Redesigning a Journalism Course to Integrate IL: A Case Study

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abstract: This case study discusses the integration of information literacy instruction and assessment in a required research course for students of journalism and strategic communication at the University of Kansas. The integration consisted of four components: (1) a unifying threshold concept, (2) an open textbook, (3) a sequence of five assignments, and (4) an early- and late-semester assessment of student information literacy attainment. Qualitative and quantitative data were used to evaluate course components and to guide ongoing course revisions. The course redesign addressed the challenge of creating a sustainable structure for IL instruction. Discipline-specific obstacles stemmed from divergent information values and distinct information-handling conventions in journalism-related professions.

Introduction

Integrating the Framework for Information Literacy for Higher Education (the Framework) within discipline-specific courses entails the development of information literacy (IL) instruction using the content and conventions of individual disciplines.[1] The literature discusses IL integration in stand-alone courses and course sequences in many disciplines, including agricultural science,[2] biology,[3] business,[4] chemistry,[5] engineering,[6] health sciences,[7] and teacher preparation.[8] Since the development of the Framework, there have been discussions, programming, and courses centered on the intersection of "fake news" and IL[9] but scarce presentations of IL integration in journalism education more broadly.[10] This article tackles the omission by presenting how IL instruction was integrated into a journalism research course during a course redesign. The integration consisted of four components: a unifying threshold concept, an open textbook, an assignment sequence, and an early- and late-semester assessment. The article

also discusses how qualitative and quantitative data were used to evaluate the textbook and other course components, and to iteratively guide ongoing course development.

Instructional Challenges

This case study illustrates how a course redesign addressed three IL integration challenges: the distinct student makeup of journalism programs in the United States, the typical student assignments and sourcing conventions discussed in IL literature, and the universal need for sustainable librarian support of discipline-specific courses. First, journalism and mass communication courses often enroll young people who aspire to careers in professions with divergent information values. Professional journalism programs in U.S. universities train students not only to be journalists but also to work in public relations and advertising, collectively referred to as strategic communication.[11] Strategic communication students, in fact, outnumber journalism majors in such programs.[12] Journalists' use of information is guided by the professional values of accuracy, transparency, and independence.[13] Public relations practitioners, on the other hand, emphasize the professional values of advocacy, expertise, and loyalty to those they represent.[14] Such differences in guiding principles can complicate teaching IL in classrooms that comprise both journalism and strategic communication students.[15]

The second challenge concerns the typical student assignments and sourcing conventions discussed in IL literature, in contrast to the information-handling practices that are standard in journalism and strategic communication. Teaching strategies presented in many integration case studies are designed to assist students in sourcing and writing annotated bibliographies, academic research papers, and portfolios, and these products often are used as indicators of students' IL attainment.[16] Journalism and strategic communication students, in contrast, produce news articles or broadcasts, news releases or public relations campaigns, and market research reports or memos. Their sources include government information and data, business records, scholarly research, marketing research, and expert and eyewitness interviews. Attribution conventions in journalism typically consist of identifying sources in text and omitting bibliographies. While some IL case studies discuss alternative student products,[17] integrating IL in journalism necessitates the development of distinct instructional elements that correspond to the discipline's educational and professional practices.[18]

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This course redesign also illustrates sustainable methods for integrating library instruction in undergraduate education by shifting away from the one-shot instructional model and toward open educational resources (OER) and open pedagogy. The one-shot session, which saw its greatest popularity in the 1990s, remains a staple in IL instruction.[19] Many librarians, burnt out from attempting to cover an impossible number of topics in repetitive one-hour sessions,[20] recognize the model's pedagogical ineffectiveness[21] and seek alternatives.[22] OER are openly licensed educational materials that can transform

teaching and learning through the open licensing of materials such as textbooks.[23] Creating and using OER as opposed to a commercial textbook allows educators to customize learning materials and actively involve students in inclusive learning practices.[24]

Instructional Context

The research course discussed here is one of several requirements that constitute the core of the journalism school's curriculum at the University of Kansas (KU) in Lawrence. Students complete the core before advancing to more specialized professional courses, such as multimedia reporting and strategic communication campaigns. During the course redesign described in this article, a mass communication survey course was the only prerequisite for the research course, which resulted in students taking the research course as early as their second semester at the university. Approximately 350 students who either majored or minored in journalism or strategic communication took the course each year.[25]

The research course was introduced to the curriculum in 2012, with the goal of offering students more specialized training both in researching sources and in communicating information. The learning objectives of the course were that students know how to (1) identify, (2) retrieve, (3) evaluate, and (4) synthesize information sources. The research course became a prerequisite for the writing course, with the expectation that students apply their new research skills to presenting information to audiences in the subsequent course. Each semester, the course was delivered in five or six 30-student sections, each taught by an individual instructor with varying levels of teaching experience, and with little coordination of teaching and assessment between the sections. In most sections of the course, librarians provided one-shot instruction sessions on accessing and using the library website and proprietary scholarly databases.

By 2017, anecdotal evidence suggested that students completed the research course with uneven skills. A new lead instructor initiated a course redesign process to standardize student outcomes and to address this "course drift,"[26] in which the material and expectations differ greatly depending on the instructor. Planning for the redesign included a discussion with librarians who provided the one-shot sessions. They advocated devising a sustainable structure for integrating library instruction in the course. This resulted in the lead instructor and one of the librarians (the first two authors of this article, subsequently referred to as the redesign team) partnering to comprehensively integrate IL in the course.

The redesign team began by drawing on foundational IL sources, including the Framework, a mapping of the IL standards to undergraduate journalism education,[27] and the supporting conceptual and research literature. The remainder of this article discusses each of the four IL components the redesign team planned and implemented in the course (that is, the threshold concept, open textbook, assignment sequence, and student assessments) and the data used to evaluate these components and adjust course delivery. Each of the following sections that discusses a redesign component includes a review of the literature that supported the development and implementation of that component in the course.

Course Redesign Components

Credibility: A Unifying Threshold Concept

A key goal of the course redesign was to bolster the sense of relevance of the research course among both journalism and strategic communication students. Students' perception of relevance—the sense that what they are learning matches their educational and career goals—shapes their motivation to gain new knowledge.[28] Engendering relevance can be challenging in classrooms with students pursuing dissimilar professional goals,[29] as is the case in many journalism and mass communication programs. One approach with disparately oriented students is to deliver content that targets one group of students, in the belief that the other groups will also benefit.[30] Another approach is to cover an equal number of topics for each unique student group that populates the class.[31] The redesign team leading the University of Kansas research course pursued a third approach, in which they identified a unifying principle—a threshold concept—that reflects the learning objectives of the course and encompasses relevance for both journalism and strategic communication students.

