademic environments. This frame also has received criticism. In an article about post-truth and misinformation, Stefanie Bluemle claims that the frame gives an inconsistent definition of authority and how it is constructed, suggesting that those weaknesses make the authority frame “unprepared to fully address a post-facts climate.”⁷

If the frame “Authority Is Constructed and Contextual” cannot tackle alone the many aspects of misinformation, librarians need to look more broadly to address these issues. An examination of each frame in the ACRL Framework yields additional, complementary strategies that librarians can use ...

This point is important because misinformation thrives in a “post-facts” climate, such as the current political situation in the United States. If the frame “Authority Is Constructed and Contextual” cannot tackle alone the many aspects of misinformation, librarians need to look more broadly to address these issues. An examination of each frame in the ACRL Framework yields additional, complementary strategies that librarians can use to model critical thinking about research strategies and source evaluation. There are many definitions of critical thinking, but this article defines it as the process

of skillfully evaluating, analyzing, and synthesizing information to reach a sound conclusion. Librarians can draw relevant evaluation strategies from all the frames when teaching students, even when the assignment or instruction is not specifically focused on the misinformation problem. Bluemle also suggests that teaching source evaluation alone “is not an antidote to fake news.”⁸ This article, however, proposes that if librarians model a more holistic approach to research, based on critical thinking and using practices and dispositions from throughout the Framework, this process will do more to address the issue of misinformation than does the current practice of focusing only on the frame “Authority Is Constructed and Contextual.”

The next section of this article conducts a close reading of the Framework to examine the relationship between research and evaluation strategies, misinformation, and the knowledge practices and dispositions in each frame. Discussion includes selected activities or strategies that address each frame’s role in thinking critically about research and evaluation strategies. The activities described may address multiple frames due to the overlap of concepts within the Framework.

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“Authority Is Constructed and Contextual”

The frame “Authority Is Constructed and Contextual” has a clear connection to source evaluation, as it emphasizes the expertise of information creators and the contexts in which knowledge is developed and used. The frame also recognizes that both the reader and the producer of information have bias. All the practices and dispositions in this frame involve thinking critically about information, from establishing different paths to becoming an expert to practicing acceptance of contradictory viewpoints. The frame explores how sources can be authoritative, credible, and appropriate for information needs. It also considers how source types differ in value, depending on the discipline and context. By modeling critical examination of the authority of information creators and publishers, librarians support students in developing strategies for identifying and avoiding misinformation.

Teaching students to evaluate the authority of a variety of sources can be challenging when assignments require students to use only specific types of sources assumed to be dependable. One activity that can be applied to any academic project is to give students a scholarly source and a popular one and ask them to evaluate the two for credibility, noting the different ways authority is established. Librarians can also encourage faculty to adjust research project requirements to accept a variety of sources and investigation methods. This allows students more opportunities to practice evaluation, including critically examining how authority may be judged differently, based on the context and format of a source. This exercise also challenges the assumption students and faculty may have that format equates to credibility.

Discussing bias with students develops their awareness of the preconceptions everyone encounters when researching. Through reading news stories about the same event from multiple perspectives and comparing how they use the same information but spin it differently, librarians can help learners develop a better understanding of what bias is and how it influences reporting. The website AllSides (<https://www.allsides.com/unbiased-balanced-news>) is

ideal for this type of activity because it rates news stories and publications on a bias scale from right to center to left. Librarians can also introduce students to tools to fact-check information found online to uncover potential prejudice. A sample activity is to ask the class to use the Internet Corporation for Assigned Names and Numbers (ICANN) Domain Name Registration Data Lookup

(<https://lookup.icann.org/>) to find the registered owner of a website and then look up the owner’s background and affiliations. Recognizing that website authors and owners influence the information they publish should encourage students to think beyond the text of a source and seek more context.

