

Title: Reframing Information Literacy Assessment: Reaching for College Seniors

Abstract: Although our institution has a history of information literacy assessment for general education, we found the method used did not allow us to tell a compelling story about students' information literacy skills. After a "reflection year," we centralized summative assessment and focused on seniors. Disaggregation of senior-level data will reveal answers to questions such as, "Do students who had an information literacy session do better than those who do not?" and "Do transfer students perform as well as students who started as freshmen?" This manuscript describes our process and the details of the power of our data collection strategy.

Keywords: information literacy, assessment, seniors

Project focus: assessment methodologies, techniques, or practices (e.g. Critical Incident Technique); information literacy assessment; assessment concepts and/or management; concepts/theory

Results made or will make case for: more funding, improvements in services, proof of library impact and value, a strategic plan or process, decisions about library staffing. These are what we anticipate, but we don't know for sure.

Data needed: ID, race, gender, ACT, transfer, hours earned, class level, college, major, expected graduation date

Methodology: quantitative. Our assessment method is quantitative, but our article is more about the process than the data.

Project duration: ongoing (continuous feedback loop)

Tool(s) utilized: computers, Qualtrics. Once data is collected we will use R statistical software. Staffing: instruction librarians, Director of Academic Assessment, Core Curriculum and General Education committee members, faculty allowing us to pilot assessment in classes, faculty and staff who gave feedback, administrators

Cost estimate: < \$100

Type of institution: university—public

Institution enrollment: 15,000–30,000

Highest level of education: doctoral



Chapter 21

Reframing Information Literacy Assessment

Reaching for College Seniors

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Context

General Education at Auburn University

A land, sea, and space grant institution located in east Alabama, Auburn University offers 140 majors. Of the 28,000 students enrolled, undergraduates make up about 80 percent. All public colleges and universities in the state of Alabama must maintain a general studies curriculum in order to lessen the complexity of transferable hours. Therefore, in addition to taking classes in their majors, Auburn requires students to complete general education courses that include English composition, as well as a variety of options within the humanities, science and mathematics, and the social sciences. Many Auburn students take the required courses during their first two years.

Prior Assessment Infrastructure and Approach

University administration supports institutional-wide student learning outcomes (SLOs) for general education. These cover broad skills and concepts: information

literacy, critical reading and thinking, writing, oral communication, art and aesthetics, basic math and science principles, diversity, and global citizenship.¹ Each general education course aligns with one or more outcomes. For example, numerous literature and philosophy courses address the university's general education outcome for constructing effective arguments (a component of critical thinking). The university's general education committee oversees the approval of new courses and coordinates assessment of the SLOs for accreditation. Prior to changes that will be discussed later in this chapter, instructors in each general education course assessed assignments using committee-approved rubrics. Committee members then attempted to aggregate the results across courses and determine student success for each SLO. Throughout the several years that the university attempted this course-level assessment approach, the committee members encountered inconsistency in the artifacts gathered and interpretation of rubric scores; they also found some instructors using different rubrics than those advised by the committee. Ultimately, this assessment method provided little to no constructive data, which hindered the committee's ability to tell a compelling story about student learning at Auburn. This chapter, cowritten by the university's Library Instruction Coordinator and the Director of Academic Assessment, will detail steps taken to improve assessment of the student learning outcomes, with particular focus on information literacy.

Information Literacy Assessment

Auburn University Libraries consists of the main library, Ralph Brown Draughon (RBD), and two branches, the Veterinary Medical Library and the Library of Architecture, Construction, and Design. Seventeen subject librarians together teach on average between 600 to 700 information literacy sessions per year; sessions target first-year students as well as those in their disciplinary courses. Librarians conduct formative assessment during these sessions. An instruction team made up of four librarians (one being the Instruction Coordinator) provide their colleagues with professional development opportunities related to teaching and assessment. The team also leads instruction-related initiatives and projects; our current projects include a foray into online library instruction, a reexamination of our role in the disciplines through curriculum mapping, and experimentation with new lesson plans grounded in the *Framework for Information Literacy for Higher Education*.²

