

“Design and Evaluation of Digital Information Literacy Modules in an Online First-year College Writing Course”

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Bios

Lee-Ann Kastman Breuch, Ph.D., is an Associate Professor in the Department of Rhetoric at the University of Minnesota, where she teaches courses in first-year writing, technical communication, computer pedagogy, teacher training, and usability testing. Her research addresses writing theory and pedagogy in technical disciplines, composition, and online environments.

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Merry Rendahl is a Ph.D. student in Rhetoric at the University of Minnesota. Her areas of study include technology enhanced learning, writing pedagogies, and adult education. Merry has experience teaching writing courses both online and in the classroom. She has also been a tutor and director in the University of Minnesota Online Writing Center. Merry will be wrapping up her coursework this year with classes on the psychology of technology and instruction and educational research. Merry also likes to run--an activity that requires no writing and no computers.

Caroline Crouse is the Electronic Resources librarian in the Reference Department at the Gelman Library at George Washington University in Washington D.C. Until recently she was at University of Minnesota Libraries, working on undergraduate initiatives and information literacy. She received her Masters degree in Library and Information Science from the University of Michigan, and has a keen interest in the role of the information commons in a university setting.

Design and Evaluation of Digital Information Literacy Modules in an Online First-year College Writing Course

Abstract

How can information literacy be communicated in an online environment? This paper discusses the partnership between librarians and writing teachers to design and evaluate online modules about information literacy and library research at the University of Minnesota. The pilot for the information literacy modules was an online writing course at the University of Minnesota, a first-year composition course. Two librarians created modules on the following topics: identifying popular and scholarly articles, selecting an index, and searching an index. For the first module, the librarians used an interactive technology called Breeze which allowed them to create interactive PowerPoint slides with voice narration and quiz features. The last two modules were created using animated, narrated files that demonstrated how to navigate online indices. Quizzes for the modules were created to measure comprehension. All modules and quizzes were integrated in the online writing course and were used to help prepare students for a prospectus assignment in which students needed to propose a topic and identify several popular and scholarly sources they would use for a long research paper. Two writing instructors were involved in the online writing course: a tenured faculty member in Rhetoric who designed the online course, and a PhD Rhetoric graduate student who taught the course Spring 2006. These instructors worked with the librarians (one of whom was a liaison librarian who already worked closely with Rhetoric) at various points to discuss the content and placement of the modules in the course. Our presentation shares the following information about this partnership: how the partnership began, design decisions in creating online modules, results and reactions from students, and plans for revision and further evaluation.

How the Partnership Began

In Spring 2005 the Rhetoric Department announced plans to launch an online version of first-year composition, to be taught Spring 2006. The department had developed several other online courses, including graduate courses, some advanced undergraduate courses, and one service course, a multi-section technical communication course. Unlike those courses already developed for online delivery in Rhetoric, first-year composition had the challenge of addressing first-year college students who were new to the university. In addition, the first year composition course required familiarity with library research and resources. In traditional first year composition courses, this is accomplished by a visit to the library, in which a librarian meets students in a computer lab, explains the many ways to search for information in the library, how to use databases, etc. The online version of this course would not receive the same kind of hands on workshop.

Fortunately, Rhetoric had developed a positive relationship with Magrath Librarians; in fact, they worked with the library to develop a liaison position, a librarian who would work specifically with Rhetoric. First year composition was one of the courses that the liaison addressed regularly. Another fortunate circumstance was that Magrath Library had resources to develop online tools and were willing to share and even customize tools for the Rhetoric first-year composition course. As plans for the online version were being made, Rhetoric instructors worked side by side with librarians who agreed to make an online information literacy module that would, in

effect, walk students through the process of using online library search tools. As a pilot project, we decided that the modules would address three major points that are typically covered in the hands-on workshop: identifying popular and scholarly articles, selecting an index, and searching an index.

Design Decisions in Creating the Modules

Two librarians created modules on the following topics: identifying popular and scholarly articles, selecting an index, and searching an index. For the first module, the librarians used an interactive technology called Breeze which allowed them to create interactive PowerPoint slides with voice narration and quiz features. The last two modules were created using animated, narrated files that demonstrated how to navigate online indices. Quizzes for the modules were created to measure comprehension.

In moving from in-person, hands-on library sessions to an online environment, decisions had to be made about the best software to use for each topic, and for any feedback the students would submit. Although the online first-year composition course was designed in WebCT, none of the library modules or the accompanying quizzes were produced in that software. Incorporating both PowerPoint and video clips would have been cumbersome, and the quizzing functions seemed to be more geared to formal graded assignments than to the more informal feedback we were planning.

The section on popular and scholarly articles was developed in PowerPoint, and the slides were uploaded into Breeze software. In Breeze, short quizzes with multiple choice questions could easily be added, with feedback given to each student about whether their answers were correct. If the answers were not right, a short statement would give an explanation. The material on popular and scholarly articles is quite straightforward, and it was felt that this self-testing was adequate for checking the comprehension of the students.

For the sections on selecting an index and searching the indexes, we decided to use Captivate software, which makes a video recording of live Web sessions, and allows narration to be added after the fact. For a check on comprehension, students were asked to select an index and perform a search, using their topic for an upcoming assignment in the class. They wrote short answers to a few questions concerning their search experience, and those were forwarded to one of the librarians. It was originally planned that the students would use a Web form to report, but technical challenges led to the information being delivered via e-mail.

Students were asked what index they had chosen, and why, and what search terms they used. They were also asked to report about the best article they retrieved in the search. Librarians replied to each student, giving ideas about how to improve their searches, if necessary.