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Debating authority encourages critical engagement with sources. Ask students to compare different types of sources on the same topic, such as a news or magazine article reporting the result of a study and the study itself, then discuss with the class which is most credible and why. An alternate activity is to give a set of potential sources to a class and have students debate and vote on the most trustworthy. This can be done using the first page of results from a search engine and again with search results from a library database to add more layers of complexity to the discussion. Librarians can also teach students to do a “lateral reading” of their sources, as proposed by educational technologist Mike Caulfield. Lateral reading asks students to look beyond the source itself and check the author’s credentials or the reputation of the website or publication.⁹ This inquiry can include using a search engine to look up the name of a publication or website plus the word *review* or investigating an author’s background. This method emphasizes that students should seek additional confirmation of the authority of a source rather than trust it blindly.

The knowledge practices and dispositions from “Authority Is Constructed and Contextual” are useful for modeling critical thinking about the authority of a source. Strategies for analyzing trustworthiness help students identify misinformation, which often overstates or obscures its actual authenticity. Strong researchers recognize that they need to consider more than the format of a source to determine its credibility and appropriateness for their purpose, and they reexamine any assumptions about the reliability of sources.¹⁰ Students who actively look for bias and realize they may need to fact-check a source’s authority will be better equipped to identify and avoid potential sources of misinformation.

“Information Creation as a Process”

At first glance, the concepts presented in the frame “Information Creation as a Process” might seem far removed from the misinformation problem, but understanding how different types of material are produced is essential when developing research strategies and critically examining sources, especially on the Web. This frame emphasizes that source quality may be indicated by the process used to create it, including editorial or other reviewing mechanisms. This frame also acknowledges that the trustworthiness of information relates to the path by which it is developed, packaged, and distributed, and that characteristics of a source can reveal much about how it is produced. Librarians can use practices and dispositions from “Information Creation as a Process” to model critical examination of information, regardless of how it is delivered.

Activities that inform students about the differences between the editorial process applied to fake news and that practiced in traditional news can support development of source evaluation strategies. As Wayne Finley, Beth McGowan, and Joanna Kluever point out, “While traditional journalism outlets subject news articles to a rigorous editorial process based upon evidence, requiring fact checking and verification of sources, fake news does not rely upon these time-tested processes. But the editorial process may not be well-known to the general public.”⁸ Students who know about the range of editorial processes used online can examine those procedures as an additional facet of their source evaluation strategy. Activities such as challenging students to compare websites

that have professional editors to those without editors emphasize the added value associated with specific editorial operations. An extension to this activity is to discuss the peer-review process in academic publishing, which provides a similar quality check, or to acknowledge that class peer-review activities may achieve a similar purpose of improving the final product.

Librarians might emphasize that some website developers take advantage of the processes involved in publishing on the Internet. For example, students already know of a relationship between domain names and authority. Activities that build on that

knowledge might ask the class to look up who verifies the legitimacy or credentials of websites with, for example, a .org designation (such as Wikipedia), or to discuss how domain names are assigned. Realizing that no one polices these designations challenges assumptions of Internet quality based on domain names or other superficial markers.

To assist students with evaluation, librarians can spark class discussions on the strategies used by producers and promoters of online misinformation. Topics can be tailored to complement a disciplinary focus, such as asking a composition or communication class to examine the rhetoric of a website to determine whether it exaggerates its authority. Computer science classes may be interested in discussing search engine optimization, by which online publishers ensure that their site appears high on the list of results returned by a search engine to increase traffic to their website. Optimization techniques include manipulation of long-tail keywords—that is, longer and more specific search phrases—and the use of bots, computer programs that simulate human activity on the Internet.

Librarians have a role in helping students understand the processes used to publish Internet sources, which can affect information quality. Knowledge of the different standards applied to content production gives learners additional strategies to employ when evaluating sources and encourages them to see how their own participation in peer-review activities adds another layer of scrutiny to their own writing.

