Recently I switched from our longtime family dentist to a new one. Other members of our family had already switched to his practice based on my daughter-in-law's recommendation after she got a referral to him for an implant surgery. As each of them began to use this dentist, I was told how much better he was. He had been practicing much longer, did a more careful and thorough examination, and carefully explained his proposed treatment using a digital photograph of your tooth. He was conscientious about alleviating discomfort, reassuring about avoiding pain, and called to check on how you were doing in the evening after a procedure. As I listened to descriptions of these experiences, I began to form a judgment about this dentist's expertise and trustworthiness, downgrading my opinion of our family practitioner despite my long-term trust. My family's enthusiastic recommendations, which felt truthful to me because they had nothing to gain, convinced me to make an appointment. My behavior is pretty typical; Nielsen reported recently that personal recommendations and, by extension, consumer opinions online are the most trusted forms of advertising globally (Neilsen 2009). In daily life, I make many iterative judgment calls like this one about the competence and trustworthiness of a source (Brehm, Kassin, and Fein 2005) to finally come to an assessment of that person's credibility.

In an academic setting, sources of information that can help me answer a question or make sense of a problem are also judged on competence and trustworthiness. As I locate a written text, an image, or a person, and "interrogate" it, I am again questioning, working through a series of judgment calls that end in a summative assessment of credibility. That final, overall assessment is an iterative process (see figure 1) and is based on three factors:

1. **My definition of credibility**, shaped by my background and prior knowledge, and guided by the kind of information that I need

2. **Specific attributes of the source**, which provide me with cues about its quality and value

3. **My application of rules of thumb** (heuristics) that have worked for me in the past to identify credible information

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1 The following model is based on the research presented in a 2008 article by Brian Hilligoss and Soo Young Rieh "Developing a Unifying Framework of Credibility Assessment: Construct, Heuristics, and Interaction in Context," which appeared in Information Processing and Management 44, no. 4 (July) 1467–84.
Of course, judgments of competence and trustworthiness vary depending on our relationship to the source. For example, the family of the woman in figure 2 sees her as being trustworthy, while we may see her as having expertise.

Social Assessments

Collective credibility judgments go on all the time. The Enron scandal, the exposé of Bernard Madoff’s Ponzi scheme, and dozens of bank failures demonstrated to us that auditors, lawmakers, and regulators may all be experts but may not all be reliable or honest. Social trust, the collective judgment of a group, changes just as individual judgments do. Knowing this, companies and countries expend extraordinary efforts to maintain or restore social trust. Upon taking office, President Barack Obama wrote in a memorandum to the heads of executive departments and agencies:

"My Administration is committed to creating an unprecedented level of openness in Government. We will work together to ensure the public trust and establish a system of transparency, public participation, and collaboration. Openness will strengthen our democracy and promote efficiency and effectiveness in Government" (2009).

Social trust varies by country and by industry. The Edelman Trust Barometer, a large-scale yearly study of trust and credibility of over 4,500 people in twenty countries on five continents, found that, unlike Americans, Chinese citizens’ trust in businesses has risen from 54 percent last year to 71 percent this year among 35- to 64-year-olds (2009, 6). Globally, Edelman reported, technology has been the most trusted industry during the last three years, while media companies are near the bottom (2009, 10).

Social trust colors our personal judgments. The citizens of Scandinavian countries—like other countries that are ethnically homogeneous, wealthy with relative equality of income, and well-governed—exhibit high social trust (Delhey and Newton 2005) with the result that their citizens have more-positive attitudes toward immigrants (Herreros and Criado 2009). Americans rate nurses, pharmacists, and high school teachers highest in terms of their professional honesty and ethical standards (Gallup 2008). And, if we believe "You can make money without doing evil" (Google 2009), then we are likely to trust the relevancy ranking of Google’s results without subjecting them to in-depth analysis or comparison, even when the abstracts are less relevant (Pan et al. 2007). If we trust Google’s reputation, we will downplay the impact on their search results when we learn that:

- webpages are removed from Google Search in compliance with the Digital Millennium Copyright Act (Chilling Effects Clearinghouse n.d.)
- imagery is blurred in Google Maps in response to U.S. and foreign government requests (Geens 2008)
- poor scanning and incorrect metadata mislead readers of a Google book (Duguid 2007)
- the manipulation of ranking, called "Google bombing," continues (Gray 2009) despite Google’s modifications of its search algorithm, which, in turn, have resulted in the omission of accurate and relevant results that should have been included for a search string (Sullivan 2007)

Defining our trust in Google as a function of good and evil is of less use than questioning how our assumptions, like our background...
and prior knowledge, influence our credibility assessments (see figure 3).

**Trust Assumptions of Students and Librarians**

With our help students can learn to recognize their assumptions. When students consider a source to be authoritative, do they mean that the source is accurate based on what they already know? Objective because it’s reported from a neutral point of view? Reliable because they have used the same source successfully before? Expert because the source’s experience or credentials are relevant? Or, perhaps, trustworthy because the source’s assumptions match those that the student holds? One approach, described by Shannon Bomar (page 72), is to implement a scope and sequence of source evaluation skills. By gaining agreement from her faculty that all students would add annotations to their citations for any research conducted across the curriculum, she was able to institutionalize credibility assessments. Over four years, always in the context of a topic being researched, students learned how to:

- make explicit their assumptions about what would be considered credible for a particular topic
- identify specific attributes and cues in information that signaled quality
- develop workable rules of thumb to evaluate the expertise or trustworthiness of information.

Our own profession makes certain assumptions about credibility, which we then teach to students as “rules of thumb” but which they implement as rigid algorithms. For example, we believe that the medium in which information is delivered is a useful measure of reliability (see figure 4).

Thus, books and journals, and, by extension, subscription databases and certain publishers, are more authoritative than the open Web. Some of us might be surprised to learn that Wikipedia agrees with us. According to its guidelines, articles written for Wikipedia “should rely primarily on reliable, third-party published sources... credible published materials with a reliable publication process [and] ... authors [that] are generally regarded as trustworthy or authoritative” (Wikimedia Foundation 2009b).

Of course, the trust we place in print journals, books, and their databases is not entirely misplaced. “Traditional” publishing requires documentation of where information was obtained, formally using MLA, APA, Chicago, and other styles, or informally through attribution. Articles in scholarly journals like *School Library Media Research* incorporate works cited lists. Databases like *Opposing Viewpoints Resource Center* identify from which of Gale’s print anthologies each digital excerpt is reproduced. Children’s nonfiction authors like historian Russell Freedman meticulously attribute information and reference additional sources to help their young readers learn more. Oh, and even Wikipedia requires that evidence be supported with citations. While formal citations are not used in mainstream news and magazines, reporters and writers attribute information, even when they protect sources’ actual names. Attribution and documentation allow us to track the author’s ideas backwards, confirming that the information is indeed as represented and enabling us to broaden our assessment to the author’s sources. Traditional sources acquire authority from “verifiability.”
Sources’ Efforts to Assert Authority

Publishers assert their own claims of authority. They seek authors who are known for their expertise, who are cited by other experts, and who are credentialed or hired by respected institutions. They create ethics and best practices statements and provide a process for refereeing manuscripts by expert peers to “ensure that the articles accepted for publication meet the journal’s accepted standards for quality and to prevent the dissemination of unwarranted claims, irrelevant findings, unacceptable interpretations, and personal views” (LISE 2009). To a greater or lesser extent, each publication in our traditional hierarchy has a procedure for editing manuscripts for clarity and coherence, and for correcting grammatical and factual errors before publication.

Authors assert their competence by speaking, writing, and teaching others about what they know, and by publishing information about their credentials and affiliations. Web 2.0 transparency has made us even more aware that people can become a “brand name” for certain information. Thus, in the school library field we turn to Carol Gordon for action research, Helen Adams for intellectual freedom, Marcia Mardis for science education with digital resources, and Joyce Valenza for technology tools.