For the past few years, summative assessment of the information literacy SLO depended on one course only, second-semester English composition (ENGL 1120). This is the only SLO that the university assessed in just one course. In the university's course-level assessment approach described above, rather than ENGL 1120 instructors assessing the information literacy SLO, the instruction team received samples of students' final research papers and bibliographies from several of the sections taught each spring and applied the approved information literacy rubric to them. When first developed, the rubric aligned closely with the ENGL 1120 curriculum, which emphasized students' use of scholarly sources. Over the years, however, ENGL 1120

instructors' definitions of "scholarly" began to vary widely, which in turn rendered the rubric useless. Similar to the course-level assessment of the other SLOs, this method yielded little usable information for improvement.

Communicating Results and Impact

Reflection Year

Following reaffirmation from our regional accreditor, the general education committee (in which the authors are both members) had an opportunity to evaluate current practices. Because of the issues mentioned previously, the general education committee engaged in a "reflection year" to evaluate the course-level assessment approach. During that year, the committee lifted the SLO assessment reporting requirements. With assistance from our new Office of Academic Assessment, committee members engaged with other faculty by hosting ten focus groups that explored both the benefits and the drawbacks of the assessment approach. Through this process, we discovered that faculty members conducting SLO assessment also found the current method not useful. Likewise, due to the inconsistencies described previously, the data collected provided them with little valuable information for formative purposes. After confirming our suspicions, the committee decided to explore new assessment approaches.

We began this process by reviewing the SLOs and realized that all statements began with "students," but did not specify *when* we expected students to achieve these outcomes. Did we presume they achieved these outcomes immediately after taking a general education course? A meta-analysis by Huber and Kuncel on critical-thinking skills informed our initial conversation.³ Interestingly, they found that critical-thinking skills do indeed increase over the college experience, but could not relate growth to any particular learning intervention.⁴ In addition, the authors of the study learned that critical-thinking skills gains were larger over more time (e.g., greater gains over four years than two years).⁵ This research implies that critical thinking is reinforced throughout a student's college education and not limited to a single class. A similar argument has been occurring in the library profession for many years. Indeed, several research articles support the *institutionalization* of information literacy across the college curriculum.⁶ For example, Grafstein notes that information literacy is a *shared responsibility* and not the sole responsibility of the library.⁷ In addition, the literature reveals real-world examples of how information literacy can be structured within an academic program.⁸

In light of this research, we decided it would be foolish to assess information literacy after students take a single course as freshmen; surely courses at the freshman level lay the groundwork for learning that students expand upon in their major. The committee cemented its view of general education as foundational and determined that the intent of all SLOs should be students' abilities when they graduate, not after their freshman or sophomore years (it should be noted that this approach aligned much more closely with the library instruction program's philosophy of information literacy instruction on campus). Thus, our first major change meant *switching our assessment focus of the*

SLOs to graduating seniors. Secondly, we chose to *centralize our assessment procedures*, since we had proven the course-level approach not helpful to faculty or the committee. This new approach would allow our committee to disaggregate data to determine if students who engaged with information literacy concepts via library instruction over their college career earn higher scores than their peers who did not, by parsing out these groups in our data. We could then identify specific areas for improvement. Such action was unrealistic in the previous method given the inconsistent measurement strategies used in the course-level assessment practice. In addition to disaggregation, our new focus places greater emphasis on students' ability to transfer their knowledge to a setting beyond graduation.

These changes made good sense for information literacy assessment, as well. Students learn basic information literacy skills as freshmen in the ENGL 1120 course. However, they should pick up more advanced skills throughout the remainder of their college career.

Assessment Strategy: Outcome Development

In order to focus on graduating seniors and centralize assessment, we needed to reevaluate each SLO and select or create a test to measure each. For the information literacy outcome, a working group comprised of two members of the library instruction team, one ENGL 1120 instructor, one faculty member from veterinary medicine, and the Director of Academic Assessment convened in order to complete these tasks. The group met biweekly for one-and-a-half to two hours over several months.