“Information Has Value”

In source evaluation, there is a strong connection between perceptions of quality and value. The frame “Information Has Value” promotes knowledge of the ways in which information functions “as a commodity, as a means of education, as a means to influence, and as a means of negotiating and understanding the world.”⁹ Access and barriers to quality content are especially relevant to source credibility, because though the amount of openly available and credible content on the Internet has increased, much

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higher-quality material is still subscription-based. Knowledge practices related to research strategies and evaluation include crediting the work of others, knowing how personal data can be commodified by companies to deliver targeted advertising, and understanding that some perspectives may be marginalized by power structures. The financial value of information is strongly linked to misinformation since research shows that it is more lucrative to publish fake news than accurate reporting.¹⁰ Fake news stories may generate more advertising revenue because they drive up the number of page views or even “go viral” through Internet sharing more often than fact-based content does. Dispositions within this frame that relate to misinformation include valuing the time and effort required to create quality material. Librarians can emphasize different aspects of information value when teaching about research and evaluation.

Activities related to “Information Has Value” may examine the purpose and motivation for how content is presented and contextualized. Librarians may model how to check for sponsor influence in scientific studies. This activity can be adapted to nonscientific sources by having students look up the registered owners or financial backers of a website or other source they want to use and considering how those owners might influence how information is spun. This consideration can be applied to other media as well. For example, students’ evaluation of a *Washington Post* article about online shopping may become more nuanced when they learn that the paper is owned by the chief executive officer of Amazon.com. Librarians can ask students to consider how they might account for such sponsorship within a source or encourage them to bring in another to balance potential conflict.

The distinction between advertising and other types of content has blurred in online environments. In their now-famous study of the media literacy of students in middle school, high school, and college, researchers from Stanford University in Stanford, California, found that 80 percent of the students tested could not tell the difference between sponsored content (advertisements) and news articles.¹¹ An activity that addresses this distinction is to direct students to a website that interweaves its own content with sponsored material and ask them to identify which articles have been paid for by outside organizations. Next, lead the class in comparing a sponsored article with a non-sponsored one from the same site to identify differences between content whose main purpose might be advertising or propagandizing and an article that seeks to add to scholarly knowledge or provide accurate information.

Additional activities that support the concepts within “Information Has Value” include challenging students to think about value versus familiarity and ease of access. Students often place a high value on sources found through Internet search engines

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because they are easy to locate, but librarians can introduce students to the reality that the open Internet includes much more misinformation than library databases do. An activity that demonstrates the difference between content available through the open Web and that in research collections is to ask students to search using the same set of keywords both on the open Internet and in a library database and compare the results they get. The class can then



pick which sources in both lists seem most credible and articulate why. Students may not recognize that much academic content is not free partly due to the costs associated with editing and curation, a vetting process that most of the open Web lacks. Even quality open access content has a price tag. Librarians can ask students to think about the privilege of access to subscription-based content that others lack and how that might inform their research strategies now and in the future.

“Information Has Value” encourages thinking about how value is constructed in information environments. A good researcher recognizes that there are costs associated with both creating and accessing high-quality content and understands that some information producers incentivize profit over accuracy. Librarians play a role in teaching students how to recognize when they are being sold something and to consider how the sponsorship or ownership of a resource may influence its content. Students who can discern the differences between cleverly disguised advertisements or editorials and less biased content are more prepared to recognize misinformation.

“Research as Inquiry”

The frame “Research as Inquiry” recognizes the need to ask progressively more sophisticated questions as a student moves through the research process, which mirrors the way researchers should question potential sources as they evaluate them for suitability. According to “Research as Inquiry,” the required level of engagement changes based on the situation and information need, which contributes toward developing strategies for further inquiry. Knowledge practices in this frame applicable to critical thinking about sources include the abilities to identify and pursue gaps in information, to bring sources into conversation with one another, and to analyze content to make educated guesses. Relevant associated dispositions include “consider[ing] research as open-ended exploration and engagement with information,” reducing bias, locating and accounting for alternative viewpoints, and recognizing the researcher’s own gaps in knowledge and asking for help as needed.¹² The nature of research requires learners to develop search strategies in which they look in more than one resource and use more than one set of keywords to find multiple viewpoints. Librarians can incorporate portions of the “Research as Inquiry” frame into their instruction to strengthen student research strategies and reduce susceptibility to misinformation.