21st-Century Challenges

In actual practice, our gold standard for trust is subject to enormous challenges. Time passes, new facts are uncovered, cultural norms change, and static information betrays its age. How to classify that egg-laying platypus—a duck, a mammal? Is that country Myanmar or Burma? Did Peary really reach the North Pole? As norms of fairness or social justice change, we finally put father rabbit in the kitchen (see the comparison of Best Word Book Ever cover photos <www.flickr.com/photos/kokogiak/66087367>), and revise entries on minorities and women in our encyclopedias. Of course, to serve particular agendas, information can also be secretly altered: newspapers print staged or cropped photographs (King 1997), journals publish disguised drug marketing as scientific studies (Singer 2009), and, to reap high-stakes academic rewards, research scientists falsify data and plagiarize (Martinson, Anderson, and De Vries 2005).

As old information migrates online and new information is published only online, we are simultaneously presented with information transparency and confronted with information overload. It has become easier to find out about a source, but also easier to choke on “data smog” (Shenk 1997), compounded by social software that enables contribution and participation by anyone and everyone. The affordances of Web 2.0 are significant: many eyes find errors quickly; the publishing timeline is significantly shorter; and new experts emerge easily, unimpeded by traditional publishing gatekeepers. Problems are equally significant: publish first, then edit—maybe—unless information has propagated everywhere, in which case, prepare for an endless cycle of retraction and assertion. Ignorance may be as influential as expertise and leave us wondering which text to read, which voice to believe.
In an NPR radio commemoration of Charles Darwin's contribution, Steven Shapin, a professor of the history of science at Harvard, remarked that in the mid-nineteenth century when *Origin of the Species* was published, it was possible for a reasonably well-educated person to understand and evaluate Darwin's arguments and keep up with new developments in science. Today, while "we hear about scientific claims [and] scientific findings...the proportion of the population that can evaluate them...is very, very small." He continues, "People who say that you have to come to your own view, evaluate, make up your own mind are, in a sense, speaking something which is blandly true, but strictly speaking, impossible. It's impossible for any of us" (Palca et al. 2009). Thus "Whom do we trust?" is a vital question, and, in the case of global warming, even the very survival of the species may be at stake. Yet we are farther than ever from an ability to make such evaluations alone.

**A Continuum of Participation**

I think it is useful to visualize trust decisions as a continuum of participation (see figure 5 on page 38). As we move from left to right along the continuum, more people participate in the evaluation process and software can aggregate large numbers of individual votes. On the left end of the continuum, decisions are made by a few gatekeepers before publication. Toward the right end, the commenting, editing, evaluating, recommending, and voting occur after publication, thus opening evaluation to many. In support of "publish first, correct afterwards," some argue that the cream will rise to the top as more people weigh in with votes or clicks. In search results, then, "findability" (Morville 2005) acts as a de facto measure of reputation: more attention = more reputation = more authority.

"Clearly, the average internet browser seeks to spend as little of his or her 'attention-dollars' as possible in finding content, in order to ensure they have plenty left over to assimilate what they arrive at. This reinforces the point that better content, which is reproduced everywhere, is findable; whereas tedious blog rants are essentially hidden, unless they focus on niche markets at the far end of the long tail" (Cohen 2007). The same increase in participation that we see in scholarly journals and books is occurring in the news media, propelled by a precipitous drop in print readership and loss of advertising revenue, and by competition with free sources of news. In response, traditional news sources like the *New York Times* and *CNN* are adding mechanisms for reader feedback, while hyper-local media outlets, like the *San Francisco Appeal* [http://sfappeal.com] and *Pegasus News* (Dallas) [www.pegasusnews.com/news], are experimenting with even more interactive input ranging from ranking professionally written stories to citizen-contributed reporting. For blogs and other new forms of publishing, prepublication editing and fact-checking has never been in place; for other media, it is being scaled back or eliminated. Pew's Project for Excellence in Journalism calls the publish-first-correct-afterwards model a "journalism of assertion...which is less interested in substantiating whether something is true and more interested in getting it into the public discussion" (Kovach and Rosenstiel 1999). In such an environment, inaccuracies are repeated as assertions with lightning speed, making our directive to "corroborate" or "triangulate" information a challenging one for students.