First, the group analyzed the current SLO, "Students will be information literate," and the associated rubric, which provided greater depth and aligned with ACRL's *Information Literacy Competency Standards for Higher Education*.⁹ Group members recognized that a minority of students would remain in the academy after graduation and aimed to include some measurement of transferable skills for life after college. This strategy paralleled the general education committee's direction. In addition, we wanted the new *Framework for Information Literacy for Higher Education* to serve as the basis of our outcome;¹⁰ the *Framework* also positions information literacy as a skill required within academia, but certainly reaches beyond higher education, as well.¹¹ After months of detailed discussions about what we hope students will know, think, and do at the time of graduation, we formed an initial draft of a revised information literacy outcome, along with sub-outcomes to provide further context.

Rather than immediately finalizing this new set of outcomes, we sought feedback from key stakeholders. First, because information literacy will still play a significant role in the research requirements of ENGL 1120, we held a discussion with the libraries' Associate Dean of Public Services, the chair of the English department, and the Composition Coordinator to get their opinions of the changes. We next held a feedback workshop that included other members of the library instruction team, teaching and learning experts on campus, and ENGL 1120 instructors. During this two-hour event, we engaged our stakeholders in a conversation about what information literacy means for graduating seniors and received invaluable responses on our drafted outcome

and sub-outcome statements. Following this event, we added a third member of the instruction team to the working group and made additional revisions to our outcomes. After thinking about information literacy on Auburn’s campus for approximately six months, the group settled on a final version of the information literacy SLO, which the general education committee approved.

It should be noted that while these discussions were occurring, the library instruction team moved all information literacy instruction for ENGL 1120 online. Students will now work through tutorials that cover the same fundamental concepts introduced during face-to-face ENGL 1120 library sessions. Embedded assessments will allow us to formatively measure student learning.

Assessment Strategy: Test Selection

While rewriting the information literacy outcome, the working group simultaneously investigated methods of assessment. As mentioned earlier, the course-level assessment that had occurred in previous years measured student learning only in English composition, a 1000-level class. To help paint a more complete picture, the libraries had also administered the standardized *Project SAILS* test biennially for several years.¹² Participation was voluntary among all students, however, and participants could enter to win a tablet. This incentive may have contributed to self-selection bias. In addition, with our new focus on the *Framework*, *Project SAILS* (which aligned with the *Standards*), no longer met our testing needs.¹³ Carrick Enterprises has created a new assessment—the *Threshold Achievement Test for Information Literacy (TATIL)*—that attempts to test the skills and concepts described in the *Framework*.¹⁴ Because we knew that test development ourselves would require a great deal of human resources, we decided to explore the *TATIL* in depth.¹⁵ Of the numerous groups involved with this process, the library instruction team had the most extensive discussions about the benefits and disadvantages of using this commercially available test. Talking points included

- The *TATIL* is new and not yet widely used within the academic library community.¹⁶ Little mention of it can be found in the library literature or informally by librarians on blogs and social media.
- The design of the *Framework* lends itself to the development of outcomes at the local level.¹⁷ Could a standardized test measure the subareas that we had created?
- Unlike *Project SAILS*, we would administer the *TATIL* yearly and most likely require it. Which unit on campus would fund the test (i.e., the libraries or central administration)?¹⁸
- If we choose not to use the *TATIL*, do we have alternatives?¹⁹
- If we create our own test, how would we ensure reliability and validity, or even find the time to write the questions and scenarios, as well as grade the assessments?

The *TATIL* was still in field-testing during this period and free of administrative costs.²⁰ Therefore, we chose to pilot it during the spring semester. Luckily, the general education committee provided all the working groups a generous time line to investigate

the best approach. Both the working group and the instruction team rationalized that a pilot would allow us to see both the *TATIL* test questions and how the results would be summarized.²¹ This should help answer some of the questions presented above.

