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Ashley Roach-Freiman, University of Memphis

Abstract

BEAM is a schema for categorizing the rhetorical positions of authors according to the author's intention or purpose of the information. This Innovative Practices piece critiques common methods of teaching source evaluation and proposes that instruction librarians teach BEAM to students who may struggle using a source once they have located it. A lesson plan is included as supplemental materials.

Keywords: BEAM, source evaluation, one-shot instruction, checklists, source synthesis

Innovative Practices
edited by Andrea Baer, Carolyn Gamtso, and Merinda McLure

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The University of Memphis (UM) Libraries’ Instructional Services (IS) department recommends using the BEAM schema, created by Joseph Bizup, as a strategy for teaching students how to assess sources for usefulness alongside the more traditional one-shot instruction session focusing on search strategies. BEAM is an acronym that stands for Background, Exhibit, Argument, Method. Students classify sources in readings or research according to this schema. BEAM requires metacognition, or the student’s ability to reflect on their own critical reading and source choice, making it a good supplement to evaluation methods such as CRAAP or the Five Ws. Combining source use and evaluation strategies supports the knowledge practices in the ACRL Framework for Information Literacy for Higher Education. This paper argues for BEAM as a supplement to other source evaluation methods, outlines its schema and theory, describes how UM librarians incorporated a lesson plan based on BEAM into their standard teaching practice, and discusses an assessment strategy.

Checklists, Source Classification, and Source Evaluation

First-year students are often stymied by the challenges presented in research and writing. Insua et al. (2018) found that students struggled to parse scholarly jargon and tended to rely on patchwriting and other strategies to meet the requirements of assignments without learning to read critically and deeply. The Citation Project (http://www.citationproject.net) has conducted important work mining student citation practices, raising a bevy of studies that critique the pedagogical imperative to focus on the mechanics of citation rather than critical reading and summarizing. However, Troutman and Mullen (2015) criticized the Citation Project for elevating summarizing as a critical skill without acknowledging that summarizing is no replacement for the more essential task of synthesizing information. Instead, student writers strive for efficiency, relying on shallow reading, seeking sentence-level quotations rather than on the deep, focused reading required of students throughout the “scholarly conversation” of a paper (Troutman & Mullen, 2015, p. 182).

With the ACRL’s move from the Information Literacy Competency Standards for Higher Education to the Framework for Information Literacy for Higher Education in 2015, the literature has reflected how instruction librarians have refocused their lesson plans to incorporate...
more critical thinking strategies that help students recognize and integrate challenging knowledge. By reflecting on pedagogical methods that support the Framework, librarians and instructors have begun to realize that, as suggested by Wojahn et al. (2015), students have many complex decisions to make when required to read, synthesize, and cite multiple sources.

The CRAAP acronym, originated by Sarah Blakeslee (2004), is a critical evaluation checklist that asks students to evaluate the currency, relevance, authority, accuracy, and purpose of a source found on the web being considered for research. While memorable and often useful, CRAAP is not a holistic method of evaluation, and does not apply as well when researchers consider a broader variety of source types including popular sources, primary sources, and scholarly texts. Additionally, CRAAP does not help students understand the differentiation of sources in an online environment. Thus, a student might not be aware of the differences among scholarly journals, online archives, or news sites. A student who has internalized the perspective that information sources need to be recent may discard an archival document rather than closely examine the text to consider its purpose. Another student who has determined that an information source’s authority and accuracy depend on the scholarship of the author will discard a newspaper opinion piece due to bias, even if it is relevant to their topic.

Fielding (2019) found fault with CRAAP for not asking students to go beyond evaluating more than the web source itself to consider whether the wider context might be valuable. The CRAAP method also does not take into consideration the evolving nature of the internet, where webpages can be well-designed, authored by a seemingly authoritative organization or non-profit, and still be egregious sources of misinformation. Fielding recommended teaching the practice of lateral reading, as originated by Sam Wineburg and Sara McGrew with the Stanford History Education Working Group, and made popular in information literacy literature by Mike Caulfield. When reading laterally, students learn to act like fact-checkers, using an “independent verification process” that involves “opening multiple tabs, and searching for independent information on the publishing organization, funding sources, and other factors that might indicate reliability and perspective of the site and its authors or sponsors” (Fielding, 2019, pp. 620-621). This process, used generally by journalists, encourages students to seek information and context beyond the web source itself.
The idea of using the mindset of a journalist for source evaluation did not originate with lateral reading. Radom and Gammon (2014) explored an alternative to CRAAP which engages students in source evaluation by asking them to tap into prior knowledge of well-known journalistic questions: who, what, when, where, why, and how. This style of questioning is similar to lateral reading in that it requires further investigation by the student into the context of a publication, and therefore prompts fact checking.

