

6-1-2022

Flexibility Is Key: Co-creating a Rubric for Programmatic Instructional Assessment

Maya Hobscheid

Grand Valley State University, hobschem@gvsu.edu

Kristin Kerbavaz

University of Western Ontario, kkerbava@uwo.ca

Follow this and additional works at: <https://pdxscholar.library.pdx.edu/comminfolit>



Part of the [Higher Education Commons](#), and the [Information Literacy Commons](#)

Let us know how access to this document benefits you.

Recommended Citation

Hobscheid, M., & Kerbavaz, K. (2022). Flexibility Is Key: Co-creating a Rubric for Programmatic Instructional Assessment. *Communications in Information Literacy*, 16 (1), 24–37. <https://doi.org/10.15760/comminfolit.2022.16.1.3>

This open access Innovative Practice is distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License \(CC BY-NC-SA 4.0\)](#). All documents in PDXScholar should meet [accessibility standards](#). If we can make this document more accessible to you, [contact our team](#).

Flexibility Is Key: Co-creating a Rubric for Programmatic Instructional Assessment

Maya Hobscheid, Grand Valley State University

Kristin Kerbavaz, University of Western Ontario

Abstract

This paper describes a project undertaken at Grand Valley State University in which a co-creative model was used to develop a rubric for assessing student learning in library instruction. It outlines the design process as well as the training and support provided throughout implementation. It concludes with the authors' reflections on the successes and challenges of the process and provides recommendations for future projects.

Keywords: assessment, student learning, rubrics

Innovative Practices

edited by Andrea Baer, Carolyn Gamtso, and Merinda McLure

Hobscheid, M., & Kerbavaz, K. (2022). Flexibility is key: Co-creating a rubric for programmatic instructional assessment. *Communications in Information Literacy*, 16(1), 24–37.

Copyright for articles published in *Communications in Information Literacy* is retained by the author(s). Author(s) also extend to *Communications in Information Literacy* the right to redistribute this article via other scholarly resources and bibliographic databases. This extension allows the authors' copyrighted content to be included in some databases that are distributed and maintained by for-profit companies. All other rights of redistribution are licensed by *Communications in Information Literacy* under Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0).

Flexibility Is Key: Co-creating a Rubric for Programmatic Instructional Assessment

Historically, the Grand Valley State University (GVSU) Libraries' Information Literacy instruction program has been assessed through a variety of statistics gathered for external reporting, including session and participant counts, as well as large-scale surveys like SAILS and a longstanding collaboration with the university's Institutional Analysis unit that demonstrated a consistent correlation between receiving library instruction and ongoing academic success (O'Kelly et al., in press). Instruction and student learning were primarily assessed at the classroom level at the discretion of the librarian instructor; while some librarians' research interests led them to implement rigorous assessments using pre- and post-testing, the majority used informal checks for understanding to guide their instruction. These more informal data about student learning were typically not documented or shared beyond the librarian's notes. However, in 2019, liaison librarians, who do the majority of the instruction for GVSU Libraries, set a goal to move toward more programmatic assessment of instruction. This goal aligned with a trend at the university level of encouraging co-curricular units to begin thinking of their work in terms of student learning outcomes. We identified the need for more data about student learning and decided to develop a flexible rubric that liaisons could use to assess learning in their classrooms.

Academic libraries can create space for broader conversations about library instruction and its impact through programmatic assessment of student learning. There is a substantial body of work focused on the assessment of library instruction. Much of the literature on the subject focuses on the application of assessment methods in the information literacy instruction context. Common methods explored include pre- and post-tests (Donahue, 2015; Gross & Latham, 2012; Markey et al., 2005; Noe & Bishop, 2005), student surveys (Smith & Dailey, 2013), faculty satisfaction (Bradley & Oehrli, 2018), and student reflection activities like start/stop essays, minute papers, and six-word memoirs (Gammons, 2016; Lowe, 2006; Nutefall, 2004; Wolstenholme, 2015). Many researchers use mixed methods approaches to combine a variety of data sources (Belanger et al., 2012), and a growing number of studies explicitly promote the use of critical pedagogical approaches, including emphasis on qualitative methods, to ethically assess student learning (Accardi, 2010; Gammons, 2016).