Assessment Strategy: TATIL Pilot

The test makers have divided the *TATIL* into four modules—evaluating process and authority, strategic searching, research and scholarship, and information has value. Each question aligns with a performance indicator or disposition.²² After we received the test results, the working group tasked four of its members with reviewing one module each and reporting to the group. We considered several factors, including

- Do the test questions challenge students to think critically?²³
- Do our sub-outcomes align with the *TATIL* modules?²⁴
- Do we teach the concepts tested? If so, to which students and disciplines and at what levels?
- Does the test focus on academia, or does it include scenarios that students might encounter after college? Does it test for transferable skills?²⁵
- Will the results be presented in a way that is actionable for the librarians?

We mapped out the strengths and weaknesses of each module on Excel spreadsheets. Our major concerns centered around the heavy emphasis on academic scholarship; for our library sessions, we develop lesson plans that support assignments that require the use of scholarly sources and databases. This test would no doubt measure our success in this area, but what about students' abilities to transfer these skills to nonacademic situations? Ultimately, we decided to pilot the *TATIL* again in the fall, but to administer only one module and to focus on what we currently tend to teach the most—strategic searching.²⁶ This data collection strategy should allow us to better understand one aspect of our outcome in depth, and the results could possibly yield “improvement conversations.” In addition, we will also create our own test items to append to the *TATIL* modules that focus on post-graduation skill transfer.²⁷ Specifically, we want to develop scenario-based items that center on issues students may face outside of the academy (e.g., searching for information about a medical concern, researching a company prior to a job interview). Our testing sessions last between forty-five and sixty minutes, which should allow time for both the module and a homegrown assessment. We based this estimate on the length of time it took students to complete the strategic searching module during the first pilot.²⁸

Leveraging the Findings

Ultimately, our new data collection process will allow us to gather a representative sample from seniors of their information literacy abilities. In addition to gaining a more complete picture of students' education, our new infrastructure will allow us to disaggregate the data in interesting ways. For example, we can disaggregate information literacy scores by how frequently students interacted with instruction librarians. If the

evidence suggests stronger information literacy skills for students who have engaged with instruction librarians at strategic points in their college career, we could leverage this information to encourage more instructors to work with librarians. We could share these findings within the libraries, and because we could eventually disaggregate by department, we could share the data widely across the institution to encourage more emphasis on these critical skills. Likewise, internally, the data could confirm to subject librarians that the time they dedicate to outreach to their departments impacts student learning.

There are also interesting possibilities associated with the creation of a homegrown assessment focused on nonacademic scenarios. If we find that student scores on the *TATIL* and this new assessment are inversely related, this would have a wide impact on our campus information literacy conversation.²⁹ For example, if students scored high on the *TATIL*, but low on the nonacademic questions (assuming the test had reliability and validity evidence), then we would encourage conversations about why this may be the case and thoughts for improvement.³⁰

Reflection

We consider this process a rewarding experience. After several years of institutional-level assessment that provided us with little to no usable data about freshmen's (and certainly not seniors') information literacy skills, we hope that our new summative approach—in concert with continued formative assessment—will offer valid information that allows us to continuously assess and improve our information literacy program and student learning. As a library that chose to accept and endorse the *Framework* (our philosophy and pedagogy had already begun to morph in that direction), we faced the challenge of how to impart our evolving approach to information literacy instruction with the campus.³¹ This process has provided us with a boost of visibility, as well as a wider understanding among faculty of information literacy and its value. The members of the general education committee, the working group, and those who attended our various feedback sessions interacted with the entire *Framework*.³² Without this process, it would have been difficult to engage these stakeholders with our new direction for information literacy. We heard no complaints about the jargon or language used in the document, and faculty seemed to find interest in it.

The importance of the relationships created and the growth in mutual respect through this process cannot be overstated. Essential pieces of the puzzle include support from the university via the general education committee (and its generous time lines for changes), the relationship between the Instruction Coordinator and the Composition Coordinator, the Instruction Coordinator's face-to-face time with other faculty who serve on the general education committee, and the Director of Academic Assessment's understanding of the significance of information literacy.