However, neither CRAAP nor the Five Ws, nor the practice of lateral reading, help students with the deeper problem they encounter while researching: how to use the information they find. For example, students are often taught to identify and discard biased information; however, when students learn to engage with a source in conjunction with other sources, they learn how to engage in argument, even a biased argument, in a meaningful way.

Ostenson (2014) compared checklist alternatives that shift the focus of evaluation from surface-level attributes to deeper interrelated aspects of information. While critiquing the checklist mentality, Ostenson did not argue for the end of checklists, citing studies that found them to be a valuable scaffold for students to gain experience on their way to becoming experts. Instead, Ostenson recommended a flowchart that emphasizes strategies and behaviors for evaluation based on disciplinary features, format, genre, and publishing or historical context. The idea that checklists can help develop behaviors is valuable when considering how the BEAM schema is and is not a checklist.

Joseph Bizup (2008) identified issues with another frequently used checklist—the classification of sources according to primary, secondary, or tertiary status, terms that are familiar to librarians and library instructors. These terms are problematic for students because they are slippery and discipline specific. For example, a primary source in the humanities can be a poem or photograph, but in the sciences, it would be a dataset or original study. A source’s classification as primary or secondary is particularly sticky as it depends upon the researcher’s use of the source and the context of its creation. The author has observed this issue in the classroom when students, required to use primary sources, are confused by a photograph in a newspaper or an artwork in a gallery catalog. If the newspaper is a secondary source, could the photograph be used as a primary source? If the museum catalog is a primary source, is the artwork or introductory essay a primary source as well, or is the catalog secondary if using the artwork as primary? If a dataset is part of a scholarly article, is it a secondary or primary source, or is the literature review secondary...
and the dataset primary? Because of examples like these, the differences in sources in terms of primary, secondary, or tertiary classification can be difficult to explain and comprehend. Bizup (2008) argued that such classifications are antithetical to the work that students are trying to do, which is to learn “interpretation, argumentation, and communication” (p. 75).

The BEAM Schema

Bizup (2008) suggested readers “adopt terms that allow us to name, describe, and analyze the different ways writers use their materials on the page or, equivalently, the various postures toward their materials that writers adopt” (p. 75). In other words, Bizup recommended that writers categorize authors’ rhetorical means of persuasion using the acronym BEAM, or Background, Exhibit, Argument, and Method, as a classification schema. Background sources are factual sources, such as an encyclopedia article. Exhibit (or Example) sources are “examined and analyzed…. [m]uch like the exhibits in a museum or trial,” and provide students opportunities to dig deep into source material (Bizup, 2008, p. 75). An Exhibit might be a photograph, a chart, a poem, or a story to be analyzed, or it may be a piece of descriptive prose that the student is using as an illustration. Writers of Argument sources “affirm, dispute, refine, or extend” an analysis or hypothesis and “enter into conversation” with their source material (Bizup, 2008, pp. 75–76). An Argument source might be a piece of opinion writing or a hypothetical proposition. Method sources inform a way of thinking, whether by defining essential terms, outlining a research procedure, or providing a theoretical framework or lens. Examples of Method sources might include a study that models textual analysis or an essay that explicitly engages with critical race theory.

