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Peer Reviewed Article

What We Talk about When We Talk about Quality: A Librarian and Instructor Compare How They Assess Students' Sources

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Abstract

This case study explores and compares how a librarian and an instructor evaluated the quality of bibliographies students produced for the instructor's class. The ethnographic study attempted to unearth nuances in the respective practical approaches librarian and instructor took to assess a source's quality as well as differences in what librarian and instructor might mean by "quality." Themes emerged as indicators of quality that librarian and instructor applied differently in terms of frequency and weight. Findings also included that librarian and instructor looked to different aspects of citations to demonstrate common values, such as thoroughness, and to reflect the quality of a student's research process. Additional findings included differences in librarian and instructor's working definitions of "academic" and in their approaches to consulting the citation versus the full text of a cited source. The aim of the study was to make such implicit practices and expectations around "quality" explicit, and thus more transparent to students, and to better align librarian and instructor's daily practices.

Keywords: quality, authority, credibility, credible, assess, citation, citation analysis, ethnography, ethnographic, qualitative, assessment, framework, collaboration, collaborate, bibliography, faculty, teaching faculty, instructors, librarians, constructed, contextual, anthropology

Introduction

Collaboration between librarians and course instructors forms the backbone of information literacy (IL) instruction. As part of their daily practice, librarians regularly teach course-integrated IL sessions, develop instructional learning ob-

jects, and guide students to sources during reference encounters. Likewise, instructors facilitate access to course readings, refer students to librarians, design assignments, direct students to sources to support coursework, and grade research projects involving bibliographies. Librarians and instructors work together with the un-



derstanding that they both value credible information. The focus of this study grew from conversations between an anthropology librarian and an anthropology instructor at Portland State University, from which they concluded that they approached instruction in recognizing credible information in different ways, sometimes with implicit rules. This study is a systematic assessment of their respective approaches to evaluating the quality of sources. It involves an ethnographic analysis of librarian and instructor's notes and dialog surrounding a review of the quality of sources in students' bibliographies. It is an exploratory case study and thus examines a limited sample.

Differences in defining "quality" and in the process of determining "quality" are important, because librarian and instructor assume this shared value, both explicitly and implicitly, in teaching students to search for and evaluate sources. They bring to bear this value via many granular mechanisms such as the language they use in formal and informal discussions, the research processes they select to undertake and demonstrate, what they include in assignments, the parameters of grading rubrics, and, in general, the nuances of the information landscape they do and do not emphasize. For example, which parts of a citation do they consider, specifically, to determine the quality of a source? Do they weight all parts equally? Do librarian and instructor actually teach students the same modes of constructing authority?

The authors of this study, an anthropology librarian and an anthropology instructor, collaborated to analyze students' bibliographies for a research study. They began the study because they 1) were concerned about being consistent in how they respectively taught students to assess the quality of a source, 2) were concerned about being consistent in how they respectively taught students to construct authority in their course research projects,¹ and 3) wanted what they taught students to align with the rubric they

used to grade students' work. Since the librarian and instructor had been working together for a few years and were in agreement in a broad sense that a "credible source" offers reasonable grounds for being believed, they suspected they needed to unearth some nuances of their respective approaches to assessing a source's "quality." As relatively experienced professionals in their fields, they also suspected their situation might be similar to that of other librarians and instructors.

This case study examined the process a librarian and an instructor took to evaluate the bibliographies students produced for the instructor's class. The authors approached the assessment of their own determination of "quality" inductively, to demonstrate how criteria for the practices and definitions surrounding "quality" are often implicit and thus, unanticipated. Ethnographic methods help to identify discrepancies between what people intend to do and what they actually do, and these methods help to identify and analyze unexpected issues. In order to emphasize points of overlap and divergence between librarian and instructor in teaching students to recognize "quality," this study examines the typical case of one librarian and one instructor working with a class to guide students toward credible information. The study attempted to characterize nuances of the conceptual and practical approaches librarians and course instructors take to determine a source's quality, and to clarify what each meant by "quality" in order to develop a more explicit definition consistent with both disciplines.

Literature Review

There are few studies that directly compare the approaches librarians and instructors take to assessing the quality of sources, citations, or bibliographies. Existing literature often assumes that the instruction practices of librarian and instructor are complementary, e.g., they use the same language, point students to the same indicators



of quality, weight those indicators similarly in assessment, and generally point to the same value and modes of constructing authority. However, the studies that have compared the practices of librarian and instructor have found some differences in their approaches to working with students on assessing sources. In "Culture and Collaboration: Fostering Integration of Information Literacy by Speaking the Language of Faculty," Saunders found that while faculty value the same skills librarians intend IL to provide, faculty do not necessarily share the same definition of IL.² Similarly, in "Do We Speak the Same Language: a Study of Faculty Perceptions of Information Literacy," Cope and Sanabria interviewed faculty from a range of disciplines about their perceptions of IL as a way of comparing how faculty conception "differs from that of professionals in library and information science."³ Cope and Sanabria found that "although there is a great deal of commonality in the key skills that library-based IL practitioners and faculty members would like students to develop, faculty discuss them in ways that are related to how IL is applied in specific disciplinary and institutional contexts."⁴ In "The Collision of Two Lexicons: Librarians, Composition Instructors and the Vocabulary of Source Evaluation," Carter and Aldridge directly compared the language librarian and instructor used in working with students on assessing sources,⁵ and found that librarian and instructor were working with "two similar but competing definitions of authority."⁶ The study also evaluated students' work and found that the competing definitions of "authority" resulted in students performing the "least meaningful evaluations" of sources.⁷

These findings point to potential differences in librarians' and instructors' regular work with the concept of authority and thus, to the importance of librarians and instructors maintaining complementary practices. The findings also suggest the question, how do these conceptual

differences manifest in librarians' and instructors' daily practices, such as in conversations with students, curriculum design, and assessment? On a more granular level, when reviewing students' work, do librarian and instructor look at the same parts of citations? If not, what is the thinking behind their different choices? Do they comparably weight the parts of the citations they do evaluate? In other words, how do librarian and instructor go about constructing their different working definitions of authority or quality?