The popularity of fake news may persist because it uses simple language and is “aimed at audiences who are not likely to read beyond titles.”¹³ Research from the field of composition and rhetoric has found that college students often gravitate toward online material that is “straightforward and uncomplicated” and rate this characteristic as more important than relevance to their topic when choosing which resources to use.¹⁴ Librarians can help students engage more fully with challenging sources through activities that increase their confidence in reading and analyzing content that might seem intimidating. One activity that can encourage

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students to read beyond article titles while considering search results is to discuss different strategies for reading based on format. For example, acknowledge that the primary audience for academic research is other scholars, not college students, so students may not yet have the expertise to understand the methodology or results. Reading the abstract and then other sections out of order, or skimming the methods and statistics sections, might help them focus on content with which they feel more comfortable.

Librarians can also encourage students to not feel satisfied with sources that answer their questions in a simple, straightforward way or that only confirm their views. Understanding that it is not only beneficial but even ideal to look at information from a wide variety of viewpoints will help students gain enough familiarity with their topic that it will be easier for them to spot inaccuracies. Activities that focus on multiple perspectives, including introducing students to such databases as *CQ Researcher* or *Opposing Viewpoints in Context*, both of which consider the many sides of controversial issues, can help make these points. Modeling asking progressively more challenging questions is another way to encourage students to hone this skill. Librarians could begin by asking a class

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which disciplines might care enough about a specific topic to research it. Topics such as performance-enhancing drugs are studied from many angles and generate questions from a wide range of disciplines, including business, sports management, medicine, communication, popular culture, and education.

The frame's focus on searching skills and habits contributes to strong research strategies. Students who learn to seek out a wide range of viewpoints and try to

encompass all aspects of the topics they research will likely gain a deeper understanding of their subject and be better positioned to spot false information. Better searchers question their sources and read beyond headlines and article titles to think critically about how they might synthesize different types of information to support their arguments.

“Scholarship as Conversation”

The relationship between the frame “Scholarship as Conversation” and source evaluation has similarities with both “Authority Is Constructed and Contextual” and “Information Creation as a Process.” All three frames are grounded in authority and process. In addition, this frame recognizes the contributions of scholars within academic disciplines as well as the benefits of identifying voices from alternate viewpoints or outside a discipline to expand knowledge. “Scholarship as Conversation” asserts that understanding the traditional modes of inquiry in a field is necessary to evaluating and participating in scholarship. Relevant knowledge practices related to misinformation include recognizing that important voices may be barred from a conversation and that a given work should be viewed within a larger disciplinary context; acknowledging original source material to strengthen arguments; and “critically evaluat[ing] contributions made by others in



participatory information environments.”¹⁵ Dispositions that relate to misinformation include understanding that participation in conversations should be handled responsibly through following the conventions of citation. Scholars look for disciplinary research in different formats and recognize that formal academic publications engage in a dialogue with one another. Possibly the most challenging disposition from this frame is delaying judgment on an information source until the surrounding context is known. Librarians can engage students in activities that address the conventions of traditional scholarship and more recent modes of distributing information.

Librarians can also ease the transition to scholarly conversations by orienting students to academic expectations. One way to do so is to start with the nonacademic sources students already feel comfortable using. Beginning with an article from a popular magazine that refers to a research study, have students click through to the study itself and analyze whether it was misquoted or misused. Seeing how a source they read easily relates to other types of sources gives students an opportunity to see that academic writers value the same kind of connected conversation through their citations. In contrast, fake news and other types of misinformation often cite sources in the wrong context or for the wrong reasons. A related activity is to ask a class to track a viral Internet story or other item back to its first mention, which often turns out to have been Twitter or another social media site.¹⁶ This challenging exercise provides an eye-opening look into how information and misinformation can spread online, especially in such nontraditional formats as social media postings, blogs, message boards, and other less formal methods of publication.