Bizup (2008) situated BEAM into an easy-to-use strategy for rhetorical analysis: “writers rely on background sources, interpret or analyze exhibits, engage arguments, and follow methods” (p.76). Each of these indicates a “posture” a writer is taking in their work, rhetorically posing information as Background, Exhibit, Argument, or Method in order to build an effective piece of writing. Bizup (2008) recommended asking students to classify the rhetorical postures of authors in challenging texts, allowing students to learn that authors frequently change rhetorical position within a single text. If students can chart another writer’s strategic rhetorical shifts, they can more easily adopt such strategies for themselves. To put it more simply, “BEAM argues that classroom language should emphasize practical use rather than jargon...[B]y revising the conversation around reading, interpreting, and analyzing sources and the way they are incorporated into the process of writing and
revision, BEAM provides a model for successful classroom sessions” (Christensen, 2015, p. 99). BEAM classification is not discipline specific and can be used across disciplinary frameworks. The schema works beautifully for students in first-year writing courses, but I have met librarians excited about using it in classes with social sciences and health students as well.

**Framing Source Evaluation and Synthesis**

To understand how BEAM engages critical thinking, it is useful to consider the literature that examines students’ difficulties with source evaluation and synthesis. Many writers have wrestled with understanding these information gaps and grappled with pedagogical solutions. For example, in their case study about the Five Ws method, Radom and Gammons (2014) found that students were successful in investigating authority when they engaged with the idea of authorship by asking *Who* (is the author of the article? What are their credentials?). Students struggled most with *What*, or ascertaining the nature of the document they were evaluating (e.g., the difference between a newspaper’s opinion column and a journalistic article) and *How*, or the method of information gathering and presentation. These struggles suggest that many students were unfamiliar with the language and processes of publishing various forms of writing. Similarly, Insua et al. (2018) identified reading academic literature as a major hurdle to first-year student success. Students who struggle with reading academic texts may feel that the task is too difficult and turn to a version of plagiarism (p.92). Students unable to read the literature will struggle to evaluate it and will be unable to put sources in conversation.

Duffy et al. (2016) parsed the challenges and lost opportunities for learning when instructors try to simplify complex information literacy processes. Instead, they encouraged instructors to promote modes of thinking to enable students to begin to see themselves as participants in the information ecosystem rather than mere consumers (or, more often than not, grade seekers). Broussard (2017) reflected on BEAM as a form of scaffolding, allowing students to enter the zone of proximal development on the way from writing book reports to seeing themselves as part of the scholarly conversation.

Source evaluation and synthesis are processes that require sophisticated thinking; BEAM sits somewhere between the two categories, offering an instruction method that encompasses both. Like other modes of evaluation, BEAM is not the only answer, but it is a compelling and useful tool that encourages critical thinking. However, framing BEAM as an
evaluation device alone doesn’t quite do service to the complexity with which BEAM allows students to consider information sources in terms of utility.

**BEAM and Source Use in Writing and Information Literacy Instruction**

The use of BEAM is an evolving discussion in the information literacy instruction literature. Broussard (2017) recommended BEAM as an instructional scaffold for helping students understand “how the texts they read put other texts to use” and acknowledged a colleague who incorporated BEAM into one-shot instruction (p. 102). Rubick (2015) used BEAM to great effect in a rhetorical criticism course and did a significant service for its use in information literacy instruction by compiling several handouts, videos, class modules, and blogs in the bibliography. Rubick noted that the use of BEAM in classrooms had been developing alongside the creation and dissemination of the ACRL *Framework for Information Literacy in Higher Education*, highlighting the *Framework’s* emphasis on source authority and synthesis. Christensen (2015) saw BEAM as a “natural ally” of the *Framework* in that they both support threshold concepts, explicitly “Information Creation as a Process.” Wojahn et al. (2015) incorporated concepts from BEAM into a semester-long class stemming from a collaboration with writing instructors. Inspired by Bizup’s rhetorical use of sources in the classroom, they incorporated essential questions about source use into reflective essays and research diaries, frequently finding that “many students reported valuing instruction in learning to evaluate, integrate, and cite sources” (Wojahn et al., 2015, p. 198). Troutman and Mullen (2015) argued for I-BEAM, adding Instance to the schema to ask students to incorporate into their argument why they were using a source, situating its value to their overall argument. While this paper does not incorporate this theory into the framework of the lesson plan, I-BEAM would be a fascinating option for further case studies in source synthesis in the library instruction literature.