When evaluating health information for teens, Sophia Yen (page 62) has documented multiple instances of inaccurate information across many "authoritative" Web sites, but these exist in every subject. To build awareness of the replication of errors, begin a research project by asking students to verify the accuracy of subject-specific myths or "factoids" such as:

- A dime has 118 ridges around the edge.
- Vitamin A improves eyesight.
- Chameleons change color to camouflage themselves.
- Red lipstick contains lead.

Another approach, modeled by CD McLean in this issue (page 18), is to teach news media evaluation like a defensive driving course. Students evaluate the landscape of new journalism within the context of a current issue, then compare news sources with widely differing viewpoints using third-party media watchdogs [www.dmoz.org/News/Media/Watchdogs] to assess sources' competence.

Web 2.0 technologies such as social bookmarking tools, recommender systems, and tagging offer hope of identifying "good" or "better" information by applying collective intelligence. The concept is based on gathering the judgments of many individuals and turning them into an aggregated decision, an idea from Linux's Law famously restated as "Given enough eyeballs, all bugs are shallow" (Raymond 2000). On the right end of our continuum, "voting" by a large number of people—who bring diverse perspectives from different geographical locations, and who are not able to influence each other's opinions or scam the software—results in a collective consensus called the "wisdom of crowds" (Surowiecki 2005).

Flickr tags use the wisdom of crowds to help define words authoritatively.
When I was in Hawaii I came across the sign shown in figure 6 and, having no idea of what the bird in the sign really looked like, I worried that I was feeding protected birds. After looking at several dozen photographs labeled by individuals with the tags “Nene” and “Hawaii,” there was no doubt (see figure 7). Collective wisdom can benefit even the smallest school library. Ask your vendor to add tagging to your library catalog so that information that has been invisible with only Library of Congress subject headings can surface. For example, how do you currently find “memoir” or “first-person narratives” or “stream of consciousness writing” when teachers request them? How do you identify “mentor texts” that you own? When individual teachers and students tag books using their own vocabulary terms, their small efforts result in better access to more-reliable results for everyone.

Hoping to benefit from the wisdom of crowds, the Library of Congress (LOC) posted photographs from its archives in the Flickr Commons where anyone could tag and comment on them. The result? In addition to acquiring new information in the form of detailed reminiscences about “farming practices, grandparents’ lives, women’s roles in World War II, and the changing landscape of local neighborhoods” (Springer et al. 2008, 31), they have gleaned expert knowledge of aircraft types and principles of stacking hay, and identified previously unknown locations and photographers (42). After contributed information is verified by LOC archivists, it is being incorporated into official cataloging records, thus enhancing the quality of the descriptive data. The staff debated whether to create a more authoritative folksonomy by removing inappropriate or incorrect user-generated tags, correcting misspellings and typos, and adding or weeding tags. Rather than removing an inaccurate tag, such as “Dirigible” on a photo of a barrage balloon, they may decide to qualify the label as, for example, “Dirigible (related to)” since the incorrect term is useful as “entry vocabulary for non-specialists” (Springer et al. 2008, 25). Inaccurate but credible tags help users recognize useful information.

Collective results, whether they are aggregated tags, recommendations, or rankings, naturally reflect the characteristics and interests of those who are voting. Digg users, for example, are predominantly males (57 percent) from the United States (89 percent) and tend to choose technology and science stories (Journalism.org 2007). To mitigate the effect of the crowd’s bias or point of view, Technorati modified its software to first calculate a blog’s influence within a subject category and only then assigned an “authority” rating to the blog based on “linking behavior from blogs and posts in the same category, how well a blog’s overall content matches the category in question, and other associated data” (Technorati n.d.).