In designing both the Breeze and Captivate modules, we tried to abide by best practices for creating online learning modules. Scripts were written and rewritten before any development began in the software. Learning objectives were clearly stated at the beginning, and the modules were kept short in length. A roadmap was given, so students knew where they were headed, and main points were reviewed to emphasize their importance. Checks for comprehension were

included throughout the activities, and when appropriate, feedback was given concerning the correct answers.

Student Reactions to Library Modules

As could be expected, there was a range of responses from students to the library modules. For example, on distinguishing popular from scholarly sources, responses ranged from

“I had a hard time....” and “It is sometimes pretty tricky ...”

to

“There exist people who can't tell the two apart? I don't believe you. No wonder Bush is president.”

Because some students still struggled with the library modules, there may be value in developing some advanced modules. We decided to administer an end-of-course evaluation to gather more data. The next sections detail survey responses about technology, overall student reaction, the librarian's summary of their responses to the quizzes, and the quality of the resources used in the final papers. The data collected at the end of the course was anonymous and, so, is not correlated with the mid-term evaluation or with individual student performance.

Technology

The modules, as originally conceived, were to be interactive and automated. Due to technical difficulties, students were only able to access two of the three modules, and then had to download the quizzes and email answers to the librarian.

After clearing up the original technical difficulties, only one student mentioned a technical problem. In a question that asked students to identify the most and least helpful elements of the course overall, one student listed the library tutorial on searching journal indexes as the least helpful element, noting that “It did not work on my web browser at home (aol), so I didn't get a lot of the information I should have.” Highlighting again, as we already knew, technology that does not work does not benefit student learning.

Students accepted the online exercises and all but one completed them. When asked about the exercises, the students focused on the content of the exercises, not on the delivery method or the format.

Survey Responses

There were 12 students in the class, and 10 responded to the end of course evaluation, which included questions about the library tutorials. The text of the five questions and a summary of responses can be found in Appendix A.

Students reported positive changes as a result of going through the tutorials. Students reported that the exercises helped them to understand the importance of preparation, pay more attention to sources, be more focused in their approach, and gave them confidence for the assignment. The range of responses also indicated some areas for expansion and advanced lessons.

Librarians Summary

Eleven students corresponded with the librarian. Here is the librarian's summary:

Most [students] did a great job, especially on the popular vs. scholarly section. A few used Google Scholar, and I tried to write back with a bit of caution about that. Three or four said they didn't have to modify their search terms at all, which makes me think they were either very lucky, or got a huge number of hits and just looked at the first ones. In those cases, I reaffirmed that idea of narrowing if you need to.

The librarian's assessment implies that students are learning the basics. It also implies that students may be accepting the first sources that seem applicable rather than searching out the best sources. While finding the best source is a skill that students continue to develop throughout graduate studies, perhaps it is a skill that could begin to be honed in introductory writing courses.

Use of Resources in Students' Final Papers

The final assignment for this course allowed students to use some popular sources. Although students did seem to be able to identify which sources were classed as popular and which were classed as scholarly, the final papers displayed little distinction in the application of those sources. The final papers seemed to use popular sources as frequently as scholarly sources to establish factual evidence. A more appropriate application would be to use popular sources to establish the currency of an issue or relate it to a social context, and to use scholarly sources to establish evidence based on research and theory.

Conclusion

These student responses suggest that some students in introductory writing courses need to learn to distinguish popular from scholarly sources and are helped by having guidelines or criteria to do so. Other students could benefit from more advanced training about library research. Advanced topics might include deeper searching and evaluation techniques, and appropriate application of popular and scholarly sources in research papers.

Appendix A: Survey Questions and Student Responses

- How helpful was the online tutorial on searching online journal indexes? (Multiple Choice)

Quantity	Response
5	Very helpful
4	Slightly helpful (including a student who noted the least helpful piece of the course was the library tutorial due to technical difficulties)
1	Knew all that before

- What is one thing that you remember about searching online journal indexes from that tutorial? (Paragraph)

Quantity	Summarized
4	Amount of information/good information available online
2	Academic Search Premier
1	Unaware of the tutorial

"It was actually a lot easier to browse online than I anticipated, however I had some trouble accessing the same area twice."

- How helpful was the online tutorial on scholarly vs. popular sources? (Multiple Choice)

Quantity	Response
4	Very helpful
2	Helpful
1	Slightly helpful
3	Knew all that before

- What is one thing that you remember about distinguishing scholarly sources from popular sources? (Paragraph)

Quotes
"I used Google to find scholarly sources for my topic because I couldn't find anything about my topic in the library even when I searched on one generic word from my topic. Google offers a scholarly search as well. "
"It is sometimes pretty tricky because sources can often seem to be both popular and scholarly or neither."
"I had a hard time, but once I really looked at the article, the title, and how the work was cited I figured it out pretty easily."
"Being able to distinguish popular from scholarly based on the publication name."
"Where you'd find them. For example, a medical journal versus the New York Times."
"Book was most helpfull for these distinctions: peer edit, appears in less circulated publishings, nonprofit or .edu web address for scholarly materials."
"I remember that sholarly articles are based upon the information. Like the words and pharases used and also the length of the article itself. Scholarly articles tend to be in specific journals were as popular sources are newspapers, and magazines that you can get anywhere."
"One is more scientific and the other is more common (newspaper). The exercises were very helpful!"
"The guidelines seemed a bit like common sense to me, I think it is a very good distinction to be able to make however, and clarification and practice with it can never hurt."

"There exist people who can't tell the two apart? I don't believe you. No wonder Bush is president."

- In what way did the tutorial change how you approached your research for this class project? (Paragraph)

Quantity	Quotes
6	Noted changes: "More focused approach" "Helped with back checks" "Paid more attention to sources" "Gave me more confidence on how to approach such a big task" "I learned that there is a lot of prep work..." "...more sources in a shorter time"
4	Saw no change