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A threshold concept is a central idea that transforms how students view a subject or a discipline.[32] It is likened to a portal that, once crossed, shifts learners' perceptions of the subject, such that they understand it from the perspective of an expert rather than a student. Crossing a threshold is essential for developing advanced field-specific concepts. Instructors in several disciplines have used threshold concepts to reorient their teaching and improve student outcomes. In business, for instance, an instructor used the threshold concept of power to improve students' understanding of the political institutions and actors shaping a business landscape.[33] A journalism teacher relied on quantitative literacy as a threshold concept to raise students' confidence in using data in reporting.[34] Electrical engineering instructors used two threshold concepts (Thévenin's theorem and dynamic resistance) to increase student outcomes and decrease attrition.[35]

The KU redesign team identified credibility as the threshold concept for the IL course because it is relevant for both journalism and strategic communication students, and because it is a central idea in the "Authority Is Constructed and Contextual" frame of the Framework.[36] In general parlance, credibility is the "quality of meriting belief or confidence."[37] In communication, it is "the impression of trustworthiness that a speaker, or the arguments he or she uses, leaves with an audience."[38] Audiences use credibility to distinguish information sources that have merit and are believed from those with little or no worth that are cast aside and ignored. Unlike other information values, on which journalism and strategic communication may differ (for example, independence versus loyalty), credibility is indispensable to the professional success of both groups. The livelihoods of both journalists and strategic communication practitioners depend on readers and audiences trusting the information they present. Credibility also is a key focus in IL literature, where the analogous term *authority* tends to be favored.[39] The

Framework outlines requisite research and critical thinking skills and dispositions for identifying and using credible information sources.

The credibility threshold concept informed a central theme of the revised course: that the credibility of communication professionals depends on how believable the messages they produce are, which, in turn, depends on the credibility of the sources of these messages. In the revised course, instructors presented this theme at the outset of the semester and reinforced it in every IL component of the course.

The redesign team intentionally positioned the course theme in a professional context to directly connect the course to students' professional aspirations and thus increase their perception of relevance. This approach reflects John Keller's instructional design model, in which students' impression of relevance plays a central role in motivating their attention and learning.[40] According to this model, a sense of relevance is necessary to students' engaging with learning supports in a course. Engagement, in turn, stimulates their confidence in succeeding in the course. Librarians have used this motivational model to design and deliver IL instruction on searching, source evaluation, and research-based writing in community college and liberal arts college settings.[41] The learning supports developed for the journalism research course—an open textbook, an assignment sequence, and a student assessment at the beginning and end of the semester—integrate and advance the IL course theme, with the goal of increasing students' self-efficacy, their belief in their ability to succeed.

First Instructional Support: Open Textbook

The redesign team created and implemented an OER in the form of an open textbook to integrate and scaffold IL instruction in the course. The team also assessed students' perceptions of the textbook in the first semesters of its implementation. *OER* is defined as "high-quality teaching, learning, and research materials in any medium—digital or otherwise—that reside in the public domain" and are openly licensed to permit "no-cost access, use, adaptation and redistribution by others with no or limited restrictions."[42] Examples of OER are open textbooks in such repositories as OpenStax, the Open Textbook Network's Library, or the California State University System's MERLOT (Multimedia Education Resource for Learning and Online Teaching). OER, born from open education and open access more broadly, democratizes education by lowering the costs of textbooks and by granting students immediate and perpetual access to course materials.[43] Employing OER is an empirically supported equity strategy to provide all students, especially traditionally marginalized learners, with affordable access to educational resources. Studies show that students in courses that employ OER perform better on such indicators of achievement as content knowledge, course grades, and course completion than do students in courses with conventional textbooks.[44]

Advantages of the Open Textbook

Three considerations motivated the redesign team to create an open textbook. First, no commercial textbook addressed the learning objectives of the course and the needs of both journalism and strategic communication students. The research course overlapped three content areas, with available textbooks covering each area: IL,[45] research methods,[46]

and reporting.[47] Instructors could have required students to purchase three books or assembled a course pack of readings. Neither approach would have completely addressed the concepts and skills that comprise the learning outcomes of the research course.

Second, the redesign team favored an OER because its open licensing would allow instructors to continually update the text with current examples relevant to aspiring journalism and strategic communication professionals. Additionally, because the open education movement promotes engaging students as peer educators that benefit subsequent learners,[48] an OER eventually would incorporate student-produced instructional aids.

Finally, the redesign team reasoned that using an OER would provide a more effective platform for IL instruction than scattered one-shot library sessions. Research has shown that one-shot IL instruction sessions are pedagogically ineffective.[49] Instead of one-shots, an OER would allow the redesign team to tailor the Framework to the learning objectives of the research course and to ensure that IL concepts would be taught iteratively throughout the semester. Given the multi-section nature of the course, using the same OER also would standardize IL instruction across multiple sections and instructors.

The open textbook became a collaboration among nine faculty members in the journalism school and the university's library, and took approximately one year to complete. The resulting OER, *Be Credible: Information Literacy for Journalism, Public Relations, Advertising and Marketing Students*, was accessible both online and as a PDF document to accommodate students with limited Internet access or those who wished to print a copy of the textbook.

The textbook consisted of three sections that together integrate most IL frames.[50] Chapters in the first section, "Information Workflow," focused on the frames "Research as Inquiry," "Searching as Strategic Exploration," and "Information Has Value." This section concentrated on the development of search strings, effective use of search operators, the maintenance of research records, licensing of information, and attributing sources in the presentation of research results. Chapters in the second section, "Evaluating Information," focused on "Authority Is Constructed and Contextual" and "Scholarship as Conversation." Topics included methods for evaluating information, how to recognize and tap into credible information networks, and how to determine biases in information. Chapters in the third section, "Information Sources," introduced and discussed the sources that journalism and strategic communication students were expected to use in research, including public records, public data, nonprofit organizations, news archives, scholarly research, market research, public companies, and archives. Each chapter in this section offered opportunities to discuss multiple IL frames. The text prompted students to consider the "Information Has Value" frame, for instance, by discussing the access that different information types offer: open, closed (privately held), or privileged (proprietary). Chapters also advised students to evaluate the credibility of information sources iteratively, independent of the cost of access, and to use conventional criteria, such as publisher, recency, relevance, sources, and bias.