Jimmy Wales, the founder of Wikipedia, argues that rating systems influence behavior and could poison the altruistic actions of Wikipedians who ostensibly have nothing to gain other than creating neutral, objective information for the world:

"Metrics for rating users is not under consideration because we don’t see anything useful there. If you imagine that you took a job someplace where you’re required to wear a name badge, but on that badge it says how many people like you and don’t like you, this is not a healthy social environment. (When) you have a point system...people start to do whatever they can to increase the points they are getting, which may or may not be the right behaviors” (Lee and Wales 2007).

In wisdom-of-crowd systems, anonymity is seen as an advantage, since private decisions unencumbered by influences ensure that the model works. Indeed, all along our continuum anonymity or disclosure is based on the advantages afforded by revealing or hiding one’s identity. Blind peer-reviewing assures journals that their referees will give honest feedback, while anonymity protects whistleblowers from the retribution of an oppressive regime or reprisals from aggrieved.
corporate executives (Sunshine n.d.). Therefore, although evaluating the "who" by credentials, experience, reputation, and affiliations has been one of the rules-of-thumb we like to teach students, the absence of a name does not necessarily point to a lack of expertise or credibility.

Hybrid Evaluation Models

The middle of our continuum is populated by models that incorporate elements from publishing schemes on either side. Toward the left, one could put *PloS One*, an open-access peer-reviewed resource in which there is both peer review and open assessment:

"The peer review of each article is rigorous and concentrates on objective and technical concerns to determine whether the research has been sufficiently well conceived, well executed, and well described to justify inclusion in the scientific record. Then, after publication, all papers are opened up for interactive discussions and assessment in which the whole scientific community can be involved" (Public Library of Science n.d.-b).

Registered users must "unambiguously identify themselves" with their first and last names, their geographic location (both made public), and a valid e-mail address (kept private), after which they can contribute to the discussion and ratings, but not anonymously. This combination of prepublication anonymous peer review with attributed commentary and ratings is enhanced by software that aggregates the number of scholarly citations to each article from third-party services (CiteULike and Connotea) (Public Library of Science n.d.-a).

Further toward the right of the continuum, individual authors have experimented with hybrid peer review, notably Noah Wardrip-Fruin, an assistant professor of communications at U.C. San Diego who used the digress.it plug-in for Word Press to enable readers of his interactive fiction and video games blog to comment paragraph-by-paragraph on the manuscript of his book, later published by MIT Press as *Expressive Processing: Digital Fictions, Computer Games, and Software Studies*. Simultaneously, the publisher conducted a traditional peer-review process. The author found that both sets of feedback pointed to the same areas for revision, but the blog discourse provided him with detailed paragraph-by-paragraph criticism while the traditional peer reviewers offered more-global suggestions about the structure. The online discussion helped him weigh and compare bloggers' criticisms and comments against each other, whereas the individual feedback from peer reviewers, while helpful, left him wondering about how to weigh one suggestion against another (Wardrip-Fruin 2009). Hybrid experiments like these are being repeated with variations across the Web informally and, in a systematic way, by the Institute for the Future of the Book (<www.futureofthebook.org>). Students can reap similar benefits in library assignments from hybrid peer review systems, which provide students with both individual and group feedback on their written work.

Traditional and open-review systems are also manifested in "hubs" created around a common interest. Hubs are destinations for emerging audiences grown accustomed to seeking information online and interacting with each other through devices. Whether grounded in print publishing content, like *School Library Journal* (SLJ), or built entirely online as an immense collection of voices, like ScienceBlogs, the goal of a hub is to become an authoritative source of news, commentary, and controversy for the community it
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targets: "where the world discusses science" and for writers and readers of "books, multimedia and technology for children and teens." Both hubs select bloggers for their sites based on expertise, reputations, credentials and because they have a track record of lively, original writing. Then these bloggers are given the latitude to report and comment without prepublication editorial oversight. Bloggers help create a churn of rich, current content, inviting readers to become critical consumers and loyal participants. Participants judge bloggers according to their varying needs for credible sources—current, honest, believable, accurate, objective, reliable, etc.—but the overall impact of the collective blogging and repurposed print content is to enhance the site's authority.