A smaller subset of the literature addresses assessment at the programmatic level. A typology proposed by Head et al. (2019) divides assessment work into four levels. The first two levels address the work being done at a single institution: a “micro” level that measures a single class or course’s effectiveness in meeting established learning outcomes, and a “meso” level that illustrates the longer-term impact of a program of library instruction (p. 20). One method that can be used to assess at both the micro and meso levels is the rubric, a scoring instrument “consisting of specific pre-established performance criteria, used in evaluating student work on performance assessments” (Mertler, 2001, p. 1). In the context of information literacy learning assessment, rubrics are often used to score responses to open-ended test questions (Donahue, 2015) or for citation analysis of student research projects (Carbery & Leahy, 2015; Rinto, 2013; Smith & Dailey, 2013; Yu et al., 2006). Oakleaf (2007) found that data from these kinds of rubric scoring activities can support evidence-based decision making by informing the revision of tutorials. Multiple large-scale initiatives in the United States promote rubrics as assessment tools, including the Association of American Colleges and Universities’ (2013) Information Literacy VALUE Rubric and the Rubric Assessment of Informational Literacy Skills (RAILS) research project, funded by the Institute of Museum and Library Services to support the design and implementation of information literacy assessment rubrics in nine academic libraries (Oakleaf, 2011/2012; RAILS, n.d.).

In this paper, we will describe the process of co-creating a flexible student learning rubric for library instruction at GVSU, the mechanisms for piloting and gathering feedback, and the implementation of the completed rubric. We will conclude with our own reflections on the project’s successes, a description of our lessons learned, and a discussion of the implications and considerations that this project has for other institutions.

Toolkit & Initial Training

Considering the needs of our library stakeholders as well as our desire for more programmatic assessment of student learning, we identified two key priorities that would inform our approach to this project:

- We wanted to balance liaison autonomy and individuality with consistency of purpose and data
- We needed to provide support for colleagues to help them feel successful in their assessment work

To achieve these project goals, we identified two project phases. First, we would develop support structures to increase liaison librarians' comfort with assessment vocabulary, concepts, and methods. Then, we would begin developing the rubric itself. The first support that we developed was a toolkit of resources aimed at informing instructional design decisions. This toolkit, a collection of documents housed on the Libraries' intranet, included assessment best practices, a menu of assessment methods appropriate for library instruction, a worksheet to support assessment development, and best practices for reporting assessment data. We later added a document focused on assessing online and asynchronous instruction during the COVID-19 pandemic.

To introduce the toolkit and its content to liaisons, we held a workshop in March of 2020. The workshop used an active learning approach to teach a variety of assessment methods by having librarians participate from the student perspective. This approach allowed us to showcase a wide variety of classroom assessment techniques from the toolkit in a relatively short time, while also modeling ways to organically incorporate assessment into active learning activities.

Rubric

Planning

Soon after the March workshop, the university suddenly closed due to the escalation of the COVID-19 pandemic. Despite these rapid changes to our work environments, we were able to continue the next phase of the rubric project with relatively few changes. We shifted our expected timeline to allow for the immediate pandemic response and avoid adding to librarian workloads, and the working group we convened met online rather than in person. This adjustment necessitated changes to planned activities: much of the design work shifted to an asynchronous working pairs model to allow greater flexibility of scheduling and to reduce video conference fatigue.