Student Perceptions of the Open Textbook

Evaluations of OER typically cluster around four themes: cost, outcomes, use, and perceptions, also called the COUP Framework.[51] Cost studies examine savings to students

resulting from OER adoption.[52] Research on outcomes compares OER with commercial textbooks on such academic indicators as final grades and student attrition.[53] Studies of use examine how and how frequently students access an OER and the features that make an OER more or less usable (for example, accessibility, portability, searchability, and ability to highlight).[54] Perceptions research focuses on faculty and student evaluations of OER quality and how effectively OER support learning.[55]

The redesign team drew on the COUP Framework to understand student reception of the open textbook. Students in the first two semesters of the text's implementation (fall 2018 and spring 2019; $n = 264$) scored the textbook as part of the end-of-semester evaluations, using six questions that focused on cost, use, and perceptions. The outcomes theme was not examined given the absence of a non-OER control group. Table 1 presents the evaluation questions, response scales, frequencies, and means.

With all response means above 4 on a 1-to-5 scale, students indicated overwhelmingly that the OER effectively supported their learning. Nearly all students either agreed or strongly agreed that they appreciated the textbook being free (99.6 percent) and accessible online (99.2 percent). These highly positive perceptions of OER cost and accessibility likely drove students' utilization of the book. Most (85.3 percent) said that they read the assigned chapters always or most of the time, 9.3 percent of students reported that they read the material about half the time, and only 5.4 percent indicated that they did the assigned readings less frequently. Most students either agreed or strongly agreed that the OER supported their learning, scoring the examples (96.9 percent) and video tutorials (88.46 percent) presented in the OER as helpful. Overall, most students (93.0 percent) rated this open textbook as either slightly better or much better than other (commercial) textbooks they had used.

In addition to the quantitative scores, students answered open-ended questions about what made the OER better or worse than other textbooks they had used and how to improve it. The article's third author analyzed these responses and organized them, focusing on cost, use, and perceptions.

Many students praised the open textbook's affordability and accessibility. Several students underscored the value of a free textbook by specifying their college-related financial burdens. This quotation typifies these students' views: "Having a free textbook was very helpful as a young college kid who can't work a ton and is

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paying for his own education." In terms of use, students mentioned the textbook's online convenience. One wrote, for instance, that the textbook "was accessible everywhere and wasn't a heavy stack of papers in my backpack all the time." A few students noted the need for Internet access as a barrier to using the book: "Having the online textbook makes it easier to do your work on the go. The only downside is when you don't have an Internet connection. That being said, I still prefer the online textbook."

Students' perceptions of the OER focused on writing, authorship, structure, and tutorial videos. Students said that they engaged with the open textbook's content because its writing was casual, accessible, and well organized. Some made a direct connection between writing and learning: "The writing style was more approachable, and

Table 1.

Student evaluations of the OER textbook ($n = 264$)

	Response scale	Frequency	Mean (standard deviation)
Cost			
I appreciate that the textbook for this class was free.	Strongly disagree (1)	.40%	4.98 (.25)
	Disagree (2)	–	
	Neither disagree nor agree (3)	–	
	Agree (4)	.40%	
	Strongly agree (5)	99.20%	
Use			
I appreciate that the textbook for this class was accessible online.	Strongly disagree (1)	–	4.94 (.28)
	Disagree (2)	–	
	Neither disagree nor agree (3)	0.80%	
	Agree (4)	5.00%	
	Strongly agree (5)	94.20%	
How frequently did you read the assigned chapters in the textbook?	Never (1)	1.16%	4.16 (.84)
	Sometimes (2)	4.25%	
	About half the time (3)	9.27%	
	Most of the time (4)	48.26%	
	Always (5)	37.07%	

Perception

The examples discussed in the textbook were helpful.		4.62 (.56)
Strongly disagree (1)	–	
Disagree (2)	.39%	
Neither disagree nor agree (3)	2.70%	
Agree (4)	32.43%	
Strongly agree (5)	64.48%	
The tutorial videos in the textbook were helpful.		4.54 (.74)
Strongly disagree (1)	–	
Disagree (2)	1.92%	
Neither disagree nor agree (3)	9.62%	
Agree (4)	21.54%	
Strongly agree (5)	66.92%	
Was the textbook for this class better or worse than other textbooks you have used?		4.54 (.62)
Much worse (1)	–	
Somewhat worse (2)	–	
About the same (3)	6.98%	
Somewhat better (4)	32.56%	
Much better (5)	60.47%	

the separation of paragraphs, aesthetic, and setup of the book made it easier to read and want to learn more." A few students called for some chapters to be shorter: "Some chapters were pretty lengthy, which made it hard to keep following along with. They became tedious at times."

Knowing the open textbook's authors and seeing a clear connection between the text and assignments also facilitated learning: "I liked that it was written by several J-School professors, and they gave real world examples. It was easier to relate to lectures when we knew this is exactly what the professor was talking about, as it is in his book." Another student appreciated the opportunity to reach out to the text's authors: "I learned better knowing that I knew some of the authors in person and could reach out to them with further questions about what they had wrote about." Students noted the clear alignment between the open textbook and their assignments: "Not a single section was left unread because of the assignments accurately going along with the book and lectures."

Students applauded the tutorial videos, which were embedded in the text, and suggested improvements to them. Many students echoed this student's call: "Keep the tutorials, as they were extremely helpful." Some championed the planned inclusion of student-developed videos: "I think the inclusion of student-made tutorials will really improve the book." Others recommended shorter and more engaging videos: "I think maybe make shorter tutorials. I would usually watch about half of it and then give up because it took too long to get to the point." Such comments illustrated students' willingness to improve elements of the OER to make it more relevant.

> Students recognized that the OER helped them engage with the course and facilitated their learning by being free, convenient, well-written, developed by their professors, and aligned to course content …

In all, students' evaluations of the open textbook showed it to be a successful learning support. Students recognized that the OER helped them engage with the course and facilitated their learning by being free, convenient, well-written, developed by their professors, and aligned to course content, and by featuring video tutorials. Students' comments also highlighted the need to reduce the length of some chapters and videos, and to reiterate that the textbook may be downloaded for offline use. These comments indicated that students were actively and critically engaging with the open textbook as potential collaborators, suggesting a future expansion of how open pedagogy is integrated in the course.

Second Instructional Support: Research Brief Assignments

In addition to the OER, the redesign team implemented a series of five research brief assignments designed to advance IL. By completing each assignment, students practiced and demonstrated their progress toward the course learning objectives, namely, their ability to search, retrieve, evaluate, and synthesize information sources. The structure of the five assignments mirrored these learning objectives. Each assignment comprised three sections, focusing on (1) searching, (2) evaluating, and (3) synthesizing information

sources. This sequence of tasks is typical in undergraduate IL assignments across the disciplines.[56] Each assignment also required students to demonstrate professional skills and conventions that are unique to journalism and strategic communications.