When discussing sources, existing literature has addressed the idea of quality in a variety of ways. Past citation analysis studies have looked at criteria such as scholarliness, authority of sources, number of sources, variety among sources, format (journals, books, newspapers, websites, etc.), citation style formatting, and currency. Davis developed a scholarliness checklist for print materials,⁸ and Robinson and Schlegl modified Davis's checklist to facilitate evaluation of websites.⁹ Middleton developed a scholarly index ranking tool to apply to students' bibliographies.¹⁰ Clarke and Oppenheim evaluated format, currency, and number of citations.¹¹ Mill looked at format, scholarliness, and currency.¹² Long and Shrikhande looked at authority and appropriateness with respect to the topic, variety among sources, and citation style formatting,¹³ and Reinsfelder developed a citation rating scale that measured authority, the level at which the source addressed the topic, and a more complex look at dates, looking not just at currency, but at the appropriateness of date with respect to the topic.¹⁴ As Leeder, Markey, and Yakel noted in 2012 of such past citation analysis studies, "the definitions of terms are not standard and vary from study to study."¹⁵

Leeder, Yakel, and Markey developed a taxonomy that also assigned scores to specific facets, but it focused on categories that "are not hierarchical but combinatory" and that were developed with faculty input.¹⁶ Dahlen and Hanson



adopted Leeder, Markey, and Yaker's taxonomy "to measure the authority of information sources" students found via discovery layers versus via subject-specific indexing and abstracting databases.¹⁷ Georgas added the facet, relevance, to Leeder, Markey, and Yaker's rating system to compare the quality of sources students found using Google versus a federated search tool.¹⁸ When the ACRL Board adopted the Framework for Information Literacy for Higher Education (2016), which states that "authority is constructed and contextual," Rosenzweig, Thill, and Lambert developed a "Framework-friendly" version of Leeder, Markey, and Yaker's taxonomy that defined authority more contextually in order to look at how undergraduate students construct authority.¹⁹ These numerous studies using checklists, rating systems, and other rubrics were designed to either evaluate the effects of different factors on the quality of sources students cite, or to serve as evaluation tools, but they were not used to explore the process librarian and instructor regularly undertake to evaluate sources as part of their respective daily practices.

Furthermore, these studies' preset standards of measurement do not facilitate unanticipated discovery nor do they facilitate gathering a sense of the process and how it might differ in subtle and meaningful ways between librarian and instructor. Again, ethnographic methods are inherently exploratory and help to identify and analyze unexpected issues, and there is limited research that has applied ethnographic methods to examine potential discrepancies between librarians' and instructors' working definitions of quality.

As shown, prior studies on the "quality" of sources often touched on the concept of "authority." The concepts are connected, sometimes used interchangeably, and, as with other terms, have been defined differently in different studies. Having used Leeder, Markey, and Yaker's taxonomy, Georgas employed their use of the

term, "quality" rather than "authority."²⁰ However, Dahlen and Hanson, who also used Leeder, Markey, and Yaker's taxonomy, stated, "We view these facets as primarily addressing the authority of the publication and prefer to use that term rather than the more general "quality" descriptor employed by the authors."²¹ The 2016 ACRL Framework frame, Authority is Constructed and Contextual, aims to reflect in part that "different communities may recognize different types of authority" and to "acknowledge biases that privilege some sources of authority over others."²² Under this definition, students, librarians, and instructors might well constitute different communities. As suggested by the work of Saunders, Cope and Sanabria, and Carter and Aldridge, librarians', instructors' and students' differing approaches to research, and their different roles in the process of constructing authority, may differentiate them as groups.²³

The Framework states, "authority is constructed," and construction is a process just as assessment of the quality of a source or bibliography is a process.²⁴ Of particular importance to the current study is Rosenzweig, Thill, and Lambert's paraphrase of the Framework, which states, "[T]he systems that create and elevate certain publication types and author credentials are fallible."²⁵ Through the process of teaching students to focus on certain aspects of sources, whether it be the expertise of the author (subject or otherwise), the impact of the journal, or the number of sources to include – or some combination of facets – librarian and instructor "elevate" the aspects of sources on which they focus and the modes of evaluating sources they teach. This elevation happens implicitly at many levels as librarians and instructors guide students to complete their research projects and during the process in which librarian and instructor review students' work and give feedback.

These systems are fallible. If the librarian guides students to certain modes of evaluating and selecting sources and the instructor values and practices other modes, the students' work could suffer, as Carter and Aldridge found, as could students' thinking about the context and construction of authority.²⁶ Thus, it is fundamental that librarian and instructor work in complementary ways with students. Carter and Aldridge stated, "We share the consequences of a glossed-over understanding of each other's language—a somewhat inconspicuous topic that needs more attention in the literature."²⁷

As this review of the literature shows, there is not much research on the discrepancies between librarian's and instructor's approaches to evaluating sources' quality. There is even less ethnographic research, which would allow for discovery, and the consequences of "a glossed-over understanding" are that students' work suffers. This study compares the approaches of a librarian and an instructor to assessing the quality of students' sources in order to unearth and compare their respective working definitions of "quality." The authors chose the term, "quality," in line with the thinking of Dahlen and Hanson, because it is a more general descriptor than "authority" and allows for nuances relating to the process of constructing authority to emerge.²⁸ The authors' methodology is what Glaser and Strauss describe in their seminal work on grounded theory as "*controlled* by the emerging theory;" namely, via ground-level, explicit comparison of librarian's and instructor's assessments of student work, this study uses ethnographic means to unearth ways their approaches to "quality" might differ.²⁹ This project seeks to reveal definitions of quality as they are already at work in daily practices, with an eye toward using current points of overlap to develop more comprehensive rubrics in the future.

Methodology

For this study, an academic librarian of fourteen years and an anthropology instructor of over twenty years examined their own approaches to evaluating sources. To create opportunities for such evaluation, they looked at the final project bibliographies of students from a section of the course, Anthropology 350: Archaeological Method and Theory. The bibliographies served only as an opportunity for librarian and instructor to perform evaluations and to take notes and discuss their processes; it was the notes and discussion that actually served as the data, which they coded for themes. Librarian and instructor evaluated individual citations as well as evaluating each bibliography as a whole. They took notes on their thinking. Librarian and instructor worked independently to avoid influencing the other's approach to evaluation or the language they used in their notes.

In order to create opportunities for notetaking and discussion, librarian and instructor undertook a few different tasks. First, they each ranked sixteen bibliographies. They made notes about the order they chose and any issues they encountered determining whether a bibliography was "better" or "worse" than another one. They ranked the bibliographies before they evaluated individual citations so that their familiarity with the individual citations would not affect their rankings. In other words, they intended this methodology to unearth subtleties of their respective processes, and if their processes of evaluating a bibliography would not have involved close examination of an individual source, they wanted that to be reflected in their approaches to evaluation and in their notes. After they ranked the bibliographies, they evaluated individual citations. They took detailed notes on how they went about determining the quality of each of the forty-seven sources included in the sixteen bibliographies.