The working group, recruited prior to the COVID-19 closure, included four liaison librarians as well as the two project leads. In an effort to accurately represent our student body and the diversity of liaison work, as well as share power and labor across promotion levels, our working group included representatives from two of our three campuses, undergraduate and graduate programs, and tenured and untenured library faculty. We also wanted to ensure that the working group employed a collaborative, participatory model so that the final product was a bottom-up decision rather than a top-down imposition. We

took inspiration from participatory design methods, emphasizing creative, activity-based design processes (Elizarova & Dowd, 2017). While we originally intended to hold these sessions in person, using traditional tools like whiteboards and sticky notes, we were able to pivot to online using tools such as Jamboard and Google Docs.

We opened our collaboration with two activities meant to identify shared goals and project scope. We started with an activity called “Remember the Future” (Hohmann, 2006), which asks participants to describe what outcomes the project will achieve. The characteristics that the working team identified were collaboratively synthesized into a list of aspirational, values-based design principles. We wanted the rubric to be:

- Growth-focused, as opposed to deficit-focused
- Integrated into our workflows
- Visible, or shared with stakeholders to tell the story of library instruction
- Sustainably maintained and revised
- Generative, not punitive

After defining the design principles, we used the 4Cs activity (Gray, 2011) to identify strategies for implementing that design. This brainstorming activity asks participants to identify the components, characteristics, challenges, and characters involved in the project. This process helped the team build a shared understanding of the landscape of the project, which then informed our project scope and timelines.

Drafting

Once the working group had a shared understanding of the scope of the rubric, we completed an environmental scan, which included:

- The GVSU strategic plan (Grand Valley State University, n.d.)
- The Libraries’ strategic plan (Grand Valley State University Libraries, n.d.)
- The GVSU General Education Program (2019) student learning outcome rubrics
- The Association of College and Research Libraries (ACRL, 2015) *Framework for Information Literacy in Higher Education*
- Home grown rubrics at other university libraries

- Pedagogical frameworks such as Universal Design for Learning (CAST, n.d.) and Social Emotional Learning (Collaborative for Academic, Social, and Emotional Learning [CASEL], n.d.).

Guided by our design principles, we determined which aspects of the environmental scan most fit with our values and began to scope out content to be included in the rubric. We ultimately decided to use the GVSU General Education rubric for information literacy student learning outcomes as a foundation for the rubric and to pull in content from other rubrics and frameworks as appropriate. The initial iteration of the rubric included six rows, each representing a different learning objective (see Hobscheid et al., 2021, for the final rubric). While it is typical to use the term *dimension* to describe a row of a rubric, we elected to use the term *row* to minimize assessment jargon and make the rubric more approachable; we will use the term *row* to describe our rubric's dimensions throughout this paper.

The six rows of our first iteration of the rubric were:

- Inquire
- Access
- Evaluate
- Synthesize
- Cite
- Manage emotional states and cycles associated with the research process

These rows were divided into performance descriptors that were scaffolded across four levels to represent students' progression: emerging, progressing, refining, and accomplished. We also began to develop preambles for each rubric row to provide pedagogical and theoretical context.

In recognition of the design principle established by the working group, particularly the desire that the rubric be "integrated into our workflows," as well as our recognition of the need for broad buy-in, we did not mandate particular assessment methods to accompany the rubric. Librarians maintained the autonomy that they were used to having over their lesson planning and were able to use whatever methods they felt were pedagogically appropriate as long as they could describe student learning in their sessions in reference to the rubric

criteria. Librarians typically selected one to two rows of the rubric for each class session, in alignment with their desired learning outcomes.

Feedback & Assessment

We included feedback mechanisms throughout the rubric development process. Liaisons reviewed initial drafts of the rubric's content to check for usability and resonance and to build buy-in for the process at early stages. The working group also invited other library stakeholders, including library administrators and staff members with assessment responsibilities in their portfolios, to discuss the rubric and offer feedback in a meeting prior to the launch of the rubric. Stakeholders who were unable to attend were encouraged to share feedback via email.