The expectation that students complete the same sequence of tasks in each of the five assignments was based on the premise that the development of a cognitive skill requires repeated practice. According to learning theory, a learner begins developing a skill by enacting theoretical or observed knowledge about the procedures that make up proficiency.[57] With time and repetition, the learner applies these methods in different contexts, learns to correct errors, and refines performance of the procedures. Supporting this theoretical perspective, instructional research on college students' writing demonstrates that the repetition of writing assignments advances writing skills both within one semester and across multiple courses.[58]

While the structure and task sequence of the five assignments stayed constant, the assignments focused on different topics, and each required students to use different source types in their research. Table 2 presents each assignment's topic and required source types. The redesign team planned the assignments by first identifying the source types that journalists and strategic communication practitioners use professionally and that students in those fields would be expected to know. They then grouped related source types and identified topics that could be researched using each group of sources.

Table 2.

Topics and required source types for the five research brief assignments

Research brief	Topic	Source types
1	Local business and associated individuals	Google search results
2	Local business and associated individuals	Public (government) records
3	Local issue	News archives
		Scholarly research
		Public data
4	Product, service, or brand	Marketing research
		Annual nonprofit and public for-profit organization filings
5 (two options)	Historical local building	Archives
	Tutorial best practices	Google search results
		Scholarly research

In the first section of the assignment, students described in detail their search process. The professional goal was to develop a habit of using a research record-keeping system, so that students could efficiently trace their sources in the future for potential fact-checkers, editors, or managers. For each search, students identified the collection or database they consulted, the search term they used, and their search results. They also explained their reasoning around each of these search elements. Students then described the results they investigated further and how what they found informed their subsequent searches. Instructors used these narratives to assess students' use of the required source types, search operators, and search perseverance.

In the second section of the assignment, students evaluated the credibility of every source they considered using. The course theme—that communication professionals' credibility depends on the authority of their sources—guided students' analysis in this section. Using an evaluation technique discussed in the open textbook, students identified the credibility cues of each source they came across—that is, the elements that contribute to or diminish its credibility (for example, publisher, author, sources used, and bias). They then researched the substance of each credibility cue and determined whether it bolstered the trustworthiness of the source. Based on the balance of this evidence, students then articulated a conclusion about whether the source was credible enough to use in their research synthesis. Instructors assessed students' use of a variety of credibility cues, the depth of their credibility evidence, and the soundness of their conclusion.

The third section constituted the actual research brief—that is, a synthesis of the information that students found on the topic. In this section, students were expected to demonstrate the use of professional conventions of using in-text source attribution and embedded hyperlinks to all online sources. Embedding source links mirrored the professional practice in digital journalism and some strategic communication products of hyperlinking sources in text rather than providing a concluding list of references.

This article's Appendix contains assignment instructions for the second research brief, which focused on public records. Each assignment's instructions included links to the OER chapters students could use to inform their research and source evaluations. Prior to submitting each assignment, students had access to the grading rubric that instructors used in evaluation. The grading rubric is also presented in the Appendix.

Student Assessment: Source Credibility Evaluation

To gauge student progress toward meeting the learning objectives of the course, the redesign team designed an assessment of the source credibility evaluations that students completed at the beginning and end of each semester. The assessment was adapted from a published source evaluation instrument.[59] A separate article by the first two authors of this study details the development, design, and initial results of this assessment.[60]

Focusing solely on the main theme of the course—the link between communication professionals' credibility and the credibility of the sources they use—the assessment measured how well students evaluate the credibility of an information source. The assessment consisted of students reading a recent news article and explaining in a paragraph whether they would use it as a source in their own journalistic report on the topic. In one instance, students read an article about decluttering expert Marie Kondo's wealth and wrote about whether they would use it in an article covering their peers' views about her.

The second section of the research brief assignments provided the structure for organizing students' evaluations in the assessment. Successful evaluations included the

identification of credibility cues (that is, elements that signal the credibility of a source) and evidence about whether each cue supports or detracts from a source's credibility. Student responses were scored on two dimensions: breadth of the credibility cues used and evaluation depth. The breadth score reflected the number of cues students identified in an evaluation (range: 0–7). Evaluation depth referred to how well students supported their credibility evaluations with evidence (range: 1–3).

The redesign team used early-semester assessment scores as formative assessment, illustrating students' baseline understanding of source credibility and the evaluation process. Differences in student scores between the early- and late-semester assessments demonstrated how well the IL course advanced students' ability to evaluate the credibility of a source. The redesign team also used these differences or the absence of them to identify course elements needing revision to improve student outcomes.

Redesign Assessment Data

Assessment-Guided Course Revisions

This section discusses assessment results from the first three semesters of the assessment's implementation and how these informed the iterative implementation of course revisions. The redesign team used principles of educational design research, also known as design-based research or development research, to carry out these revisions.[61] Design research is a framework for addressing practical educational problems by incrementally designing, implementing, and testing educational interventions. Researchers generally deploy multiple design cycles to gradually understand and build effective educational solutions. The three semesters discussed here illustrate an iterative approach to incrementally testing IL interventions and improving student outcomes.

First Implementation of the Assessment

Table 3 presents breadth and depth scores from the beginning and end of the first semester of the assessment's implementation. Score differences and *t*-test results indicate the degree to which student scores changed over this semester and whether these changes were statistically significant. At this point, the course was delivered in five twice-weekly, 30-student sections, each led by a different instructor. Scores are shown for the combined and individual sections.

The first semester's scores revealed three insights. First, on average, students did not improve the breadth of their evaluations over the semester. The average student identified 3.40 credibility cues both at the beginning and end of the semester. This result was a statistical tie, $t(299) = .04$, $p = .97$, and suggested that students needed more instruction and practice in identifying credibility cues.

Second, students improved the depth of their evaluations over the semester. The average depth score at the beginning of the semester was 1.80, and it was 2.22 at the end. This increase was statistically significant, $t(299) = 5.71$, $p < .001$. This result indicated that during the semester students learned to use more evidence-based arguments in their source evaluations.

> … students learned to use more evidence-based arguments in their source evaluations.

Table 3.

Results at the beginning and end of the first semester of the assessment's implementation

Section	Breadth of students' evaluations of source credibility* (0–7)					Depth of students' evaluations of source credibility† (1–3)					Number of students (*n*)	
	Beginning	End	Δ‡	*t*§	*p*#	Beginning	End	Δ	*t*	*p*	Beginning	End
1	2.97	2.73	-.24	.88	.36	1.86	2.08	.23	1.45	.15	32	30
2	3.64	3.93	.29	.99	.33	1.75	2.16	.42	4.06	<.001	28	29
3	3.59	3.75	.16	.59	.55	1.81	2.69	.86	3.95	<.001	34	32
4	3.68	3.97	.28	1.03	.31	1.79	2.03	.24	2.02	.05	32	30
5	3.03	2.50	-.54	1.94	.06	1.81	2.11	.30	1.99	.05	26	28
All	**3.40**	**3.39**	**-.01**	**.04**	**.97**	**1.80**	**2.22**	**.42**	**5.71**	**<.001**	**152**	**149**

* The breadth score reflects the number of cues students identified as signaling a source's credibility.