Librarian and instructor then came together to discuss the ranking process, their evaluations, and their analysis, and they recorded a transcript of their conversation. In keeping with ethnographic practices, they coded all of this data—the transcript and their notes on rankings and individual citations—and several themes emerged. As Anthony Kwame Harrison explains in the “Writing up Research Findings” chapter of his book, *Ethnography*, many ethnographies contain near-verbatim passages of field notes.³⁰ This is necessary in order to describe “not only what takes place but also how it occurs.”³¹ In her article, “Ethnography as Theory,” Laura Nader calls ethnographic writing necessarily “a theory of description,” which echoes

Kwame Harrison’s assertion that “in the most essential sense, ethnography is produced via writing.”³² Again keeping with ethnographic research traditions, the authors identified overall themes and then identified and described specific trends and patterns.

Key Results

Ranking Bibliographies

In coding the notes and transcript, certain themes emerged as indicators of quality (see Figure 1) the librarian and instructor used to rank bibliographies. Important differences in which indicators were used, how they were used, by whom, and when emerged as well.

Figure 1. Indicators of Quality Used to Rank Bibliographies (by number of bibliographies)

	Librarian	Percent	Instructor	Percent
Number of citations	16	100	16	100
Variety among journals cited	15	93.8	13	81.3
Variety among databases used	15	93.8	-	-
Variety among authors cited	14	87.5	13	81.3
Date spread of citations	8	50	6	37.5
Number of peer-reviewed sources (as suggested by database searched)	7	43.8	-	-
Number of sources from library	1	6.3	11	68.8
Variety among formats cited	1	6.3	1	6.3
Overall relevance to topic /assignment	1	6.3	1	6.3
Topic specificity	-	-	15	93.8
Style/formatting (accuracy and consistency)	-	-	14	87.5
Significance of journals cited	-	-	2	12.5



Implicit Practices & Combining Indicators of Quality

Of particular importance was the finding that, in addition to using a combination of indicators some of which were explicit, both librarian and instructor employed implicit criteria. Once identified, such implicit criteria could be made explicit to students, which is crucial in terms of effective teaching and fair grading. The instructor approached ranking as she would for grading, using a rubric that “emphasizes content, and then organization, and then style...” to assign each bibliography a number one through five, five being highest. The librarian approached ranking with more general expectations focused on content, namely that some bibliographies would contain a higher number of “academic” sources than others. The assignment specified that the students were to use “academic” sources (see Appendix A). Both librarian and instructor found it difficult to rank bibliographies at an item level because they found some bibliographies to be strong in some areas, such as the *variety among the journals cited*, and others equally strong in different areas, such as *topic specificity* of the sources cited. This revealed that both librarian and instructor approached evaluation using combinations of criteria, some explicit and some implicit.

Similar Top & Bottom Rankings but Different Emphases

Librarian and instructor were both able to establish groups of comparable bibliographies and to rank those groups. From among these groups, librarian and instructor both selected the same bibliographies as their top three and as their bottom two, which points to their shared values. However, they did so using different combinations of indicators. Discussion of this ranking and closer examination of why each bibliography landed in which group exposed some of the granular workings of those combinations. Closer examination illuminated the different in-

dicators of “quality” librarian and instructor respectively employed, how frequently indicators were applied and by whom, and how different indicators were weighted and by whom.

How Librarian and Instructor Judged Quality Overall: Applying the Indicators Differently

Frequency

The librarian applied the indicators of quality with different frequency and weighted them differently than the instructor. The most frequently applied indicators of quality included: *number of citations*, *variety among journals cited*, and *variety among authors cited*, and these indicators were applied by both librarian and instructor to over 80% of the bibliographies (see Figure 1). While *number of citations* was, in part, specified by the assignment, which asked specifically for three sources (see Appendix A), one student cited only one source in their bibliography while another cited four. However, two of the most frequently applied indicators were only applied by the instructor, namely, *topic specificity* and *style/formatting*, and another was only applied by the librarian: *variety among databases used* (see Figure 1).

These differences in applications of specific indicators reflect the different concerns of librarians and instructors. The instructor brings to her work a deep understanding of the topic, she designed the assignment with specific topics in mind, she regularly sees and grades students’ bibliographies, and she regularly works with the formatting style specific to her discipline (anthropology). In contrast, the librarian works with hundreds of journal article databases available via the PSU Library. For example, she keeps track of which subjects different databases cover and which journals they index, and she develops the library’s collection accordingly. She also facilitates faculty and student research, which rely heavily on these resources.

Weight

Top Ranking Bibliographies

The fact that there is some difference in the indicators most frequently used and the indicators used to select the top-ranking bibliographies (see Figure 2) suggests that librarian and instructor implicitly ascribe more weight to some indicators than others. Furthermore, both librarian and instructor agreed largely on top ranking bibliographies, but for different reasons. The instructor emphasized *number of citations, variety*

among journals cited, topic specificity, and style/formatting, and to a lesser extent variety among formats cited. The librarian emphasized *number of citations, variety among journals cited, variety among formats cited, variety among authors cited, variety among databases used, date spread of citations and number of peer-reviewed sources.* Overall, the librarian emphasized variety and thus facility with using the library’s databases, while the instructor emphasized criteria that reflected her own experience of “good research” (see Figure 1 and Figure 2).

Figure 2. Indicators of Quality Used to Determine Top-Ranking Bibliographies (by number of bibliographies)

	Librarian	Percent	Instructor	Percent
Number of citations	3	100	3	100
Variety among journals cited	2	66.7	3	100
Variety among formats cited	1	33.3	1	33.3
Variety among authors cited	2	66.7	-	-
Variety among databases used	3	100	-	-
Date spread of citations	2	66.7	-	-
Number of peer-reviewed sources (as suggested by database searched)	2	66.7	-	-
Topic specificity	-	-	3	100
Style/formatting (accuracy and consistency)	-	-	2	66.7
Significance of journals cited	-	-	1	33.3



Bottom Ranking Bibliographies

The indicators of quality librarian and instructor employed to rank bibliographies at the bottom

(see Figure 3) point to similar differences in implicit practices. For bibliographies given lowest rankings, librarian and instructor both focused on those indicators that were absent or problematic in a bibliography.

Figure 3. Indicators of Quality Used to Determine Lowest-Ranking Bibliographies (by number of bibliographies)

	Librarian	Percent	Instructor	Percent
Number of citations	2	100	2	100
Variety among journals cited	1	50	1	50
Overall relevance to topic / assignment	1	50	1	50
Variety among databases used	1	50	-	-
Number of peer-reviewed sources (as suggested by database searched)	1	50	-	-
Topic specificity	-	-	1	50
Style/formatting (accuracy and consistency)	-	-	1	50
Significance of journals cited	-	-	1	50

The librarian employed the following indicators to select bottom-ranking bibliographies: *number of citations* and *variety among journals cited*. The instructor emphasized *topic specificity*, and *significance of journals cited*.