After all stakeholders had approved a working draft, the rubric was first piloted in the First-Year Writing program during the fall 2020 and winter 2021 terms. The ongoing COVID-19 closure led us to decide to hold multiple pilots because in fall 2020 all library instruction was held online, using both synchronous and asynchronous instruction modes. The second pilot, held during the winter 2021 term, tested the use of the rubric during in-person instruction after campus reopened.

While administrators preferred not to mandate rubric use during either pilot stage, they did highly encourage liaison librarians to use the rubric for three sessions of First-Year Writing during the first pilot, and all First-Year Writing sessions and at least one disciplinary instruction session during the second pilot. Librarians applied the rubric to a wide variety of assessments during these pilots. Due to COVID-19, much of the instruction continued to be held online, either synchronously or asynchronously. Librarians used Google Forms, worksheets, and online modules with great success in online instruction and were able to draw conclusions about student learning from those outputs. Other librarians preferred to continue using more traditional classroom assessment methods, both in-person and online. These included—but were not limited to—Minute Papers, checks for understanding, observations of class discussion, and one-on-one consultations.

The working group built a variety of support structures into the pilots to assist the liaisons in adding the rubrics to their instruction workflows. During both pilots, we offered workshops on topics including selecting assessment methods using the toolkit, planning assessment using the rubric, and applying the rubric to different assignments. These workshops were regularly attended by 80–90% of liaison and instruction librarians because

the working group collaborated with leadership at the Libraries to highly encourage liaison and instruction librarians to attend. During the first pilot, we offered periodic office hours to provide one-on-one support, which included helping with lesson and assessment planning using backward design (Wiggins & McTighe, 1998), assisting with analyzing raw assessment data, and demonstrating how to enter assessment results into LibInsight, a data analytics platform. The office hours were discontinued in the second pilot due to low attendance; this issue was likely due to the ongoing workload challenges of the pandemic, as well as liaisons preferring to seek support as questions arose rather than waiting for weekly open office hours to occur. Individual consultations, by email and video call, were offered to liaisons who wanted continued one-on-one support as questions arose.

At the end of each pilot, the working group offered multiple in-person feedback sessions, as well as an anonymous feedback survey, to gather opinions on the rubric's content and implementation. Stakeholder feedback on the process and the rubric was overwhelmingly positive. One liaison librarian wrote:

I think I've finally got over my hurdle of thinking of assessment as a last, extra step rather than something that is integrative into my work.... In our various discussions, you both helped create space and room demonstrating that intentional approaches to instruction are valued and needed. (From my lens and experience here, this was a big shift!) You helped grow a sense of community and articulated how our values translate to our instructional work. Better yet, you practiced those values so integrity is embedded in our work (connected rhetoric to practice). In our conversations (formal and informal), there has been so much engagement and digging in on what and how we teach. When we have so many new to GVSU colleagues and organizational changes, this bonding and shared norming was immensely needed.

Quantitative data also showed positive results. Comparing data entered before and after the first pilot (fall 2020) showed a 25% increase in assessments being used in library instruction sessions. This result suggests that the combination of training, the rubric structure, and the more explicit expectations for conducting student learning assessments increased liaisons' engagement with assessment. However, reported assessments dropped 13% during the winter and spring/summer semesters. We are not sure of the cause of this decrease, but we will continue to track and analyze assessment reporting to see if the difference in fall and

winter data becomes a trend. Despite the decrease, it was still 12% higher than before we implemented the rubric pilot

Revisions

During summer 2021, the project leads formed a smaller working group to incorporate the feedback from both pilots into the rubric and to finalize it in time for the fall 2021 semester. The group accomplished three significant revisions:

- We had received many requests for a new rubric row to address teaching and assessing student knowledge and interaction with the Libraries' services. Many liaison librarians teach students about library services, and this labor often goes unacknowledged. The revised rubric includes a new row, called Library Service Foundation. It differs from the other rows because the descriptor for each of the scoring levels lists library services students should know or use at that level rather than assessing performance of a skill.
- We also completed the preambles for each row that we had begun planning in the previous iteration of the rubric. Each preamble is customized to the row's content, but generally includes pedagogical background, any caveats or limitations, and ways to use the row in practice.
- Finally, we added additional explanatory text to the rubric's introduction. This includes a preamble to the rubric that explains the rubric's content, how to use the heuristic, and the rubric's pedagogical approach. We also added additional resources and best practices for using the rubric.