† The depth score refers to how well students supported their evaluations of a source's credibility with evidence.

‡ Δ indicates the difference in scores between the beginning and end of the semester.

§ *t* represents the difference in scores between the beginning and end of the semester, accounting for the expected variation in this difference. A larger *t*-value indicates a greater difference between the scores.

p is the probability that the difference in scores between the beginning and end of the semester is zero. A *p*-value lower than .05 indicates a statistically significant difference.

Third, student outcomes were uneven between the five sections of the course. While students' breadth scores did not statistically improve in any section, there were statistical differences between the five sections in how much students gained in identifying cues, according to an analysis of variance (ANOVA), $F(4,132) = 2.64$, $p = .04$. The same was true for using evidence in evaluation arguments. For example, in one section, depth scores increased 0.24 over the semester, and in another section, they rose 0.86. An ANOVA confirmed a statistical difference in the five depth score changes, $F(4,132) = 2.92$, $p = .02$.

First Revision and Second Implementation of the Assessment

The assessment's first implementation indicated the need to (1) improve students' cue identification and (2) standardize instruction and student learning across individual course sections. To improve the breadth of students' cue identifications, the redesign team implemented an evaluation activity that prompts students to list all possible credibility cues first, before collecting evidence about each. This intervention was informed by the perspective that the development of a complex cognitive skill can benefit from task decomposition[62]—that is, breaking a large task into smaller, more manageable elements—and practice repetition.[63]

To equalize student learning across all sections of the course, the redesign team worked with section instructors to integrate the series of five assignments discussed under the heading "Second Instructional Support" into all sections. Up to this point, instructors used the same learning objectives to guide their teaching but employed disparate approaches to meet these objectives in their sections, resulting in course drift.[64] The redesign team reasoned that using the five assignments in all sections would focus instruction and student work on the skills articulated in the assignments, thus reducing course drift and standardizing student learning.

Table 4 presents the assessment results for the second semester, after the first two interventions were implemented. On average, breadth scores improved from 2.9 at the beginning of the semester to 4.1 at the end, a statistically significant increase, $t(355) = 9.14$, $p < .001$. The cue-evidence intervention appeared to have taught students to rely on a greater number of credibility cues when evaluating a source.

Using the common assignments in the four sections of the course failed to even out student outcomes, however. In one section, for instance, students scored 2.2 higher on breadth at the end of the semester than at the beginning, while in another section the breadth score decreased by 0.10. ANOVAs indicated that statistical differences remained between the four section-level breadth outcomes, $F(3,165) = 27.07$, $p < .001$, and between the four section-level depth outcomes, $F(3,165) = 6.89$, $p < .001$.

Second Revision and Third Implementation of the Assessment

To further standardize instruction and improve student outcomes, the delivery format of the course was changed in the third semester of the assessment's implementation. From this point on, the course was delivered in a once-weekly common lecture, attended by all students enrolled in the course, and in a once-weekly 30-student discussion section. The large lecture was team-taught by the instructors who facilitated the individual discussion sections. All content and assignments were common across these sections.

Table 4.

Results at the beginning and end of the second semester of the assessment's implementation

Section	Breadth of students' evaluations of source credibility* (0–7)					Depth of students' evaluations of source credibility† (1–3)					Number of students (n)	
	Beginning	End	Δ‡	t§	p#	Beginning	End	Δ	t	p	Beginning	End
1	2.70	3.31	.61	2.36	.02	1.69	1.82	.12	.84	.41	27	29
2	3.11	3.64	.52	2.23	.03	1.97	1.66	-.31	2.67	.01	34	33
3	2.96	5.12	2.16	14.61	< .001	1.80	2.30	.51	4.57	<.001	88	81
4	2.90	2.79	-.11	.41	.69	1.61	2.10	.49	3.43	.001	31	34
All	**2.94**	**4.10**	**1.16**	**9.14**	**< .001**	**1.79**	**2.07**	**.28**	**4.08**	**<.001**	**180**	**177**

* The breadth score reflected the number of cues students identified as signaling a source's credibility.

† The depth score referred to how well students supported their evaluations of a source's credibility with evidence.

‡ Δ indicates the difference in scores between the beginning and end of the semester.

§ t represents the difference in scores between the beginning and end of the semester, accounting for the expected variation in this difference. A larger t-value indicates a greater difference between the scores.

p is the probability that the difference in scores between the beginning and end of the semester is zero. A p-value lower than .05 indicates a statistically significant difference.

This course delivery structure balanced the need to deliver consistent instruction and learning expectations, which was done in the large lecture, and to engage students in active learning and provide individual connection with an instructor, which was accomplished in the discussion sections.

This semester's assessment results showed that the change in course delivery erased differences in student outcomes between sections (see Table 5). The average breadth score increased from 2.38 to 3.75 over the semester, a statistically significant difference, $t(203)$ = 8.60, $p < .001$. The average depth score also increased, from 1.53 to 2.13, a statistically significant difference, $t(203) = 9.76$, $p < .001$. ANOVAs showed no statistically significant differences between sections in students' improvements in breadth ($F(3,92) = .59$, $p = .62$) or depth scores ($F(3,92) = 1.87$, $p = .14$). Thus, over three semesters, the redesign team used early- and late-semester assessments to tweak elements of the course, increasing both indicators of student learning—the breadth and depth of their source evaluations—and equalizing these outcomes across all sections in which the course was delivered.

Student Self-Assessment

In the fourth semester of the OER and assessment implementation, the redesign team used the end-of-semester assessment to collect students' subjective evaluations of their learning in the course. Students read and were asked to evaluate the same article at the beginning and at the end of the semester. After they submitted the end-of-semester article evaluations, the survey software displayed to them both their early-semester and end-of-semester appraisals. After reading both, students were asked to reflect on: (1) the differences between these two evaluations; (2) what these differences said about their learning during the semester; and (3) which components of the course advanced or did not advance their learning. The third author analyzed the students' responses and derived the following themes.

