



*Evidence Summary*

**No Pedagogical Advantage Found Between LibGuides and Other Web Page Information Literacy Tutorials**

**A Review of:**

Bowen, A. (2014). LibGuides and web-based library guides in comparison: Is there a pedagogical advantage? *Journal of Web Librarianship*, 8(2), 147-171. doi:10.1080/19322909.2014.903709

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**Abstract**

**Objective** – This study compares two versions of an online information literacy tutorial – one built with Springshare’s LibGuides and one built as a series of web pages – in order to determine if either platform provides a pedagogical advantage in delivering online instruction.

**Design** – Experimental, posttest only.

**Setting** – Large, public, primarily undergraduate four-year university in the Western United States of America with 16,000 full time equivalent student enrollment.

**Subjects** – The sample consists of 812 students enrolled in 25 sections of a 100-level Communications Studies course. Of those students, 89 responded to the study’s posttest survey (11% response rate).

Of the 89 respondents, 53 viewed the LibGuide tutorial: 12 respondents were male, 33 respondents were female, and 8 respondents did not report their gender. Of the 53 LibGuide participants, 47 responded to other demographic questions, and were primarily 18-20 years old (94%), first-year students (79%), and non-Communication Studies majors (91%).

The remaining 36 respondents viewed the web page tutorial: 7 respondents were male, 25

respondents were female, and 4 did not report their gender. Of the 32 respondents that provided demographic information, all participants were 18-20 years old, 31 of 32 were first-year students, and the majority were non-Communication Studies majors (78%).

**Methods** – Students completed an online tutorial designed to teach them information literacy skills necessary to find resources for a class debate. Each section was randomly assigned to one of two information literacy tutorials: 12 sections viewed a tutorial built with LibGuides and 13 sections viewed a web page tutorial. The two tutorials included identical instructional content and worksheet. Each of the tutorials' six sections were tied to the ACRL *Information Literacy Competency Standards for Higher Education*. A seventh section in both tutorials administered a voluntary survey. Six knowledge-based survey questions tested students' abilities on the six skills covered in the tutorials. Three affective questions asked students to use a four-point Likert scale to report ease (1 = very easy, 4 = very difficult), clarity (1 = very clear, 4 = very unclear), and convenience (1 = very convenient, 4 = very inconvenient) of six research skills, including: identifying keywords and main concepts in a topic, identifying scholarly versus non-scholarly sources, finding relevant scholarly articles, locating a book's call number in the library catalog and on the shelf, finding newspaper articles, and constructing an annotated bibliography. Two affective survey questions asked students to use a four-point Likert scale (1 = very significant increase, 4 = no increase) to rate the impact the tutorial had on their knowledge of and satisfaction with using the library in each of the six areas of research.

**Main Results** – The overall response patterns for the six information literacy knowledge-based questions were similar for both groups. Students who viewed the LibGuides tutorial performed better than the web page group on four of the six knowledge-based questions. The web page group performed better than the LibGuides group on two of the six knowledge-based questions. Across the board, students performed poorly on the first question, which

measured students' abilities to form a search string (39.2% correct in the LibGuides group; 25.7% correct in the web page group), and on the fifth question which asked students to identify the best source of current information from a list of resources (32% correct in the LibGuides group; 17% correct in the web page group).

Response means on the first three affective questions indicate that students in both groups found searching for relevant scholarly articles and constructing an annotated bibliography to be more difficult than the other four skills. Additionally, students in the LibGuide group reported slightly higher means than the web page group concerning the clarity of finding newspaper articles, and were therefore less clear on the task. Students in the web page group reported slightly higher means than the LibGuide group when reporting the convenience of constructing an annotated bibliography, suggesting they found creating a bibliography more inconvenient. Students in both groups also responded similarly to the final two affective questions measuring the perceived impact the tutorial had on their knowledge of and satisfaction with using library resources.

**Conclusion** – The author concludes that there is no evidence of a pedagogical advantage for either the LibGuide or web page information literacy tutorials. Students' poor performance on the first knowledge-based question led the author to revise the tutorial content in order to emphasize matching a search strategy to the research topic. Responses to the fifth question resulted in modifying the survey question to emphasize the importance of selecting a *current* source of information and to deemphasize format. The author suggests revising the tutorials to include a site map and reorder the materials, as well as pretesting survey questions and collecting data across multiple semesters to assess the validity and reliability of the survey instrument. LibGuides is recognized as a platform that reduces barriers to creating online learning materials with a pedagogical value similar to other web-based tutorials.

## Commentary

Cited as a “CMS for busy librarians” (Verbit & Kline, 2011), Springshare’s LibGuides remains a popular option for librarians looking to create subject guides, course guides, and other online learning materials. Librarians have created over 400,000 LibGuides (Springshare, 2014), but there is little literature addressing the efficacy of such guides as learning objects. The current study seeks to fill this gap.

A review of the study using the ReLIANT critical appraisal instrument for educational interventions (Koufogiannakis, Booth, & Brettle, 2006) suggests questions remain about the study’s intervention, population, and interpretation of results. The study’s literature review emphasizes information literacy tutorial assessment, LibGuides popularity, and the lack of literature related to LibGuides’ pedagogical value. A review of findings from LibGuides’ usability literature (e.g., Hintz et al., 2010; Sonstebly & DeJonghe, 2013) would add theoretical support for the study intervention and the hypothesis that information architecture differences between the two platforms affect student performance.

The study addresses limitations related to response rate and generalizability, yet states the respondents “were not likely to be significantly different from their peers who did not complete the survey” (p. 165). Only respondent demographics are known; there is no comparable information for sample demographics, and it is difficult to determine whether the respondents reflect the rest of the sample. Although survey questions underwent librarians’ review, pretesting with students (as noted in the study’s “Limitations and Further Directions”) will strengthen survey design and allow for establishing the instrument’s validity and reliability. Alternatively, rather than relying on an additional survey, collecting and analyzing the worksheets that accompanied the tutorials might increase response rates and provide an opportunity for authentic assessment.

There is little discussion of student groups’ comparative performances, even though

LibGuides students outperformed on four of six knowledge-based questions. The performance differences appear numerically small, and no analyses are reported to determine whether these differences are statistically significant. Student performance on knowledge-based questions is rarely attributed to the tutorial design, as hypothesized in the study’s aim. For instance, with regard to student responses on knowledge-based question number five, the study concludes, “[i]t is unclear what caused this difference between the two versions of the assignment...” (p. 164) even though the study hypothesized that presentation differences between the LibGuide and the web page tutorial may lead to differing student performances.

While the study’s limitations make the evidence difficult to interpret, the lack of meaningful differences between the LibGuide and web page tutorial suggests that librarians may feel comfortable relying on a librarian-friendly CMS to create information literacy tutorials. While no pedagogical advantage was revealed, there is also no evidence to suggest the additional time or expertise required to build the web page version of this tutorial resulted in benefits to students.

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