Weighting Indicators: General Observations

Information presented in Figures 1-3 demonstrates some general trends in librarian’s and instructor’s differing approaches to weighting indicators of quality when ranking bibliographies.

Instructor—Findings suggest that the instructor ascribed particular weight to the indicators, *significance of journals cited* and *topic specificity*, when ranking bibliographies. While the instructor applied the following indicators most frequently: *number of citations*, *variety of journals cited*, *topic specificity*, and *style/formatting*, it appears the instructor only took into account the indicator, *significance of journals cited*, when the journals were notably bad or good. While she only applied this indicator in 12.5% (2) of total bibliographies, she used the indicator to identify the 50% of the lowest- and the 33.3% of the highest-ranking bibliographies. This suggests that



while *significance of journals cited* was only a factor in 12.5% of all bibliographies, when it was a factor, it had a more weighted influence on how the instructor assessed the overall quality of the bibliography.

It is possible that the instructor noted the significance of the journals in these two cases because the journals were particularly important in the field relevant to the student's topic or because the journals were particularly irrelevant in that field. The study was in part limited by the characteristics contained in the sample of bibliographies available to review. However, the fact that the instructor used this indicator to make both positive and negative assessments and that the indicator was significant enough to land bibliographies in the very top and the very bottom of the rankings remains important.

The instructor also weighted *topic specificity* among the indicators of quality, even more than those, such as *style/formatting*, that the assignment explicitly stated. She said, in terms of the order in which she looked at aspects of a bibliography in order to rank them: "[A]uthor was one I kind of looked at, but if I could discern a really specific topic from what I saw in the listings" that was more significant. "And then when I needed something to distinguish really good from just good, formatting and consistency." Of the bibliographies she ranked at the top, she noted that the sources seemed particularly in line with the topic and that such specificity indicated a thorough understanding by the student of the research landscape and of the topic itself. The assignment rubric states that students' topics should be "specific and researchable with library resources" (see Appendix A). However, the assignment does not further define "specific" or explain that the sources in the bibliography as well as the body of the paper should reflect a certain degree of specificity. It may not be clear to students that "topic specificity" among the sources cited is a way to demonstrate a thorough understanding of the

topic. While the assignment explicitly refers to the indicator, *topic specificity*, there are nuances to the definition of "specific" that remain implicit.

Librarian – The librarian, however, did not note *topic specificity* at all when ranking bibliographies but appears to have ascribed particular weight to the two indicators, *date-spread of citations* and *number of peer-reviewed sources (as indicated by database)*. The librarian employed the following indicators frequently as well to land bibliographies at the top: *number of citations*, and *variety among journals, authors, and databases*. However, she also used some indicators in selecting top bibliographies that she rarely used overall. She used the indicator, *date spread of citations*, to select 66.7% of the top bibliographies, but she only used this in ranking 50% of bibliographies overall (see Figure 1 and Figure 2). Likewise, she used the indicator, *number of peer-reviewed sources (as indicated by database)*, to select 66.7% of the top bibliographies, but she only used this indicator in ranking 43.8% of the bibliographies overall. In other words, these findings suggest that when the librarian was able to discern one of these qualities in a bibliography, it affected her ranking process more than other indicators she found in the same bibliography.

The librarian's background involved working with a broad understanding of the discipline of archaeology compared to the instructor's deeper, more specific knowledge. Carter and Aldridge alluded generally to these differences, stating, "[L]ibrarians tend to approach source evaluation as locating and identifying a 'credible' source that meets the students' information needs...instructors view source evaluation through the lens of rhetorical analysis."³³ This difference in approach to determining the quality of a source is particularly important for librarians to consider when recommending sources to students and when teaching them to evaluate information for use in their coursework.



Librarian and Instructor: Weighting Variety among Formats— Also of note is the fact that both librarian and instructor used the indicator, *variety among formats*, one time and that landed the bibliography in both of their top three. In fact, there was only one bibliography in which a student cited anything other than journal articles (in this case it was a book). Students citing primarily journals is in line with the assignment, which specifically instructs students to find journal articles (see Appendix A). However, what is important to this study is that *variety among formats cited* appears to have significantly informed positive assessment of a bibliography. When a bibliography contained sources from both books and journals rather than just from journals, this favorably outweighed other qualities such as issues with style/formatting, which the instructor also noted in the same bibliography. These contrasts point to potentially important differences in implicit and explicit practices on the parts of librarian and instructor.

Recommendations Moving Forward

It could be strategic for librarians and instructors to ask 1) whether potentially implicit weighting of different indicators has been made explicit to their students via assignment instructions and during guiding discussions with students, and 2) whether librarian and instructor are consistent between themselves in how they discuss these indicators with students. “To avoid the consequences of a glossed-over understanding of each other’s language,” it is important for librarian and instructor to collaborate to determine if their approaches to evaluating sources are complementary or compete with each other on broad and granular levels.³⁴

Thoroughness as a Key Element

From coding notes and discussion, one of the broad themes that emerged was “thoroughness.” On a granular level, though, the librarian

and instructor’s approaches to determining thoroughness sometimes differed in important ways. As discussed, the instructor saw *topic specificity* as suggestive of a thorough understanding by the student of the research landscape and of the topic itself, but diversity among sources in a bibliography suggested thoroughness to both librarian and instructor. More specifically, diversity of sources as indicated by *variety among journals*, *date spread*, and *variety among databases*, suggested that a student more fully understood the topic and more adequately covered it, which informed the librarian’s and instructor’s implicit and explicit assessment of the overall quality of a bibliography.

Generally speaking, both librarian and instructor viewed homogeneity across cited sources as bad and diversity among sources as good. However, the ways they each went about determining homogeneity and diversity sometimes differed as did the aspects of the citations that they chose to examine (see Figure 1). Ultimately, both librarian and instructor used a combination of indicators to determine thoroughness. The librarian’s and instructor’s approach to determining quality echoes Leeder, Markey, and Yakel’s “combinatory” faceted taxonomy in that it “does not rely on a single organizing principle.”³⁵ The findings add important nuance to which indicators constitute the combination of organizing principles, how and why the principles might be functioning, and how that functioning might differ between librarian and instructor.

As mentioned, particularly common indicators of thoroughness among the top-ranked bibliographies were *variety among journals*, *dates*, and *databases* (see Figure 2). These indicators were conspicuously absent among the bottom-ranking bibliographies (see Figure 3).