Threshold Concept

Students' responses demonstrated that, over the course of the semester, many internalized the concept of credibility and its function in professional communication. On average, each student mentioned *credibility* eight times in his or her self-assessment. Without being prompted, students echoed the course theme, writing that credibility legitimizes information sources: "I learned just what determines credibility, and where to look to find out if a source is worthy of being cited." Others wrote about the professional implications of credibility: "I also learned that the articles you cite determine your OWN credibility, which made me

> **Without being prompted, students echoed the course theme, writing that credibility legitimizes information sources: "I learned just what determines credibility, and where to look to find out if a source is worthy of being cited."**

take it a lot more seriously in the end." In addition to the general credibility of sources, many students wrote about developing the sensitivity to interrogate specific credibility

Table 5.
Results at the beginning and end of the third semester of the assessment's implementation

Section	Breadth of students' evaluations of source credibility* (0–7)					Depth of students' evaluations of source credibility† (1–3)					Number of students (n)	
	Beginning	End	Δ‡	t§	p#	Beginning	End	Δ	t	p	Beginning	End
1	1.90	3.26	1.37	4.19	<.001	1.45	1.99	.54	3.64	.001	19	23
2	2.47	3.93	1.46	4.86	<.001	1.66	2.11	.45	3.70	.001	30	28
3	2.58	3.77	1.20	3.55	.001	1.35	2.13	.78	7.72	<.001	26	22
4	2.41	3.96	1.55	5.05	<.001	1.60	2.28	.67	5.80	<.001	29	28
All	**2.38**	**3.75**	**1.38**	**8.60**	**<.001**	**1.53**	**2.13**	**.61**	**9.76**	**<.001**	**104**	**101**

* The breadth score reflected the number of cues students identified as signaling a source's credibility.

† The depth score referred to how well students supported their evaluations of a source's credibility with evidence.

‡ Δ indicates the difference in scores between the beginning and end of the semester.

§ t represents the difference in scores between the beginning and end of the semester, accounting for the expected variation in this difference. A larger t-value indicates a greater difference between the scores.

p is the probability that the difference in scores between the beginning and end of the semester is zero. A p-value lower than .05 indicates a statistically significant difference.

cues: "I learned how to evaluate better cues that I had never even considered before. Such as the publisher, bias, the form of advertising that the page contains, the author, and if it is a primary, secondary, or tertiary source. I also learned how to weigh the importance of these cues when deciding to use it as a source."

Students also wrote about learning the process of determining the credibility of sources: "I can now read laterally and keep looking for information until I am confident in my knowledge of how credible the source is or not." A key difference that students noted between their early- and late-semester evaluations was that they failed to provide sufficient evidence to support their early-semester conclusions. A student who considered an information source credible at the beginning of the semester but rejected it at the end summarized her learning as follows: "In my January evaluation I made guesses as to why the article was not credible but did not bother to further explain. In the new evaluation I had reason and evidence to back up why I believed this source was not credible." Another student echoed the vast majority of students who saw a clear transformation over the semester in their approaches to researching the credibility of sources: "It's very promising to see that I've learned this much over the course of a semester and have made so many improvements. I have learned what makes sources factual and not, and how to avoid using ones that aren't credible in a way that will affect my research."

In all, students' end-of-semester self-reflections suggest that many successfully passed through the threshold of credibility, began developing a nuanced understanding of why credibility matters to professional communicators, and mastered the skills necessary to assess the credibility of professional-grade sources.

Learning Supports

Students' self-reflections underscored the utility of the OER, the inclusion of student-created tutorials, and the assignment sequence in advancing their understanding of credibility and the skills needed to establish the credibility of information sources. Several students credited two textbook chapters with helping them value and practice credibility. Students wrote that the first chapter of the book, which discussed the importance of believability in communication professions and the central role that credibility plays in the course, set the tone for their learning. Students also wrote that the chapter discussing the process of identifying credibility cues and lateral reading was central to their understanding of source evaluation. Lateral reading, as opposed to vertical reading within a website, means reading information in one web page and simultaneously opening new browser tabs to verify elements of this information.[65] Lateral reading can help determine an author's credibility, intent, and biases by searching for other articles by the same author and for articles on the same topic by other writers to see how they cover it. Several students affirmed the sentiment that "the 'read laterally' chapter was probably the most beneficial chapter of the whole book."

Students also commended the instructional videos embedded in the textbook for helping them learn. They reported that the videos accommodated their learning styles: "The book, specifically the videos, also helped me learn the information. I am a visual learner, so seeing the videos and going through them step by step was beneficial for me."

Students identified the sequence of research brief assignments as a tool that helped them learn how to critically evaluate information sources: "Going through each brief is what has helped me determine how to research a source and how to research its credibility." Students recognized that the structure of these assignments supported their learning, with each assignment prompting them both to use new information sources and to practice skills from prior units: "Each brief helped focus on a new point, while still using ones from previous assignments." Several students noted that although the assignments required considerable effort, the repeated practice of using source evaluation skills, which was built into the assignment sequence, promoted the development of an evaluation standard: "Although the research brief assignments were tedious, they helped me understand the depth I need to go into to prove or disprove a source's credibility." Students wrote about how repeating the source evaluation process in each assignment helped form good habits: "In all 5 briefs I have repeated steps over and over again, which has helped engrave credibility into my head." Another student wrote that the sequence of assignments "drilled into my brain to always look for cues and helped me learn these things the most."

In sum, as students considered their beginning- and end-of-semester source evaluations, their self-reflections closely tracked the redesign team's objectives. Students readily identified credibility as the key concept in the course and discussed the source evaluation process as a key skill they developed. They also credited the two learning supports developed for the course—the OER and the sequence of five assignments—as the critical tools that helped them learn about credibility and source evaluation. These self-reflections suggested that the course met the conditions necessary for motivating student satisfaction and confidence, according to Keller's instructional design model.[66] Namely, the course appeared to effectively instill in students the relevance of its content and to capture students' attention to engage in the learning process.

Conclusion

The course redesign collaboration between a librarian and a journalism faculty member described in this article produced a systematic and sustainable integration of IL instruction in a required undergraduate journalism research course. The redesign team used quantitative and qualitative data to examine course components, including the OER, students' source evaluations, and the overall effectiveness of the course to motivate student learning. Students' subjective evaluations of learning indicated that by positioning the threshold concept of credibility at its core, the course successfully communicated its professional relevance and conveyed the utility of each learning support to advance students' professional skills. According to Keller's instructional design model, because students understood the relevance of the course, they were motivated to engage with the content and felt confident about their eventual success in the course.[67]

> …because students understood the relevance of the course, they were motivated to engage with the content and felt confident about their eventual success in the course.

This course redesign addressed IL instructional challenges that are specific to the course in a U.S. journalism school. Journalism schools teach not only future journalists but also practitioners of public relations, advertising, and marketing. To motivate students with diverse professional aspirations to engage equally with the course, a shared theme—that a communication professional's credibility depends on the credibility of his or her sources—underscored the relevance of course skills for both aspiring journalists and strategic communicators. Textbook content, research brief assignments, and the early- and late-semester assessment echoed and reinforced this theme. The course redesign also overcame the challenge of journalism-specific source types, attribution conventions, and student products that differ from the standard information practices and student artifacts discussed in IL literature. Chapters in the OER introduced students to professionally appropriate source types and attribution conventions. Students demonstrated using these practices in assignments and assessments throughout the course that were designed to reflect professional standards and expectations of the discipline.