Implementation

The finalized rubric (Hobscheid et al., 2021) was officially launched in the fall 2021 semester. The Instructional Design Librarian collaborated with the department heads who supervise liaisons to discuss the best methods to integrate the rubric into liaison workflows. The department heads decided to include rubric planning and analysis as a 2022 team goal to encourage continued engagement. The Instructional Design Librarian will also conduct focused assessment and analysis in specific rubric rows in the Libraries' First-Year Writing program. The Libraries' *Student Learning Outcomes for First-Year Writing* was revised in 2021 and now maps directly to the rubric. Liaisons are also consulting the rubric as they revise their disciplinary curriculum maps in order to strategically integrate programmatic assessment into their instruction in their liaison areas.

Discussion

While assessment of this project is ongoing, we can identify several areas in which the project was particularly successful, as well as lessons learned that we will apply to future projects. As is often true in long-term projects, we encountered unexpected challenges and barriers to our original project timeline. When the University shut down due to the COVID-19 pandemic, we needed to shift our timeline to accommodate for the change in liaisons' workload. By remaining flexible by moving the co-creation process to an online setting and identifying alternative methods for gathering feedback, we were able to steadily move our project back to our original timeline.

The choice to build in frequent opportunities for input and feedback, as well as a variety of options for how to provide that input and feedback, was a key success of the project. This frequent communication, particularly with liaison librarians as the key user group for the finished rubric, helped to build confidence and buy-in among stakeholders. It also allowed us to be iterative in our rubric design, creating a final product that meets user needs.

Beyond COVID-19 and the barriers it created, the primary challenge of this project was the implementation of the rubrics in librarians' workflows. While we were intentional about creating opportunities for education and support, the integration of assessment and reporting required substantial culture change. While session and participant statistics have been collected successfully for several years and connected to larger student success metrics (O'Kelly et al., in press), this new workflow asked librarians to assess and report on student learning at the classroom level more consistently than they had in the past. Our initial results indicate that this project did succeed in moving the needle; however, additional time and support work will be needed to increase uptake of the rubric across the liaison departments.

As we reflect on the unique institutional and cultural context of our project, we identify several ways in which this project can be reimaged at other academic libraries. While not all institutions will have the same relationship and history with individual and programmatic student learning assessment, they can adapt our concept of flexible programmatic assessment. We intended our rubric to be applicable to all classroom assessment methods to enable the shift from "micro" to "meso" assessment and to better demonstrate the impact of our library instruction program (Head et al., 2019). By building flexibility into programmatic assessment, liaison librarians were able to continue their

existing assessment practices with very few changes, which streamlined the transition to the new process and cut down on potential changes to workload.

In addition to the project outcomes, we see value in the co-creation process we used to develop and pilot the rubric. By involving interested stakeholders from the outset, we were able to build their individual understandings of the instruction program and assessment into the fabric of the project. This also helped us gain acceptance at the pilot stage. We recommend that any librarians and educators considering a similar project identify and reach out to their key stakeholders to build trust and support for the project. By building our rubric on the foundation of assessment work already being done, and by involving liaisons at all stages of the development of the rubric, we were able to build engagement and the necessary momentum to get this new process off the ground.

Conclusion

Building on the substantial history of student learning assessment in the library classroom, this project sought to use a flexible rubric to bring formative, classroom-level assessment data into the programmatic conversation about the impact of library instruction. The rubric was co-created with liaisons, and opportunities for input and feedback were prioritized throughout the design processes and pilot launches. While there is still a great deal of work to be done on this project, initial feedback and assessment results show that this project has increased librarian engagement with assessment by creating structure and support for assessment work. We recommend that others considering similar projects adopt co-creative approaches to assessment instrument design, and that they remain mindful of the impact of existing assessment workflows and practices on the implementation of new tools.