Understanding and Evaluating New Authority

Somewhere to the right of peer-review models and hubs sits Wikipedia. It would require a separate article to summarize the complex and often intense discussions of authority, credibility, and information quality that have swirled around this free encyclopedia. Over time a collaboratively created set of social norms and consensus policies has enabled the Wikipedia community, a flat hierarchy with oversight by editors and an arbitration process, to function more or less effectively in 250 languages and to produce over ten million articles created from contributions by many "anyones." Wikipedia is worth examining as a maturing microcosm of how participatory culture creates information.

I used to believe that one could assign a global measure of authority to a source. After Wikipedia, I know that this expectation is foolish and probably was a pipe dream even when there were only print encyclopedias. Each article must stand on its own merit and most fall into a gray area of mixed quality. Initially, students can be encouraged to pre-evaluate a source with a quick-and-dirty acronym [www.noodletools.com/debbie/ethical/2phase/rateck.pdf], rather than embarking on a full-blown credibility assessment.

Recently Wikipedia's English site adopted the German site's system of geprüfte versioning to flag articles that are of high quality. Wikipedia now identifies about 0.1% or one out of a thousand articles that exemplify their most polished results, reviewed for "accuracy, neutrality, completeness, and style" and branded with a gold star (Wikimedia 2009a). If a student determines that he or she needs accurate information from a neutral point of view about Pluto, then this starred article can generally be trusted as objective and reliable. However, if the student is inquiring about Pluto's reclassification, Wikipedia's links are more valuable and, indeed, represent a more nuanced "expertise" than a summarized discussion of the controversy in the Pluto article. A judgment of relevance, then, will always relate to purpose and need, as well as context.

Who contributes is an important and complex question—important because the identity of an author enables some assessment of reputation, expertise, and other measures of authority, and complex because Wikipedia allows contributions from individuals who do not have to register with their real names. Names, of course, can be of limited value. I've given students ways to search for names [http://toolsforsearch.wikispaces.com/People+Search] to determine more about a person's credibility, but when they learn the name of the owner of a domain, for example, it does not necessarily enable them to learn more about that person.

In the past, outsider-contributors created the bulk of new content in Wikipedia, while insider-editors performed the bulk of the tweaking, reformatting, and cleaning up (Blodget 2009). Recently Ed Chi, a scientist who works at the Xerox's PARC (Palo Alto Research Center), sought to understand why the exponential growth of new content in Wikipedia had slowed down. He postulated that, since there is a limit to public knowledge, which, in turn, limits the potential for novel contributions, the fact that "anyone" could contribute didn't mean, in practice, that everyone would continue to do so as the encyclopedia matured. Instead a stable group of high-level editors currently controls the encyclopedia's content, reverting as many as 25% of the edits made by newcomers and casual editors. Chi draws an analogy to population growth: when resources start to run out (i.e., the knowledge we have that is not yet recorded in Wikipedia), competition for scarce food (unique information) slows down growth and centralizes power among stronger foragers (2009). The implications of this are, as yet, only conjectures: Does this result in a gatekeeper system not unlike Encyclopaedia Britannica? Will heavy-handed editors discourage and eventually turn away those small contributors whose aggregated contributions have been a significant factor in Wikipedia's exponential growth? Does this informal model tend to privilege certain types of information in the absence of sufficient oversight?
text based on the longevity of the edits. Lastly, Wikiscanner (<http://wikiscanner.virgil.gr>) cross-references edits with the IP addresses of their authors, thus identifying governments, companies, and other entities who have altered articles to promote a particular agenda. Students searching in Wikiscanner on either a personal or institutional name, or on an IP address, will be presented with the edits made by that contributor. Then it's up to the student to evaluate whether the edits exhibit a pattern of bias.