The redesign also addressed the universal challenge of sustainably integrating library instruction in undergraduate education. Before the redesign, librarians presented one session per semester to most sections of the course on using the library website and searching proprietary databases. These one-shot sessions were eliminated, with the OER becoming the repository of librarians' instruction. Five librarians wrote or contributed to textbook chapters on note-taking, information evaluation, publication licensing, Google, Wikipedia, news databases, scholarly research, public data, and archives. Combined, these chapters convey considerably more information than a one-shot session could. The initial time investment required to write these chapters pays off each semester when librarians are spared from teaching in-person sessions in this course. Some of the librarian-authors benefit from the textbook outside this course by assigning selected chapters to students they teach in other units across the university. The partner librarian remains engaged in the course by assisting to score the early- and late-semester assessments and helping to implement OER updates. She also leads continued integration of open pedagogy in the course by soliciting and consulting on student-created tutorials for inclusion in the OER.

This account of a course redesign can serve as a road map for similar IL course integrations across disciplines. The redesign components—threshold concept, open textbook, assignment sequence, and early- and late-semester assessments—can be customized to different IL frames, education levels, instructional settings, and discipline-specific research conventions. Not all the redesign components discussed here need be included in an IL integration project. These components were introduced incrementally into the research course. In other settings, instructors likewise should incorporate these elements one at a time, thus taking time to gauge how each one benefits student learning and to fine-tune its implementation in subsequent semesters. As illustrated in this article, instructors may use early- and late-semester assessments to examine the effectiveness of instruction and to tweak course components and delivery methods.

It is important to acknowledge the unique circumstances that facilitated this project. They constitute this project's limitations, in that their absence may limit the replicability of this course redesign in other settings. First, although the research course was not framed as an IL course when it was introduced in the journalism curriculum, its learning

objectives—how to identify, retrieve, evaluate, and synthesize information—conceptually overlap IL frames. The preexisting course, therefore, was a pliable base for IL integration, resulting in a relatively straightforward process of explicitly incorporating IL within the established structure of this course. Second, the redesign benefited from what became a multiyear commitment by a librarian and a faculty member. For the duration of the project, both individuals held the same positions at KU, and the faculty member maintained the same instructional assignment. This stability allowed for the iterative modification of the course over several semesters. Third, the redesign team gained from instructional flexibility. Despite being a required core course, the journalism school did not dictate or constrain how students reached its

> **… although the research course was not framed as an IL course when it was introduced in the journalism curriculum, its learning objectives—how to identify, retrieve, evaluate, and synthesize information—conceptually overlap IL frames.**

learning objectives. The redesign team thus could experiment with instructional and assessment tools. Finally, the project benefited from administrative backing. A library grant supported the first year of the OER's development. At the journalism school, a graduate teaching assistant was reassigned from teaching duties for a semester to manage the OER project, and an hourly undergraduate student position was used occasionally to carry out OER updates. Administrators also supported and facilitated changing the course delivery structure from several independent sections to a common lecture and breakout discussions, as suggested by the redesign team based on the course assessment results.

An ongoing redesign initiative focuses on expanding the use of open pedagogy. Assessments showed that students value the video tutorials that are integrated in the textbook, and they suggested that including students' points of view to a greater extent can strengthen the textbook. The goal of the ongoing redesign initiative, therefore, is for students to regularly produce video tutorials and other instructional content, such as games and activities, that can be integrated in the OER. The current understanding of open pedagogy is rooted in open education advocate David Wiley's distinction between disposable and renewable assignments.[68] Disposable assignments are read only by the instructors who solicit them, and their utility ends with the students who produce them.[69] Renewable assignments, on the other hand, empower students to parlay their learning into educational materials that can benefit their peers and communities.[70] Based on the dichotomy of disposable and renewable assignments,

> **Student-creators can benefit from the tutorials and other instructional aids they produce by showcasing them in their professional portfolios to promote their content creation skills.**

Robin DeRosa and Rajiv Jhangiani define open pedagogy as a dynamic site of praxis where theories of teaching, learning, technology, and social justice inform the design and

implementation of such open educational practices as renewable assignments.[71] Because renewable assignments position students as creators, Craig Gibson and Trudi Jacobson have argued that open pedagogy expands students' engagement with IL practices and knowledge, including those encompassed in the "Information Creation as a Process" and "Information Has Value" frames.[72] Student-creators can benefit from the tutorials and other instructional aids they produce by showcasing them in their professional portfolios to promote their content creation skills. Student work also can improve the OER by clarifying vague or underdeveloped topics from the student perspective and by diversifying the voices represented in the textbook. Practicing this level of open pedagogy with students can be complicated, however. Open pedagogist Rajiv Jhangiani's "5Rs for Open Pedagogy"—respect, reciprocate, risk, reach, and resist—underscore the instructor-student power differential that persists in these settings and the need for instructors to respect the technological, privacy, and learning risks that individuals take when engaging in public learning.[73] The redesign team is developing and testing assignment frameworks, instructions, and assessments for open pedagogy projects that fit within the goals and structure of this course, constitute meaningful learning experiences, and result in tutorials that enhance the open textbook.

In sum, the required journalism research course at the University of Kansas advances journalism and strategic communication students' IL abilities to identify, retrieve, evaluate, and synthesize information sources. The course integrates IL through a threshold concept, an open textbook, an assignment sequence, and early- and late-semester assessments. Qualitative and quantitative data indicate that the course motivates students to learn and that they advance on the learning objectives of the course. This case study demonstrates a sustainable model for integrating library instruction in a discipline's research course and illustrates how IL literature can be adapted to match a specific discipline's information-handling conventions.

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Appendix

Research Brief Assignment Instructions

In this assignment, you are expected to demonstrate that you can (1) use public records to find information about a local business and associated individuals, (2) describe and evaluate how you searched for and found this information, (3) evaluate the sources you found, and (4) summarize the information you found using proper attribution conventions.

Step-by-Step Instructions for This Assignment

- Read the "Public Records" chapter in the *Be Credible* textbook, and watch all of the videos linked in it.
- Reread the "Search and Re-Search" chapter in the *Be Credible* textbook.
- Reread the "Keep Detailed Research Notes" chapter in the *Be Credible* textbook.
- Read the "Attribute All Sources" chapter in the *Be Credible* textbook.
- For this assignment's topic, use the same business you researched in the first assignment.
- Distinguish between the business and the property where the business operates.