**BEAM Instruction Planning and Development**

The University of Memphis (UM) is a large Southeastern urban doctoral-granting university with undergraduate full-time equivalency of over 13,700 students. The First Year Writing (FYW) program features two courses that are incorporated into the University’s General Education requirements. One of the courses, ENGL 1020, features a semester-long research project, a paper that asks the students to attempt to understand a challenge in the city of Memphis and to propose a nuanced and thoughtful solution based on researched
argument. Because these students are beginning their first real research project of their college careers, they are among the Libraries’ most frequent patrons, and the Instructional Services (IS) department wanted to give them a novel curriculum that addressed their needs directly and provided context for research.

The IS department needed to understand how students in the FYW program were struggling and how they could provide better information literacy instruction to students in the areas they need it most. We sought the expertise of the coordinators of the English Department’s FYW program. FYW coordinators indicated that students primarily struggled in three ways:

1. finding scholarly sources
2. finding sources related to Memphis, or relating sources to their argument if the source was not about Memphis
3. critically reading sources to understand and respond to the rhetorical situations the students themselves were composing

We began to plan ways to address these concerns with in-person instruction, online instruction, and outreach to FYW instructors, focusing on creating and implementing an additional one-shot session advertised alongside a more traditional session that engaged students in search strategies and online library interfaces.

Session Description

Our goal in creating this class session was to incorporate critical reading and scholarly synthesis for beginning college writers, which are often threshold concepts for first-year learners. This activity allows learners to engage with multiple knowledge practices, as identified in the Framework. The explicit learning objectives ask students to:

- Assess the utility of several pre-selected sources by reading the source and sorting it into one or more categories of BEAM
- Defend their choices given a pre-defined research topic
- Discuss how the given sources support (or do not support) one another in a means conducive to creating an argument using the BEAM framework

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[ INNOVATIVE PRACTICES ]
These objectives imply that students question received markers of authority, consider characteristics of information products, see themselves as contributing to the creation of knowledge, and recognize how texts (and authors) converse with one another: all information literacy knowledge practices of learners according to the Framework.

The session begins with an overview of the BEAM schema. The library instructor guides the class through the process of categorizing a couple of sample sources together, and then asks small groups to spend 10 to 12 minutes categorizing additional pre-selected sources. We created two lesson plans to teach BEAM to ENGL 1020 students. Both focus on Memphis-based topics that are relevant to the ENGL 1020 assignment. These topics are (1) the legendary recording company Stax Records as a part of the national racial integration effort and (2) the evolution of Overton Park, a large, beloved urban park that faced many legal challenges over the decades, including the threat of demolition in a case that was finally resolved in the Supreme Court. The author recommends that librarians at other institutions adopt topics and sources that meet the research needs of their student population.

Students are given folders that include instructions and copies of a variety of source types, including scholarly articles, book chapters, newspaper articles, journalistic magazine articles, and archival materials. As the small student groups arrive at their decisions, they write their choices on a whiteboard that has been divided by the letters B, E, A, and M. Then, the entire class comes back together and looks at each of the sources, which are projected on slides, while the small group discusses the rationales behind their choices. The library instructor acts as a facilitator, pointing out smart choices and suggesting alternative ways to consider sources as needed. We have discovered that it is a good rule to welcome the classroom instructor to participate in one of the groups. Having the classroom instructor become a “student” provides a model for participation that students are often eager to reproduce (or to counter).

The library instructor is careful not to code any response as incorrect, but to pose questions about what the author of the source is trying to achieve, and how the author is using information and language to accomplish a goal. It is not uncommon for students to categorize many of the sources as Background and few as Method. This situation provides the library instructor with an opportunity to introduce ideas about the nature of scholarly research by asking students if it might be possible to borrow an author’s method to do a similar type of research.
As an example of how students might categorize and discuss one source, students may identify that the chosen newspaper article from the *Los Angeles Times* provides appropriate Background information about the music festival Wattstax. The same article also presents an interesting Argument, comparing the activism of 70s soul musicians to the lyrics of contemporary musicians Prince and Kendrick Lamar, and descriptions of film stills from the Wattstax documentary that many students identify as an Exhibit. Students may recognize that the author is putting sources in conversation by comparing evidence from the 70s to evidence from contemporary songwriters. Students may also identify a Method of doing a visual analysis of images or a comparative analysis of song lyrics, allowing them to consider a model of knowledge creation that can help them see themselves as knowledge creators.