Because this frame closely examines academic conversations, librarians might promote what Allison Hosier describes as appreciation of “the contextual nature of the research process”¹⁷ through activities that emphasize how research varies in different disciplines. Students can examine how scholarly conversations take place in a wide variety of academic subjects by searching for the same topic in different disciplinary databases, either individually or in groups. They can then compare such characteristics as how evidence is gathered and analyzed or how arguments are constructed. Another activity that encourages critical thinking about disciplinary values is to consider the differences among citation styles. Use a database’s tools to generate citations for an article and ask students to compare them. The placement of the date of publication in American Psychological Association (APA) style differs from that in Modern Language Association (MLA)

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style, for example. Students may connect which disciplines use which citation style and consider why currency of information may matter more in the sciences than in the humanities. Awareness of how scholarly discussions vary by discipline helps students better recognize a variety of well-researched sources of information and the different methods valued in each field.

“Scholarship as Conversation” goes beyond formal academic publishing to identify other venues in which students might participate in learned discourse. Being a good



researcher means seeking sources that represent a variety of perspectives, including those with which the researcher might not agree. Examining other viewpoints helps students develop a better understanding of their own beliefs and realize that true conversations cannot be one-sided or echo chambers that merely confirm opinions they already hold. As students join the conversations within their disciplines, librarians can help them make the transition into these scholarly communities.

“Searching as Strategic Exploration”

Source evaluation is a natural part of a researcher’s search process, and the frame “Searching as Strategic Exploration” recognizes this by emphasizing source evaluation in its first sentence. A good search process begins with sound strategies and habits, such as selecting effective keywords and choosing where to look based on research needs. Inherent in this frame is the recognition that databases and other search tools specialize in different subjects and employ different formats. The related knowledge practice of identifying those who create the information and where they store it requires critical thinking throughout the research process. “Searching as Strategic Exploration” specifically mentions the affective dimensions of research, perhaps this frame’s biggest shift from the 2000 ACRL Information Literacy Competency Standards for Higher Education, in which emotional response to information was not considered. Dispositions related to misinformation include being both flexible and persistent when it comes to searching and recognizing that the value of a source is influenced by the context of the research. In their activities, librarians can use these knowledge practices and dispositions to encourage thoughtful searching.

Believing misinformation is closely connected to confirmation bias and emotion. Simply because a search engine or database returns results that the searcher dislikes does not necessarily mean that the search tool itself is biased. Understanding this is especially relevant in an environment in which the White House accused Google of lacking neutrality and expressed a desire to regulate the company.¹⁸ To disrupt the emotional connection, librarians can ask students to analyze their reactions to sources as they search and choose them. Bluemel suggested that “librarians must give more attention to the role that emotion plays in reasoning and decision making”¹⁹ because feelings influence whether people accept facts as true. A 2012 study from the field of marketing indicates that stories which evoke strong emotions in their readers, especially awe or anger, will more likely go viral.²⁰ To challenge the role that emotion may play in research, ask students to track a viral story back to its origins. As students continue working backward, have them skim or read the sources they find and note their emotional reaction to each. Helping students develop a healthy “emotional skepticism” might help them become better at critiquing sources. BuzzFeed’s media editor Craig Silverman noted that all people are susceptible to believing information they want to be true.²¹ If the main reason a student likes a source is a strong emotional affinity for the content, the student should further investigate whether the source is truly reliable.