Variety Among Journals

Both librarian and instructor saw *variety among journals cited* as indicative of thoroughness. The

librarian consistently ranked bibliographies as “slightly less good” when they contained two citations from the same journal. In another example, the instructor initially included one bibliography in her top group and then demoted it to a lower group because of “journal homogeneity.” In fact, most of the bibliographies in the top three for both librarian and instructor contained a range of different journals (see Figure 2). The librarian’s and instructor’s mutual logic was that *variety among journals cited* “allowed for more thorough coverage” of the topic because different journals might cover different approaches to the topic and feature different experts and editorial perspectives. This finding raises the question of how explicit about valuing variety among journals librarian and instructor are in their work with students.

Variety Among Dates

Both librarian and instructor also saw variety among the dates cited as indicative of thoroughness. However, they approached using the indicator, *date spread of citations*, differently.

Librarian

The librarian’s broad background in anthropology lead her to look for broad indicators of thoroughness. The librarian stated that while she understood that variety among dates “allowed for seminal works to be cited,” she was hesitant to use the indicator to rank bibliographies even though she noted whether there was or was not a spread of dates in every bibliography. She did use the indicator to rank top bibliographies (see Figure 2), but she did not feel comfortable using the indicator in a negative assessment because of what she felt were her own limitations. As is the case for many subject librarians, she has a degree in the discipline for which she is a librarian, but within every discipline is a series of more specific disciplines. Her background is in cultural anthropology, so, in ranking, she knew which sources were “good” in a broad sense.

Thus, she looked at broader indicators to confirm their quality, e.g., she looked at the databases the students used as an indication of whether a source was peer-reviewed.

The librarian’s date-range-based rubric appears to have been functioning implicitly. As might happen at the reference desk, the librarian did not consult the assignment when ranking bibliographies higher for having a broader range of dates. This contrasts with her approach to the indicator, *number of sources cited*, for which the librarian did consult the assignment. In fact, she ranked the top bibliography at the top because it contained four sources, exceeding the three sources the assignment required (see Appendix A). The assignment explicitly states one rubric (number of sources) but says nothing to guide students toward using a broad range of dates. Thus, the librarian’s emphasis on a range of dates in a bibliography functioned as an implicit rubric.

Instructor

The instructor valued a spread of dates because it “allowed for the history of the concepts to be reflected.” She was able to (and did) look at the indicators, *date spread of citations* and *topic specificity*, through a lens of deep subject knowledge. She also explained that, while she noted the date spread, it did not affect her rankings of bibliographies or the grades students received for the assignment, in part because it was not specified in the assignment.

The instructor’s approach differed from the librarian’s in that a spread of dates was something the instructor expected an assignment to specify if it were required whereas the librarian applied the parameter, *date spread of citations*, regardless of whether it had been stated explicitly to students. The value of a range of dates as an indicator of quality, while not explicitly stated in

the assignment, was consistent with how the instructor applied it in practice (see Appendix A and Figure 1).

Variety Among Databases

Another difference between the approaches of librarian and instructor in this study was that the librarian looked to *variety among databases cited* as an indicator of thoroughness. The instructor did not use this indicator at all (see Figure 1). In addition to regularly noting that the sources all came from databases that usually (but not always) indexed peer-reviewed journals, the librarian perceived *variety among databases cited* akin to the way the instructor perceived *topic specificity*, namely, the librarian saw *variety among databases cited* as an indication of a thorough understanding by the student of the research landscape.

The librarian also saw it as an indication of the student's understanding of research as a process. In other words, she thought that *variety among databases cited* allowed for the student having done deep and thorough research. It allowed for the student having searched iteratively, and it allowed for the student having looked comprehensively enough to locate, identify, and select the most relevant, impactful sources. Again, the librarian's focus on databases reflects her daily practice. She works deeply in numerous databases and is particularly familiar with the nuances of their search functionality and their journal-, subject-, and date-coverage.

As shown, many of the differences in the indicators librarian and instructor considered in assessing the quality of sources reflect their respective subject knowledge and their daily practices, which are intrinsically linked. Thus, it is important that librarian and instructor work together to ensure that their practices complement rather than compete with each other.

"Allowed for" as Problematic Shorthand for Quality

As discussed, both librarian and instructor assessed the quality of bibliographies with the view that variety among journals cited allowed for more comprehensive coverage, and that a broad date spread of citations allowed for the inclusion of seminal works and historical concepts. The librarian also performed assessment from the perspective that variety among databases allowed for the student having looked comprehensively enough to locate, identify, and select the most relevant, impactful sources. Of particular note in these assessment-of-quality practices is that "allowed for" functioned as a kind of shorthand for quality.

The shorthand occurred when instructor or librarian looked at the *potential* for thoroughness rather than *verifying* the thoroughness. The fact that the potential itself, i.e., what an indicator "allowed for," was enough to give a bibliography a higher rank could prove problematic. For example, a larger number of sources may or may not cover a topic well, depending on whether the sources cited are relevant and specific enough and whether they are scholarly (or not, depending on assignment/context). Both librarian and instructor also looked to other indicators to verify their assessment of the quality of a source or bibliography, and the instructor looked at titles of the articles to see if each source was relevant and specific enough (as opposed to articles she found "very pedestrian") to support the topic. However, neither librarian nor instructor ever looked at whether the specific articles worked together to cover the topic. They never considered the group of titles as a whole towards this end and rarely looked at the full text when a title was unclear in order to verify that the topic had, indeed, been more or less thoroughly covered by the cited sources. Neither did they look beyond there being a spread of dates to see if the sources actually included any seminal works or reflected the history of the concept.

Recommendations Moving Forward

Identifying such shorthand practices can help librarians and instructors hone their practices. They will then be able to determine which practices are impractical to change, such as looking at the full text rather than the citation for every article to verify coverage of the history of the concept, but they can also become aware of how they approach indicators that “allow for” thoroughness rather than substantiating thoroughness. Through this awareness, librarian and instructor can identify moments in assignment directions, instruction sessions, and guiding discussions during which they might make explicit to students ways to thoroughly cover a topic, such as through variety among dates and journals. In these moments, librarian and instructor can also make explicit to students their expectation of such thoroughness. Librarian and instructor can also carry this awareness with them into practices of measuring students’ work, such as grading, so that rubrics explicitly state the expectation of thoroughness and are thus more transparent and fair.

Consulting the Citation vs. Full Text: Issues with Selecting Appropriate Sources

Librarian and instructor rarely turned to the full text of a cited article. However, when they did, it was in response to different cues.

Librarian

The one time the librarian consulted the full text was when the citation listed a single page number for the source. Because she felt less knowledgeable about the journals, she tended to look at every detail of a citation, even if she weighted those aspects differently. In this case, the librarian went to the full text and discovered it was a one-page interview and thus not an “academic”

article as the assignment had specified (see Appendix A).

Instructor

The instructor did not usually notice page numbers. In the situation where a citation was formatted incorrectly and the instructor could not discern the title of an article or journal, she did not consult the full text, and this situation resulted in a more negative assessment of the bibliography.