After examining and discussing each source as a class, the instructor asks the class how they might position the source within an argument by asking how the source might be used. The library instructor poses a series of questions: In what order would you write about these sources? Would you include a Background source before an Argument? What next, an Exhibit? What do you write about an Exhibit? Where would you explain your Method? Do you always include a Method? Students must consider how they would synthesize these materials to support a given thesis and make assumptions about categorizing their own writing according to the BEAM schema. Students often come to the realization that there is not one set order but multiple options depending on the student drafting the paper.

This session is highly interactive and requires students to think independently and critically while working collaboratively. Library instructors allow students to make and defend BEAM decisions, encouraging interrogation and analysis, and supporting students with positive affirmations. The students’ decisions are always a little different, demonstrating that reading and synthesizing sources will be a unique experience for every learner. Although this session is usually taught in a 55-minute class period, it can easily be adapted to fit into a longer class session that incorporates CRAAP or the Five Ws.

As a necessary revision to the curriculum in the advent of the COVID-19 pandemic, we revised the BEAM lesson plan to be provided in two ways: via interactive tutorial with supplementary video and by a lesson plan intended to be taught in a synchronous online classroom via Zoom or Teams. This variation of the session has yet to be fully implemented, but early trials show it to be as easily adaptable as the classroom version.
Assessment

Initially, my assessment efforts focused on informal observations in the classroom. After the first semester of teaching the session, I devised an assessment strategy in which librarian instructors passed out surveys at the end of the BEAM session. The survey consisted of three questions:

1. How can you use BEAM to read and organize sources in your own writing and research?

2. Did working with a group help establish your understanding of BEAM?

3. How likely are you to use BEAM? (with answer choices: very, somewhat, not at all)

At the end of the semester, I informally reviewed the responses to determine how well the learning objectives were met. This review found that students supported BEAM as a mode of organization and appreciated the group work overall, particularly the opportunity to voice their own opinions. They liked practicing the BEAM concepts immediately after learning them in order to deepen their understanding and to get hands-on experience with a tactic they could use in their own research. Although some students found the BEAM lesson confusing or unnecessary, or found the conflicting opinions of other students distracting, most students were grateful to learn a new approach.

In the future, I will code a statistically significant sample of the responses according to categories that arise organically from the student responses. Some coding categories for the question “How can you use BEAM to read and organize sources in your own writing and research?” might be analysis, organization, and writing. I will also create categories based on the level of complexity to the response (e.g., whether the student gave a basic answer with no details or a more thorough answer with examples). By analyzing the complexity, I will learn the extent to which students have internalized the concept of BEAM. Answers to the second question “Did working with a group help establish your understanding of BEAM?” will help me understand how students feel about group work and how they interact with each other. Answers to the third question will help me determine if students think the concept of BEAM will be useful in their own writing practices. I intend to use this qualitative assessment to shape future iterations of the curriculum and create further assessment strategies. I also intend to build an in-class worksheet with a corresponding rubric and to update the questions to be more open-ended and less prescriptive.
Conclusion

As a lesson in the usefulness of sources, BEAM is an effective supplement to source evaluation methods such as CRAAP and the Five Ws. Integrating BEAM into an instruction librarians’ pedagogical offerings adds value to their toolboxes, providing support for the Framework’s knowledge practices and dispositions. While the theory behind BEAM is complex, its implementation is simple. Hopefully, this lesson plan can serve as a jumping off point for librarians, with ample space for modifications and spin-offs, including, possibly, I-BEAM (Troutman & Mullen, 2015). For librarians and instructors teaching semester-long courses, the BEAM method is a rich addition to the more well-rounded opportunities for research instruction and development that an entire semester provides.

The full BEAM Me Up lesson plan, including slides and copies of all sources and materials for the Stax topic, is available via Project CORA, an open-source information literacy lesson plan database, at https://www.projectcora.org/assignment/beam-me-source-use-and-synthesis. The author welcomes adaptations to be posted to that page.

References