Strategies that ask students to consider where they search and which words they use to do so involve thinking critically about the relationship between information creators, information storage, and information retrieval. Librarians might lead a discussion about

where students search and ask why they choose that tool, acknowledging the advantages and disadvantages of different search engines. A related activity that demonstrates the power of neutralizing search terms and balancing extremes is to have students compare results from a search that uses slang or biased language to the results from more standard or impartial terms. Selecting search terms to locate sources with greater credibility requires a willingness to adapt based on the circumstances or results. Additional ideas for increasing student awareness about how Internet search engines influence their results include teaching about such phenomena as search results bias and the filter bubble effect, a state of mental isolation that results from a website automatically feeding users what they want to see and shielding them from views with which they disagree.

“Searching as Strategic Exploration” acknowledges the flexibility of mind needed to search strategically. Good researchers pay attention to where, why, and how they search; are aware of their emotions; and consider how feelings affect their critical thinking processes. Selecting whether to search online or within library resources is a basic skill for student success. Understanding the limitations of search tools is helpful for researchers, especially if librarians can help them understand how search algorithms work and what factors affect the results. More advanced researchers evaluate the available search tools and choose those most likely to provide the needed information. Stronger search processes will naturally reduce the amount of misinformation students encounter.

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Conclusion

Moving from the ACRL Standards to the Framework modeled a professional shift away from a checklist-based approach toward a concept-driven approach to information literacy. This shift followed the evolution of the Internet as it became more interactive and socially driven, requiring more flexibility from teachers and librarians to help students navigate this fast-changing online world. The recent proliferation of misinformation only adds to this need to reexamine and create new approaches. As librarians continue to reevaluate lesson plans in response to both the Framework and the evolving media environment, taking a more holistic approach to help students develop research strategies and critically examine sources provides flexibility to prepare learners for encountering misinformation.

Librarians are not the only educators dealing with the challenge of misinformation. New approaches to teaching students to avoid false information have been proposed in other disciplines. From the field of cognitive research, Elizabeth Marsh and Brenda Yang suggest that pairing the evaluation of sources with the assessment of arguments helps prepare students to better deal with misinformation in both academic and nonacademic contexts.²² In educational technology, Mike Caulfield proposes teaching students to analyze online content using “four moves,” now known as SIFT, an acronym that stands



for stop, investigate the source, find trusted coverage, and trace claims, quotations, and media back to the original context.²³ The SIFT process aims to simplify source evaluation by using skills related to critical thinking and analysis. Caulfield also recommends paying attention to emotion when reading sources; the stronger the emotional reaction people have to the material, the more effort they should spend in analyzing it further because emotions might cloud their judgment.²⁴ Both Marsh and Yang and Caulfield point out that little is known about whether students apply source evaluation techniques learned for academic purposes to their personal and professional research.²⁵

Another new approach comes from the field of composition. Bruce McComiskey proposed that writing instructors look to their own statement, the Framework for Success in Postsecondary Writing, to better equip students to read and write critically in the fake news era.²⁶ This document was developed collaboratively by the Council of Writing Program Administrators, the National Council of Teachers of English, and the National Writing Project. It identifies “habits of mind,” like the ACRL Framework’s dispositions, that teachers should cultivate in their students to help them become better writers. The habits are curiosity, openness, engagement, creativity, persistence, responsibility, flexibility, and metacognition—that is, awareness and understanding of one’s own thought processes.²⁷ McComiskey points out that teaching these habits of mind goes a long way toward making fake news ineffective because readers with these tendencies seldom fall for the rhetoric of misinformation.²⁸ Similar to this approach, the ACRL Framework offers dispositions related to each frame’s concepts and promotes “an attitude of informed skepticism,”²⁹ which, if enacted, also goes far toward helping students recognize misinformation.

Librarians can look to the ACRL Framework for guidance on teaching students to question and think critically about sources. Because misinformation is currently distributed primarily through nonacademic sources, students need research strategies flexible enough to deal with many formats and contexts. Although the Framework is not an ideal fit for evaluating all nonacademic content, it has many of the pieces needed to effectively evaluate sources regardless of the situation. Students need to be prepared for the research environment available to them beyond their college coursework. The Framework offers much more to this preparation than just its first frame.

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