Of course, we faced challenges along the way. While gathering feedback from many groups provides inclusivity, it also models the dreaded “writing by committee” method. It proved difficult to synthesize opinions from the instruction librarians and all other

stakeholders. In the end, the expertise of the instruction librarians swayed other faculty, but this requires a culture dynamic that may not be present on all campuses. We still face an uphill battle in spreading the word about information literacy and in how to interpret the university outcomes. In addition, developing ways to assess our locally written outcomes may continue to create challenges as we analyze the results over the next few years. On the upside of inclusivity, there will continue to be opportunities for engagement. For example, the Office of Academic Assessment plans to hold nine information sessions for faculty about the new SLOs. The libraries, and particularly the instruction team, will assist with the session on information literacy.

For other library instruction programs grappling with assessment at the institutional level, adequate time to think, share, and experiment is vital. This requires support from the university administration, as well as stakeholder buy-in. The fact that our old system failed to yield usable results—and that this was across the board for all outcomes, not just for information literacy—helped in our situation.

Notes

1. “Core Curriculum and General Education Outcomes,” Auburn University, accessed May 22, 2017, <http://bulletin.auburn.edu/undergraduate/academicpolicies/thecorecurriculum/>.
2. Association of College and Research Libraries, *Framework for Information Literacy for Higher Education* (Chicago: American Library Association, 2015), <http://www.ala.org/acrl/standards/ilframework>.
3. Christopher R. Huber and Nathan R. Kuncel, “Does College Teach Critical Thinking? A Meta-analysis,” *Review of Educational Research* 86, no. 2 (2016): 431–68, <https://doi.org/10.3102/0034654315605917>.
4. Huber and Kuncel, “Does College Teach Critical Thinking?”
5. Huber and Kuncel, “Does College Teach Critical Thinking?”
6. Debra Gilchrist and Megan Oakleaf, *An Essential Partner*, Occasional Paper 14 (Urbana, IL: National Institute for Learning Outcomes Assessment, 2012), <http://www.learningoutcomeassessment.org/occasionalpaperfourteen.htm>; Ann Grafstein, “A Discipline-Based Approach to Information Literacy,” *Journal of Academic Librarianship* 28, no. 4 (2002): 197–204, <https://doi.org/10.1016/S0099-1333%2802%2900283-5>; Jim Jenkins and Marcia Boosinger, “Collaborating with Campus Administrators and Faculty to Integrate Information Literacy and Assessment into the Core Curriculum,” *Southeastern Librarian* 50, no. 4 (2002): 29–34; Glenn Johnson-Grau, Susan Gardner Archambault, Elisa Slater Acosta, and Lindsey McLean, “Patience, Persistence, and Process: Embedding a Campus-wide Information Literacy Program across the Curriculum,” *Journal of Academic Librarianship* 42, no. 6 (2016): 750–56, <https://doi.org/10.1016/j.acalib.2016.10.013>; Michelle S. Millet, Jeremy Donald, and David W. Wilson, “Information Literacy across the Curriculum: Expanding Horizons,” *College and Undergraduate Libraries* 16, no. 2–3 (2009): 180–93, <https://doi.org/10.1080/10691310902976451>; Rolf Norgaard, “Writing Information Literacy: Contributions to a Concept,” *Reference and User Services Quarterly* 43, no. 2 (2003): 124–30, <http://www.jstor.org/stable/20864155>; Hannelore B. Rader, “Information Literacy and the Undergraduate Curriculum,” *Library Trends* 44, no. 2 (1995): 270–78; Ilene F. Rockman, “Strengthening Connections between Information Literacy, General Education, and Assessment Efforts,” *Library Trends* 51, no. 2 (2002): 185–98, <http://hdl.handle.net/2142/8465>; Loanne Snavely and Natasha Cooper, “Competing Agendas in Higher Education: Finding a Place for Information Literacy,” *Reference and User Services Quarterly* 37, no. 1 (1997): 53–61, <http://www.jstor.org/stable/20863213>; Sharon A. Weiner, “Institutionalizing Information Literacy,” *Journal of Academic Librarianship* 38, no. 5 (2012): 287–93, <https://doi.org/10.1016/j.acalib.2012.05.004>.
7. Grafstein, “A Discipline-Based Approach to Information Literacy.”