The one time the instructor consulted the full text was when she did not understand the concept to which the article title referred. When she consulted the full text, the article proved to be too broad and not relevant to the assignment. She asked, “What is the ‘Archeology of Consumption?’...This is a very broad idea, and it’s inadequate following the specifications, the guidelines.”

Collaboration and Issues with Determining Quality

When librarian and instructor looked only at citations and not the full text, there were several differences in the ones they each deemed appropriate or problematic with respect to the assignment. The librarian actually found only two citations, or 4%, of the forty-seven to be problematic to the assignment whereas the instructor found six, or 13% (see Figure 4). The librarian deemed both sources problematic because, while the topics the article titles suggested seemed broadly applicable to the assignment, the citations indicated the articles were quite short – only three to four pages long – and so the source “could not have been ‘academic.’” The instructor deemed six sources problematic based primarily on a combination of topic specificity and style formatting as indicated by the citations.

Figure 4. Assessment of a Source's Quality, via Citation

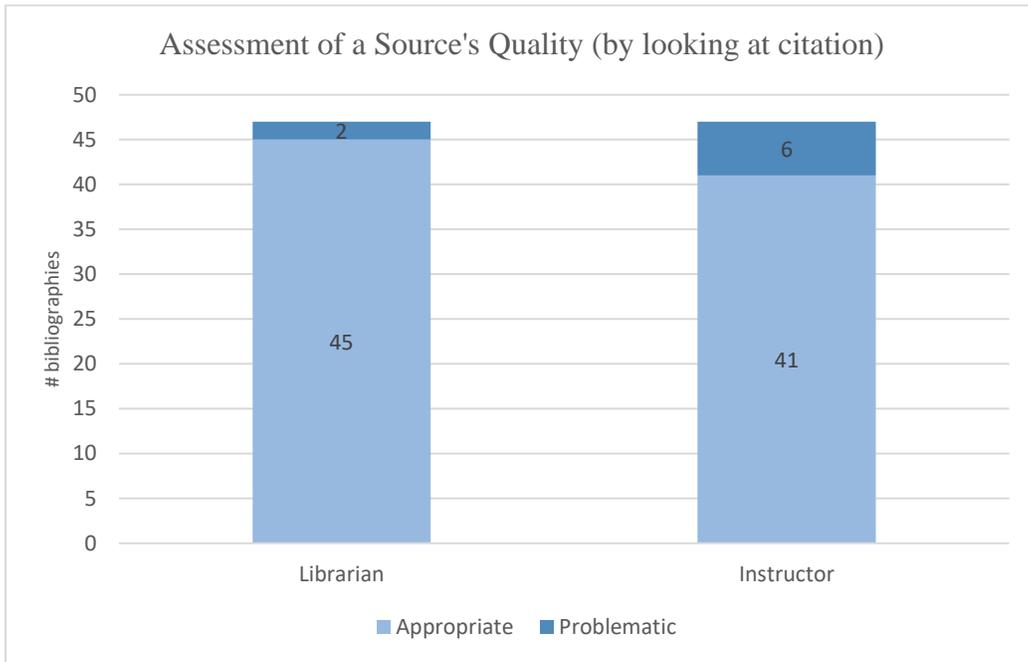
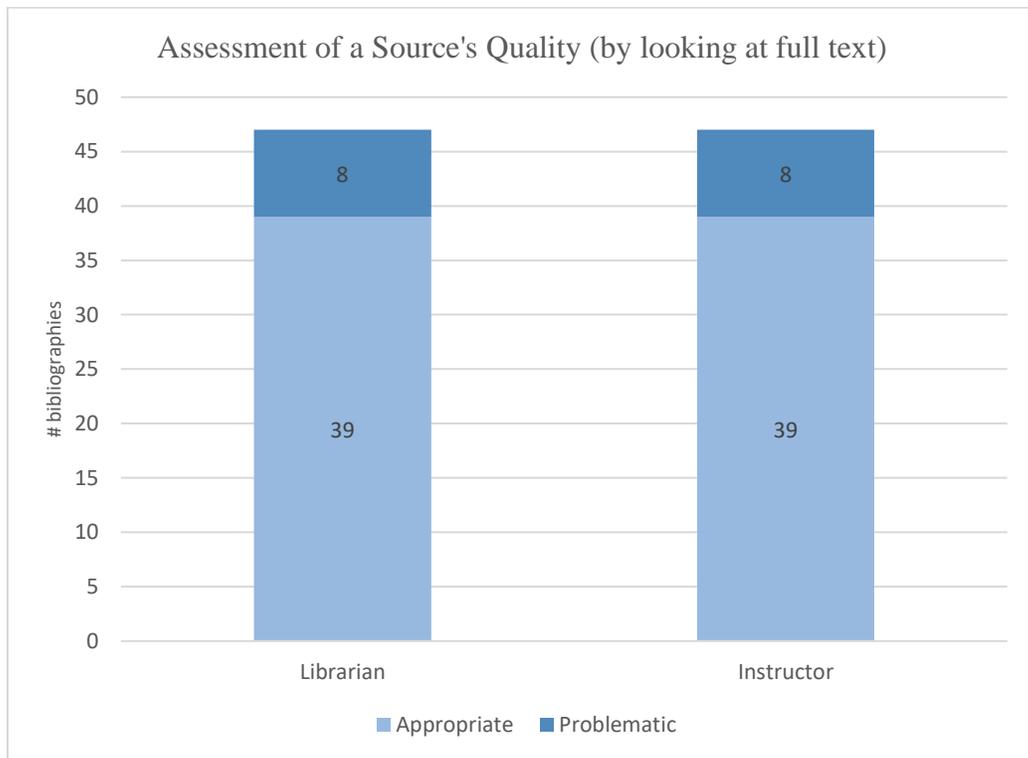


Figure 5. Assessment of a Source's Quality, via Full Text



In addition to differences in the number of sources they deemed problematic and why they deemed them problematic when looking only at citations, the instructor selected mostly different sources than the librarian to categorize this way. Only one of the two sources the librarian

deemed problematic was also deemed problematic by the instructor, and four of the sources the librarian said were appropriate the instructor found problematic (see Figure 6).