Business-Related Searches

- Use the business entity search to identify the owner(s) of the business.
- Use entity-related searches discussed in the "Public Records" chapter (e.g., restaurant inspections, liquor licenses, other licenses) to find other information about this business.
- Use Google to find out more about the business owner(s).
- Use individual-related searches discussed in the "Public Records" chapter (e.g., voter registrations, corrections records, professional licenses) to find other information about the business owner(s).

Property-Related Searches

- Use a property search to identify the current owner of the property where this business operates.
- If the property owner is a company, use the business entity search to identify the human owner(s) of this company.
- Use the real estate records search to identify the previous owners of the property; if you can, create a chronology of who owned the property in the past, and when they owned it.
- Use Google to find out more about the current property owner(s).
- Use individual-related searches discussed in the "Public Records" chapter (e.g., voter registrations, corrections records, professional licenses) to find other information about the current property owner(s).

- Using the strategies described in the "Keep Detailed Research Notes" chapter, take careful notes on all of the searches you perform, and on the results your searches generate. In your notes, include your thinking about why you conduct the searches you conduct.

Source Evaluation Steps

- Read the "Evaluate Information Vigorously" chapter in the *Be Credible* textbook.
- Read the "Go Lateral with Cues and Evidence" chapter in the *Be Credible* textbook.
- Identify all of the individual sources your searches turned up. For example, a property record is a source, a business entity record is a source, a news article is a source, and a Facebook profile is a source.
- For each source, determine if it is a primary or a secondary (or a tertiary) source. Collect evidence to support this determination.
- For each source, list the cues that say something about the credibility of this source. This is an incomplete list of possible credibility cues: publisher, author, date, content, sources, writing style, bias, visuals. Not every source will contain all of these cues; many sources will contain other cues.
- Investigate each cue, and collect evidence about it. Use this evidence to determine the extent to which the cue contributes to or diminishes the credibility of the source.
- Keep detailed notes on the sources, cues, cue evidence, and your determination of each source's credibility.
- Use all of this information to complete sections 1, 2, and 3 of this document.

Section 1: Search Strategies and Results

Use bullet points or numbers to list all of the searches you performed, and to fully explain your thinking behind each search.

As you describe each search:

- Identify the collection of sources you searched (e.g., Kansas Business Entity Search) and the search term you typed into the search box.
- Briefly explain your thinking about why you used this collection and this search term. If your thinking is related to the results of a previous search, explain this connection.
- Briefly explain the results of each search, which results you pursued further, which you didn't, and why.

At the end of this section, write a one-paragraph reflection about all the searches you completed and all the information you found. Evaluate the effectiveness of your search strategies and results. Support your evaluation with specific evidence from the list of searches and results. This is a critical thinking class. Show some critical thinking about what you did, why you did it, whether or not it worked, and what you learned in the process.

Grading Hints

In this assignment, your instructor is looking to see that you are searching for public records and that you are combining these results with sophisticated search strategies from the last assignment.

Show critical thinking as you reason through the search strategies you use and the results you get. Your goal is NOT for all your searches to hit the jackpot. Your goal is to show that you are a thoughtful and critical search and public records user.

Section 2: Source Evaluation

Use bullet points or numbers to list all of the sources your searches turned up and to fully explain your evaluation of each source.

As you list each source, attribute it:

- Provide enough information so that anyone can find the source and look at it.
- Embed a link to every publicly accessible online source (avoid pasting unreadable URLs). Include a screenshot or a photograph of each source that can't be linked to online.

Evaluate each source:

- Your ultimate goal is to explain whether or not each source is credible enough for you to use in a report on your topic.
- Use the evaluation information you generated earlier to explain and support your thinking (see "Source Evaluation Steps," above). Your explanation needs to include these parts:

  - An explanation about whether the source is primary or secondary, evidence supporting this, and a statement about whether this contributes to or diminishes the source's credibility.
  - A list of all the credibility cues for this source.
  - Evidence about each cue, including any necessary quotations, embedded links, screenshots, etc.
  - An explanation about whether, based on this evidence, the cue contributes to or diminishes the credibility of the source.
  - A synthesis statement about each source that restates the key evidence presented above. This statement should start with the phrase, "Overall, this source is / is not credible enough for me to use because . . . "

Instead of writing in paragraphs, for each source you can (but don't have to) use a table like this:

Source: Insert the name of the source here, and embed a link to it.

Cue	Evidence	Contributes to (+) or diminishes (–) the source's credibility
Primary / secondary	Evidence about primary / secondary	+ / –
Cue 1 name	Evidence about cue 1	+ / –
Cue 2 name	Evidence about cue 2	+ / –
Cue 3 name	Evidence about cue 3	+ / –
	DO NOT stop at 3 cues. Add a new row for each additional cue (right-click and press "Insert" and "Rows Below")	

Synthesis statement: Overall, this source is / is not credible enough to use because . . . [synthesize the key evidence and arguments from the table].

Grading Hints:

- Your instructor is looking for you to show that you question the credibility of everything. For every credibility assertion you make, ask yourself "why?" and investigate further. Keep asking "why?"
- Do not rely on gut feelings about the credibility of sources. Your evidence needs to come from somewhere other than yourself.
- If you use the table, make sure that the information in the "Evidence" column is complete. In each row, use multiple full sentences, links, quotes, and any other information to substantiate your thinking.
- Don't forget the synthesis statement, and don't skimp on the evidence you restate in it.

Section 3: Research Brief

Summarize the most important and interesting information you found about your topic.

The summary should tell a story. Start with the most interesting details and save the less interesting stuff for later.

Your writing should be thorough but not excessively detailed.

Attribute all information to the appropriate sources in the summary. Use the phrase "according to" as much as you need to; do not worry about sounding redundant. Embed links to sources that are openly accessible on the Internet. (For a refresher, read the "Attribute All Sources" chapter in the *Be Credible* textbook.)

Remember that in journalism, paragraphs are short, usually no more than four sentences long. There is no limit on how many paragraphs you write.

Research Brief Assignment Rubric

	Missing	Does not meet expectations—Not passing	Does not meet expectations—Passing	Meets expectations	Exceeds expectations	Almost flawless	Flawless
Section 1							
Search is thorough and uses appropriate strategies.							
Search thinking process is explained well.							
Search summary contains critical thinking.							
Section 2							
Credibility evaluation uses adequate cues.							
Thorough evidence is used in credibility evaluations.							
Credibility of each source is clear.							
Section 3							
Summary is informative yet concise.							
Summary includes attribution and links.							
Other							
Writing is free of grammatical and other errors.							
Assignment follows submission instructions.							

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