8. Ignacio J. Ferrer-Vinent, “Programmatic and Scaffolded Information Literacy Embedded in the Science Curriculum,” *Science and Technology Libraries* 35, no. 4 (2016): 295–303, <http://www.tandfonline.com/doi/abs/10.1080/0194262X.2016.1214096>; Ann M. Fiegen, Bennett Cherry, and Kathleen Watson, “Reflections on Collaboration: Learning Outcomes and Information Literacy Assessment in the Business Curriculum,” *Reference Services Review* 30, no. 4 (2002): 307–18, <https://doi.org/10.1108/00907320210451295>; Lisa Sue Flood, Nanci Gasiewicz, and Terry Delpier, “Integrating Information Literacy across a BSN Curriculum,” *Journal of Nursing Education* 49, no. 2 (2010): 101–4, <https://doi.org/10.3928/01484834-20091023-01>; Amy Getty and Dan Chibnall, “Skillful Scaffolding: Using Information Literacy Techniques to Enhance Literature Studies,” *Currents in Teaching and Learning* 6, no. 1 (2013): 53–60.
9. Association of College and Research Libraries, *Information Literacy Competency Standards for Higher Education* (Chicago: American Library Association, 2000), <http://www.ala.org/acrl/standards/informationliteracycompetency>.
10. Association of College and Research Libraries, *Framework for Information Literacy*.
11. Association of College and Research Libraries, *Framework for Information Literacy*.
12. Kent State University, *Project SAILS: Standardized Assessment of Information Literacy Skills* homepage, Carrick Enterprises, last modified August 1, 2016, <https://www.projectsails.org/Home>.
13. Association of College and Research Libraries, *Framework for Information Literacy*; Kent State University, *Project SAILS*; Association of College and Research Libraries, *Information Literacy Competency Standards*.
14. Kent State University, *Project SAILS*; Carrick Enterprises, *Threshold Achievement Test for Information Literacy (TATIL)* website, accessed May 15, 2017, <https://thresholdachievement.com/>; Association of College and Research Libraries, *Framework for Information Literacy*.
15. Carrick Enterprises, *Threshold Achievement Test*.
16. Carrick Enterprises, *Threshold Achievement Test*.
17. Association of College and Research Libraries, *Framework for Information Literacy*.
18. Carrick Enterprises, *Threshold Achievement Test*; Kent State University, *Project SAILS*.
19. Carrick Enterprises, *Threshold Achievement Test*.
20. Carrick Enterprises, *Threshold Achievement Test*.
21. Carrick Enterprises, *Threshold Achievement Test*.
22. Carrick Enterprises, *Threshold Achievement Test*.
23. Carrick Enterprises, *Threshold Achievement Test*.
24. Carrick Enterprises, *Threshold Achievement Test*.
25. Carrick Enterprises, *Threshold Achievement Test*.
26. Carrick Enterprises, *Threshold Achievement Test*.
27. Carrick Enterprises, *Threshold Achievement Test*.
28. Carrick Enterprises, *Threshold Achievement Test*.
29. Carrick Enterprises, *Threshold Achievement Test*.
30. Carrick Enterprises, *Threshold Achievement Test*.
31. Association of College and Research Libraries, *Framework for Information Literacy*.
32. Association of College and Research Libraries, *Framework for Information Literacy*.

Bibliography

- Association of College and Research Libraries. *Framework for Information Literacy for Higher Education*. Chicago: American Library Association, 2015. <http://www.ala.org/acrl/standards/ilframework>.
- . *Information Literacy Competency Standards for Higher Education*. Accessed May 23, 2017. Chicago: American Library Association, 2000. <http://www.ala.org/acrl/standards/informationliteracycompetency>.
- Auburn University. “Core Curriculum and General Education Outcomes.” Accessed May 22, 2017. <http://bulletin.auburn.edu/undergraduate/academicpolicies/thecorecurriculum/>.
- Carrick Enterprises. *Threshold Achievement Test for Information Literacy (TATIL)* website. Accessed May 15, 2017. <https://thresholdachievement.com/>.