Figure 6. Looking at Citations

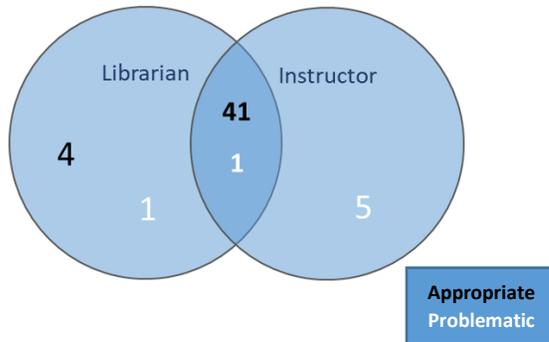
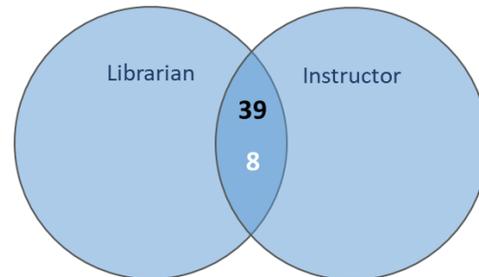


Figure 7. Looking at Full Text



Number of Sources for which Librarian’s and Instructor’s Assessments Agreed

A Problematic Solution

However, what is significant about this difference is that when librarian and instructor consulted the full text, they were in 100% agreement about which sources were appropriate to the assignment and which were problematic. The librarian came to find an additional six sources problematic, and the instructor found an additional one problematic. They each found thirty-nine of the forty-seven sources appropriate (see Figure 5), and they each placed the same sources in the same categories. In other words, the librarian’s and instructor’s sets overlapped completely (see Figure 7).

It was as a result of meeting and discovering the discrepancies in their approaches that librarian

and instructor decided to look at the full text. Of course, the function of a citation is to stand in for the full text in terms of providing the information that establishes credibility of the source, and also to facilitate transparency, i.e., readers are able to get the source and read it themselves to verify the information the bibliography author reported. It would not be sustainable in either librarian’s or instructor’s daily practice to review the full text of every source that arose in their work with students. Faculty in Leeder, Markey, and Yakel’s study reported of their own practices that they “don’t dig back into the sources, typically there’s no time.”³⁶ Likewise, the librarian cannot read every article or book she helps students find, and the instructor cannot read every article or book in the bibliographies students submit to her for a grade.

Recommendations Moving Forward

What librarians and instructors can do is collaborate more as part of their daily practices. As a result of librarian and instructor meeting and collaborating, as happened in the case of this study, they can adjust their thinking about quality and the aspects of citations they examine to assess quality. Their thinking, practices, and resulting rubrics can thus become more aligned. This example points to the importance of collaboration. Just as different subject knowledge might inform and differentiate daily practices, collaboration can inform and help align them.

Different Definitions of “Academic”

The assignment specifically states students’ “sources should come from academic journals” (see Appendix A). However, the librarian and the instructor interpreted “academic” differently when assessing the quality of sources.

Instructor

Discussion revealed that the instructor thought of “academic” and “from the library” interchangeably. She said that, in designing the assignment and in assessing the quality of sources for this study, she aimed for students’ sources to be “simply things that they find in the library as opposed to, ‘I found a website.’” The instructor’s thinking of the library and academic sources as being so linked explains the frequency with which she applied the indicator, *number of sources from library*; she applied it to 68.8% of total bibliographies (see Figure 1).

Librarian

The librarian assessed sources for this study using “academic” and “peer-reviewed” interchangeably. Discussion revealed that her daily practice has often involved different instructors using the terms, “scholarly,” “academic,” and “peer-reviewed” interchangeably and her finding that, usually, instructors actually mean

“peer-reviewed.” In her daily practice, she does not always have access to the assignment for which she is helping students find sources. Thus, in order “not to hurt students” in these situations, the librarian has made a practice of directing students to sources that are peer-reviewed in order to make sure the students’ work meets the strictest of instructors’ parameters. This practice led her to assume for this study that “academic” actually meant “peer-reviewed,” (which it did not). She explained, “I found myself, because of my job, looking at things that were peer-reviewed and valuing them, and then realizing that the assignment says academic, which is also a question that I have. Obviously, there’s a lot of scholarly stuff that doesn’t undergo a peer reviewed process per se.” Thus, in this study, as in her daily practice, she assessed a source based on whether or not it was “peer-reviewed,” e.g., she looked at which databases students used to see if peer-review were likely.

Recommendations Moving Forward

Like “quality,” “academic” can be defined multiple ways, and determining whether a source is academic is often an essential part of assessing a source’s quality for both librarian and instructor. Thus, it is particularly important to make sure librarian and instructor are working with the same definition. It is important to the kinds of sources librarians teach students to seek and to the conversations librarians and instructors have with students about constructing authority in their coursework.³⁷ The conversations collaboration involve can be key to unearthing inconsistencies and aligning working definitions.

The Student’s Search Process as an Indicator of Credibility

Coding the librarian’s and instructor’s conversation unearthed that both librarian and instructor looked to aspects of citations specifically to re-

veal the student's search process. Thus, the student's process was the location of some assessment discourse.

Librarian

As part of her assessment process, the librarian put a great deal of effort into determining where the student had searched for sources. In particular, she considered aspects of citations pointing to databases the student used as a way of determining the quality of the student's search process. She used the indicator, *number of peer-reviewed sources (as suggested by database searched)*, as part of her assessment of 43.8% of total bibliographies (see Figure 1). Conversation uncovered that she looked for database information in every citation, but it was not always clear which database the student had used to find the source. The assignment did not require students to include information about the database in their citations (see Appendix A). Nevertheless, some students included in their citations the names of the databases or URLs that pointed to the databases they had used to find sources. When the citation did not include information about the database, the librarian checked to see in which databases the student might have found the source and if the source was freely available on the web. The effort the librarian put into determining which databases students had used demonstrates how important she felt that information was towards assessing the bibliographies.

As discussed, she used this information as a cue to whether a source was peer-reviewed, or "academic," and as an indicator of thoroughness, but conversation also unearthed the fact that she tried "to determine if they had searched broadly" in order to reveal a student's understanding about the lay of the research land. She stated: "It's possible a student was familiar with the range of scholarly information available and the range of tools available and the student still didn't [search broadly]. If they did use multiple

databases, though, that seems like a good sign they know what's out there at least and at least somewhat how to use it." What is significant here is that she valued citation information about databases for what it suggested about a student's search process. The students' search process was, at a deeper level, the focus of her assessment.

Instructor

The instructor also evaluated the student's search process as part of her assessment of a bibliography's quality. Specifically, she looked at whether a source came from the library as a way of determining the quality of the student's search process. She used the indicator, *number of sources from the library*, as part of her assessment of 68.8% of total bibliographies (see Figure 1). Conversation brought to light that, if she could not "tell from the name of the journal whether something came from the library," she determined whether a source came from the library by looking up whether the source was available via a library database or freely available on the web.