**Teaching Evaluation as Inquiry**

Some school librarians are developing strategies for teaching students how to interrogate Wikipedia by scrutinizing an entry's discussion page, the number of edits, the page history, and the editor's talk page to make a series of judgment calls. Others are asking students to compare articles of the same genre (Britannica, Citizen:zium, World Book, Medpedia, The Encyclopedia of Life, etc.) in a topic they are researching for class. These school librarians reason that their students will learn to appreciate both the strengths and weaknesses of presenting certain kinds of information in a particular format. Still others show students how to investigate whether an article's claims are supported by evidence. Or they have students consult other sources to practice corroborating information (search the term or idea minus Wikipedia). A history teacher asks his honors section of World History to select a history-related stub in Wikipedia; research the topic using secondary sources in JSTOR, Google Books, and print, synthesize the material in Wikipedia's style and document it correctly with citations, then submit it to Wikipedia (Kogan 2009). For ideas of how other educators are teaching evaluation through both participation and evaluation, you can refer to Wikipedia's ongoing list of projects (Wikimedia 2009c).
This issue of Knowledge Quest is a first cut on evaluating "new" authority. As Natasha Bergson-Michelson demonstrates in her article (page 9), with some practice we can learn to teach flexible, inquiry strategies rather than structuring information evaluation solely around worksheets, hoax sites, and hard-and-fast algorithms. My own teaching rule of thumb has been to select instructional practices based on predicting the level of students' motivation. I expect deeper, more reflective evaluation during "central route" processing of information (Brehm, Kassin, and Fein 2005, 194–97), that is, when students have time to reflect on a source's arguments, see their goal as authentic, and define their task as inquiry. Conversely, when students consider the assignment irrelevant or routine, they are likely to accept information at face value and move on, demonstrating little patience for questioning their assumptions, scrutinizing evidence or evaluating claims.

When they are assigned superficial, short-term tasks that are likely to activate "peripheral route" processing (Brehm, Kassin, and Fein 2005, 194–97), be pragmatic and teach "good enough" strategies. Have students work with easy-to-assess characteristics of the source (statistics, word count, citations). Show them relevant rules of thumb for types of information, such as focusing on the author's credentials for a persuasive blog post, the sponsorship of a controversial report, the date and time of a news clip, or the sample size of a scientific study. Prior to beginning research, routinely ask students to reflect on the kind of authority they anticipate they will judge as credible. Are they looking for neutral and balanced information for a factual report? Opinionated sources for debates? The author's qualifications for health information? Statistical data to support or test a hypothesis? You don't have to give up the goal to stimulate inquiry evaluation. For short, superficial assignments, you may be able to surreptitiously steer students into questioning their search results by simply asking them to test an unfamiliar search engine, since it's been shown that people are more critical of results when they come from a search engine they don't know or have used infrequently ("Brand and Its Effect" 2009).

Go for deeper evaluation when students see personal relevance in their task; when they are working on projects that result in action or service; or when they are immersed in inquiry learning, solving problems or making real-word changes. Here is your chance to discuss the varying nature of expertise, or to explore how credibility changes with context, information need, and one's own background. When might I use a site that wasn't credible? What new evaluation strategies can we develop together to assess the "miscellaneous"—digital snippets without context? (Weinberger 2007)

We know that even four- and five-year-olds display evaluation skills. They have criteria for evaluating the trustworthiness of information. They recognize that adults have different expertise and would prefer an adult definition of a word over a child's if the two are in conflict. Like adults, they show a preference for a confident or knowledgeable source (Bloom and Weisberg 2007). As Ernie Cox so persuasively argues elsewhere in this issue (page 14), young learners are apprentice evaluators on their way to mastery. New forms of authority offer us new avenues for teaching evaluation as inquiry. Critical consciousness, resistant questioning, and healthy skepticism will develop in our students over time when we give them time.

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Works Cited:

For further reading see <http://www.citeulike.org/user/dabilock>.