- Ferrer-Vinent, Ignacio J. "Programmatic and Scaffolded Information Literacy Embedded in the Science Curriculum." *Science and Technology Libraries* 35, no. 4 (2016): 295–303. <http://www.tandfonline.com/doi/abs/10.1080/0194262X.2016.1214096>.
- Fiegen, Ann M., Bennett Cherry, and Kathleen Watson. "Reflections on Collaboration: Learning Outcomes and Information Literacy Assessment in the Business Curriculum." *Reference Services Review* 30, no. 4 (2002): 307–18. <https://doi.org/10.1108/00907320210451295>.
- Flood, Lisa Sue, Nanci Gasiewicz, and Terry Delpier. "Integrating Information Literacy across a BSN Curriculum." *Journal of Nursing Education* 49, no. 2 (2010): 101–4. <https://doi.org/10.3928/01484834-20091023-01>.
- Getty, Amy, and Dan Chibnall. "Skillful Scaffolding: Using Information Literacy Techniques to Enhance Literature Studies." *Currents in Teaching and Learning* 6, no. 1 (2013): 53–60.
- Gilchrist, Debra, and Megan Oakleaf. *An Essential Partner: The Librarian's Role in Student Learning Assessment*. Occasional Paper 14. Urbana, IL: National Institute for Learning Outcomes Assessment, 2012. <http://www.learningoutcomeassessment.org/occasionalpaperfourteen.htm>.
- Grafstein, Ann. "A Discipline-Based Approach to Information Literacy." *Journal of Academic Librarianship* 28, no. 4 (2002): 197–204. <https://doi.org/10.1016/S0099-1333%2802%2900283-5>.
- Huber, Christopher R., and Nathan R. Kuncel. "Does College Teach Critical Thinking? A Meta-analysis." *Review of Educational Research* 86, no. 2 (2016): 431–68. <https://doi.org/10.3102/0034654315605917>.
- Jenkins, Jim, and Marcia Boosinger. "Collaborating with Campus Administrators and Faculty to Integrate Information Literacy and Assessment into the Core Curriculum." *Southeastern Librarian* 50, no. 4 (2002): 29–34.
- Johnson-Grau, Glenn, Susan Gardner Archambault, Elisa Slater Acosta, and Lindsey McLean. "Patience, Persistence, and Process: Embedding a Campus-wide Information Literacy Program across the Curriculum." *Journal of Academic Librarianship* 42, no. 6 (2016): 750–56. <https://doi.org/10.1016/j.acalib.2016.10.013>.
- Kent State University. *Project SAILS: Standardized Assessment of Information Literacy Skills* homepage. Carrick Enterprises. Last modified August 1, 2016. <https://www.projectsails.org/Home>.
- Millet, Michelle S., Jeremy Donald, and David W. Wilson. "Information Literacy across the Curriculum: Expanding Horizons." *College and Undergraduate Libraries* 16, no. 2–3 (2009): 180–93. <https://doi.org/10.1080/10691310902976451>.
- Norgaard, Rolf. "Writing Information Literacy: Contributions to a Concept." *Reference and User Services Quarterly* 43, no. 2 (2003): 124–30. <http://www.jstor.org/stable/20864155>.
- Rader, Hannelore B. "Information Literacy and the Undergraduate Curriculum." *Library Trends* 44, no. 2 (1995): 270–78.
- Rockman, Ilene F. "Strengthening Connections between Information Literacy, General Education, and Assessment Efforts." *Library Trends* 51, no. 2 (2002): 185–98. <http://hdl.handle.net/2142/8465>.
- Snively, Loanne, and Natasha Cooper. "Competing Agendas in Higher Education: Finding a Place for Information Literacy." *Reference and User Services Quarterly* 37, no. 1 (1997): 53–61. <http://www.jstor.org/stable/20863213>.
- Weiner, Sharon A. "Institutionalizing Information Literacy." *Journal of Academic Librarianship* 38, no. 5 (2012): 287–93. <https://doi.org/10.1016/j.acalib.2012.05.004>.