As discussed, the instructor used this information to assess whether a source was "academic," but her focus on students' use of the library also placed the students' search process as another indication for assessment. She stated: "Ultimately, we want students to know... it's [the research process] based on information that we've collected in a systematic way as academic libraries do in collecting sources." The instructor looked at whether a source was from the library to determine if students had understood and made use of the range of scholarly information and search tools available, and she assessed the bibliographies based on this determination.

Constructing Authority during Assessment

Both librarian and instructor valued citation information for what it suggested about a student's search process, which they assessed as

part of the quality of the source. The steps a student had taken to search for a source played an important role in constructing the perceived credibility of that source and of the collection of sources that made up each bibliography. Furthermore, the assignment charged students with constructing authority via citing sources, but these findings point to ways librarian and instructor also went about constructing authority during assessment. Recognizing that librarian and instructor considered the student search process as part of their assessment is important because it allows them to then make that expectation clearer to students, e.g., for this assignment they might make explicit their expectations that the search process is part of constructing authority, searching broadly allows for thoroughness, and a bibliography should reflect this breadth.

Recommendations Moving Forward

In terms of practical next steps, this finding is in keeping with Georgas's findings that students will encounter and select reliable sources if "they are given some format criteria."³⁸ It is also in keeping with Robinson and Schlegl's findings that students find better sources when they receive clear guidelines for citations and are held accountable as well.³⁹ Thus, assignment directions, formal instruction, and guiding conversations should be as explicit as possible about the importance of the search process, the function of its being iterative and broad, and that they may be graded in part on the quality of the process they undertake.

That librarian and instructor focused on the student search process also inspires questions about the function of citation style in assessing the quality of sources. For example, if the practice of both librarian and instructor includes determining the database a student used to find a source, should the instructor ask students to use a style that requires database information in a citation, or if the discipline-specific style does not

include database information in citations, should she ask students to add database information?

In addition to facilitating the assessment librarian and instructor might already be doing of the student search process, requiring database information in citations could make the rubric more explicit and could also serve as a teaching moment. Such a requirement could function as a prompt for discussing with students the importance of searching broadly – what it allows for in terms of incorporating different authors, viewpoints, and seminal works into their research – and it could function as a prompt for discussing the lay of the research land – the kinds of information available and the tools available to search for and access that information. Another option is revisiting the practice of looking to databases for information about the student search process, which prompts the question: is there another, better way? This question might best be addressed through collaboration between librarian and instructor to assure their respective assessment of sources' quality remains strategic, explicit, and aligned.

Conclusion and Future Research

This study suggests that librarian and instructor approached aspects of assessing the quality of sources differently. While they both go about their daily work with the shared understanding that they value credible information, they employed different indicators of quality during assessment, and they wielded them with different frequency and weight. Moreover, both librarian and instructor valued thoroughness as indicated by diversity among sources cited, but they looked at different facets of citations to determine such diversity.

The study also unearthed differences in librarian and instructor's working definition of the term, "academic," and in the cues that led librarian and instructor to consult the full text of a cited

source. These differences led to their different assessment of the sources' quality.

Both librarian and instructor also looked beyond the information about a source a citation listed to what the citation suggested about a student's search process. Librarian and instructor looked at different facets of the citation to determine the quality of the student's search process, but the fact that they did this has implications for assignment design, making the working rubric more explicit, and, generally, taking the opportunity to teach students about constructing authority and the scope of information and search tools available to them.

The study also demonstrated that the expectations that went into assessing a source's quality were often not explicit. In other words, the librarian, instructor, and students were not always aware of the rubrics at work. Making expectations explicit is important in terms of equity in grading and in terms of the particular details about constructing authority that librarians and instructors include in their work with students.

Moving forward, more definitive studies on differences between librarians' and instructors' approaches to assessing sources' quality would be useful as would studies on consistency across librarians' and instructors' individual practices. Even though the findings from this study were fairly suggestive, the study was designed to be exploratory, and it examined a limited sample. Studies looking at larger and more varied samples, such as a larger pool of librarians and instructors and/or working with bibliographies from a range of course levels and disciplines, would create the opportunity for a wider range of assessments and discussions and would allow for more generalizable observations. Future research, along with this article, could strategically guide librarians' and instructors' collaboration and respective daily practices to assure that both parties assess quality using explicit criteria and maintain complementary practices at all levels of granularity.

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⁴ Cope and Sanabria, 497-8.

⁵ Toni Carter and Todd Aldridge, "The Collision of Two Lexicons: Librarians, Composition Instructors and the Vocabulary of Source Evaluation." *Evidence Based Library & Information Practice* 11, no. 1 (2016): 23-39.

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⁷ Carter and Aldridge, 24.

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⁹ Andrew Robinson and Karen Schlegl, "Student Bibliographies Improve When Professors Pro-

vide Enforceable Guidelines for Citations." *portal:Libraries and The Academy* 4, no. 2 (2004): 275-290.

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¹⁷ Sarah Dahlen and Kathlene Hanson, "Preference vs. Authority: A Comparison of Student Searching in a Subject-Specific Indexing and Abstracting Database and a Customized Discovery Layer." *College & Research Libraries* 78, no. 7 (2017): 881.

¹⁸ Helen Georgas, "Google vs. the Library (Part III): Assessing the Quality of Sources Found by

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¹⁹ ACRL, *Framework for Information Literacy for Higher Education*; James Rosenzweig, Mary Thill, and Frank Lambert, "Student Constructions of Authority in the Framework Era: A Bibliometric Pilot Study Using a Faceted Taxonomy." *College & Research Libraries* 80, no. 3 (2019): 402.

²⁰ Georgas, "Google vs. the Library (Part III)," 133-161.

²¹ Dahlen and Hanson, "Preference vs. Authority," 883.

²² ACRL, *Framework for Information Literacy for Higher Education*.

²³ Saunders, "Culture and Collaboration," 137-147; Cope and Sanabria, "Do We Speak the Same Language," 475-501; Carter and Aldridge, "The Collision of Two Lexicons," 23-39.

²⁴ ACRL, *Framework for Information Literacy for Higher Education*.

²⁵ Rosenzweig, Thill, and Lambert, "Student Constructions of Authority in the Framework Era," 401.

²⁶ Carter and Aldridge, 23-39.

²⁷ Carter and Aldridge, 27.

²⁸ Dahlen and Hanson, "Preference vs. Authority," 883.

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³³ Carter and Aldridge, "The Collision of Two Lexicons," 25.

³⁴ Carter and Aldridge, 27.

³⁵ Leeder, Markey, and Yakel, 122, 120.

³⁶ Leeder, Markey, and Yakel, 121.

³⁷ ACRL, *Framework for Information Literacy for Higher Education*.

³⁸ Georgas, "Google vs. the Library (Part III)," 155.

³⁹ Robinson and Schlegl, "Student Bibliographies Improve," 275-290.