Land Acknowledgment

The project described in this paper was completed on the ancestral territory of the People of the Three Fires: the Ojibwe, Odawa, and Bodawademi peoples. Every university in the United States was built on Indigenous land. As visitors on Indigenous land, we have the responsibility to learn about the history of settler colonialism and its continued impact on Indigenous people. As workers in the field of higher education, we have the responsibility to understand the relationship between settler colonialism and education, including the cultural genocide perpetrated through residential schools and the use of Indigenous territory to build public universities. We recognize our personal responsibility to use our work to promote social justice, equity, and inclusion on our campuses and in our communities, and

we encourage our readers to consider ways to engage with information literacies and ways of knowing that have been marginalized in higher education.

References

- Accardi, M. T. (2010). Teaching against the grain: Critical assessment in the library classroom. In M. T. Accardi, E. Drabinski, & A. Kumbier (Eds.), *Critical library instruction: Theories and methods* (pp. 251–264). Library Juice Press.
- Association of American Colleges and Universities. (2013). *Information literacy VALUE rubric*. <http://www.aacu.org/value/rubrics/information-literacy>
- Association of College and Research Libraries. (2015). *Framework for information literacy for higher education*. <https://www.ala.org/acrl/standards/ilframework>
- Bradley, D. R., & Oehrli, J. A. (2018). Assessing student learning in library instruction: A faculty perspective. In S. Baughman, S. Hiller, K. Monroe, & A. Pappalardo (Eds.). *Proceedings of the 2018 Library Assessment Conference: Building effective, sustainable, practical assessment* (pp. 787–795). Association of Research Libraries.
- Carbery, A., & Leahy, S. (2015). Evidence-based instruction: Assessing student work using rubrics and citation analysis to inform instructional design. *Journal of Information Literacy*, 9(1), 74–90. <https://doi.org/10.11645/9.1.1980>
- CAST. (n.d.). *About Universal Design for Learning*. <https://www.cast.org/impact/universal-design-for-learning-udl>
- Collaborative for Academic, Social, and Emotional Learning. (n.d.). *Fundamentals of SEL*. <https://casel.org/fundamentals-of-sel/>
- Donahue, A. E. (2015). Charting success: Using practical measures to assess information literacy skills in the first-year writing course. *Evidence Based Library and Information Practice*, 10(2), 45–62. <https://doi.org/10.18438/B85P53>
- Elizarova, O., & Dowd, K. (2017, December 14). Participatory design in practice. *UX Magazine*. <https://uxmag.com/articles/participatory-design-in-practice>
- Gammons, R. (2016). Incorporating critically conscious assessment into a large-scale information literacy program. In N. Pagowsky & K. McElroy (Eds.), *Critical library pedagogy handbook, Vol. 2*. (pp. 235–240). Association of College and Research Libraries.

- Grand Valley State University. (n.d.). *Strategic Plan for Grand Valley State University*.
<https://www.gvsu.edu/strategicplan-view.htm?entityId=4F5F5573-DC4C-1BD3-2B37E7793A4ABA39&entityType=college>
- Grand Valley State University General Education Program. (2019). *Information Literacy Rubric*. https://www.gvsu.edu/cms4/asset/E318FAA6-9691-29E8-AF089DA7E65B9CC3/information_literay_6.21.19_-_accessible.pdf
- Grand Valley State University Libraries. (n.d.). *Strategic Plan for University Libraries*.
<https://www.gvsu.edu/strategicplan-view.htm?entityId=4F5F5573-DC4C-1BD3-2B37E7793A4ABA39&entityType=college>
- Gray, D. (2011, March 30). 4Cs. *Gamestorming*. <https://gamestorming.com/4cs/>
- Gross, M., & Latham, D. (2012). What's skill got to do with it?: Information literacy skills and self-views of ability among first-year college students. *Journal of the American Society for Information Science and Technology*, 63(3), 574–583. <https://doi.org/10.1002/asi.21681>
- Head, A. J., Bull, A. C., & MacMillan, M. (2019). Asking the right questions: Bridging gaps between information literacy assessment approaches. *Against the Grain*, 31(4), 20–22. <https://doi.org/10.7771/2380-176X.8408>
- Hobscheid, M., Kerbavaz, K., Frigo, E., García Mazari, S., McClure, H., Minnis, S., and Schaub, G. (2021). Instructional programmatic assessment rubric. *Library Reports and Communication*, 17. https://scholarworks.gvsu.edu/library_reports/17
- Hohmann, L. (2006). *Innovation games: Creating breakthrough products and services*. Pearson Education.
- Lowe, M. (2006). The start/stop essay in instruction and information literacy at University of Louisiana at Monroe. *Louisiana Libraries*, 69(2), 7–11.
- Markey, K., Armstrong, A., de Groote, S., Fosmire, M., Fuderer, L., Garrett, K., Georgas, H., Sharp, L., Smith, C., Spaly, M., & Warner, J. E. (2005). Testing the effectiveness of interactive multimedia for library-user education. *portal: Libraries & the Academy*, 5(4), 527–544. <https://doi.org/10.1353/pla.2005.0056>
- Mertler, C. A. (2001). Designing scoring rubrics for your classroom. *Practical Assessment, Research, and Evaluation*, 7, Article 25. <https://doi.org/10.7275/gcy8-0w24>

- Noe, N. W., & Bishop, B. A. (2005). Assessing Auburn University Library's Tiger Information Literacy Tutorial (TILT). *Reference Services Review*, 33(2), 173–187. <https://doi.org/10.1108/00907320510597372>
- Nutefall, J. (2004). Paper trail: One method of information literacy assessment. *Research Strategies*, 20(1/2), 89–98. <https://doi.org/10.1016/j.resstr.2005.07.004>
- Oakleaf, M. (2007). Using rubrics to collect evidence for decision-making: What do librarians need to learn? *Evidence Based Library and Information Practice*, 2(3), 27–42. <https://doi.org/10.18438/B8WS3W>
- Oakleaf, M. (2011/2012). Staying on track with rubric assessment: Five institutions investigate information literacy learning. *Peer Review: Emerging Trends and Key Debates in Undergraduate Education* 13(4)/14(1), 18–21.
- O'Kelly, M., Jeffryes, J., Hobscheid, M., & Passarelli, R. (in press). Correlation between library instruction and student retention: Methods and implications. *College & Research Libraries*.
- RAILS. (n.d.). *Rubric Assessment of Information Literacy Skills*. <https://railsontrack.info/>
- Rinto, E. E. (2013). Developing and applying an information literacy rubric to student annotated bibliographies. *Evidence Based Library and Information Practice*, 8(3), 5–18. <https://doi.org/10.18438/B8559F>
- Smith, M. D. & Dailey, A. B. (2013). Improving and assessing information literacy skills through faculty-librarian collaboration. *College & Undergraduate Libraries*, 20(3–4), 314–326. <https://doi.org/10.1080/10691316.2013.829370>
- Wiggins, G., & McTighe, J. (1998). *Understanding by design*. Association for Supervision and Curriculum Development.
- Wolstenholme, J. (2015). Evidence based practice using formative assessment in library research support. *Evidence Based Library and Information Practice*, 10(3), 4–29. <https://doi.org/10.18438/B8D60J>
- Yu, F., Sullivan, J., & Woodall, L. (2006). What can students' bibliographies tell us? Evidence based information skills teaching for engineering students. *Evidence Based Library and Information Practice*, 1(2), 12–22. <https://doi.org/10.18438/B85P4Q>