Embedding the library into an online course: A quest for scalable solutions

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Introduction
Does embedding a librarian and library resources into an online-only class improve quality of students' research skills?

We hope to discover specific and scalable strategies for serving online students through library collaborations with faculty and the assessment office through this project, as online students are currently underserved by the library.

This project served as a pilot to discover best practices for embedding the library and librarians into online classes to support student success at Cal State Fullerton (CSUF).

Literature Review

Growing Online Student Population
- Cal State Fullerton has a large and growing online student population, with the library serving roughly 1/3 of students who are enrolled in at least one distance education course as of 2015. And the growth of online enrollments has slowed, they continue to grow faster than overall higher education enrollments (Allen & Seaman, as cited in Burke & Tumbleson, 2014).

Literary Services to Online Students
- It is critical for librarians to consider the unique needs of students in online classes. Their professional association states "every student is entitled to the library services and resources of that institution, regardless of where enrolled or where located in affiliation with the institution." (American Library Association, 2008). Of course, the traditional one-shot format does not transfer neatly to the online environment.

Embedding Librarians in Online Classes
- Embedding into an online class might be an opportunity for librarians to start to understand online students' needs as more "just-in-time" access that is driven by the timeline of the course and less on an organized planning of a one-shot instruction session (Burke & Tumbleson, 2016).
- Embedding might be a time-consuming task, but previous research found there were "significant differences in students' information literacy skills with a two-week embedded librarian compared with a full semester embedded librarian" (Heathcock, 2015). Thus, embedding may be a brief time commitment.

Embedding Online Library Tutorials
- Implementing online tutorials has a lot of potential for being a scalable instructional solution, but a similar project at San Jose State required lots of librarian training to equip them with the necessary skills, and furthermore, faculty requests for custom tutorials negated time savings from doing asynchronous instruction (Matsu et al., 2015)

Methods

Target: Human Services 385 (Online Course)
Participants: 28 Students
Research Assignment: Annotated Bibliography

Process

Identified willing instructor with an online course that includes a research assignment (Human Services 385)
Instructional Design Librarian designed learning and behavioral outcomes in collaboration with Human Services librarian, based on past one-shot lesson plans

Overarching Goals
- Mastery of student learning outcomes (evaluation and searching-related)
- Measurable increases in behavioral outcomes (confidence in doing research, willingness to ask for help, citing high-quality and relevant resources).

Developed library resources based on outcomes (Librarian bio, class LibGuide, handout, etc.)

Design and developed custom interactive library tutorial with built-in assessment (45 minutes long: essentially an online equivalent of traditional one-shot)

Supported the tutorial with class LibGuide, handout, etc.

Results

The planned control group fell through, so we collected data from only the intervention group.

FiRe Tutorial
The FiRe tutorial was graded as complete/incomplete for the course gradebook, but students also received a score for how accurately they completed the automated quizzes.

Students that simply completed the FiRe tutorial received higher scores on their annotated bibliographies, an average increase of 2.6%.

FiRe tutorial scores were correlated with post-test and annotated bibliography scores: the better students did on the tutorial, the better they did on the post-test and their annotated bibliography.

Pre-Test/Post-Test
- Participants did better on pre-test than post-test, partly because many students completed the FiRe tutorial before completing the pre-test. Also, the post-test was conducted months after students did their library research.
- Very few students completed the post-test because it was not required by instructor or researcher.
- Post-test textual analysis indicated general retention of key concepts from FiRe tutorial (e.g., CRAP method).

End of Semester Survey
- 8 respondents
- 50% previously had library instruction
- 100% aware of librarian availability

Course Assignment: Annotated Bibliography
- Average grade: 23.2/30 (77.3%)
- Above score includes four students who did not submit this component
- Only those who submitted this component: 25.2/30 (84%)

Librarian/Library Resources
- Class LibGuide: 115 hits (mainly August – September)
- Class handout: 17 clicks (13 students, September or earlier)
- 5 students at optional in-person class meeting with librarian present: 9/21/2015 and 11/02/2015

Conclusions

Embedding a librarian and library resources into an online class appears to improve students' research skills
- Most survey respondents reported feeling more confident with doing research
- Participants' higher scores on pre-test is understandable, given that most interacted with library at beginning of semester
- A control group may have demonstrated impact of no interaction at all with library (e.g., difference in pre- and post-test results)
- Increased promotion of discussion board may encourage student participation
- Automated tutorials and embedded library resources are scalable and effective

It is helpful to know (the librarian) is able to help with specifically the research portion. He was very nice and approachable.

I have not used the librarian, but it is nice to have that option.

Recommendations

• Scaffold and space out learning modules, rather than frontload at the beginning of the module
• Embedding library photo and bio humanizes librarians and increases student awareness
• Put your efforts into resources development and implementation rather than using librarian time, for librarian time is not scalable.

 contribution to University Goals
Cal State Fullerton is concerned about retention and graduation, especially in regards to the enrolled students. If library instruction is correlated with higher student grades, the library is contributing to greater student success, and we should embed into as many online courses as possible.

Implications
If we developed subject-specific tutorials for use across the curriculum, we could dramatically scale up information literacy instruction without using more librarian time to teach in person.

Obstacles
Designing and developing effective tutorials is very time-consuming. As I found out when I spent more than forty hours developing the tutorial for HJSR-385. Librarians would also need training to learn how to embed library resources.

Solution
If we’re able to hire an instructional designer, or contract out our ID work, we will be able to dramatically scale up our information literacy instruction and embed it effectively across each subject’s curriculum. This will result in greater student academic success, which means greater retention and graduation rates, and better service to underrepresented students.

Pollak Library Assessment in Action Team
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Assessment Officer: Jenny Babcock, CSUF assessment office

References

Students Said...
I knew I could reference a specific librarian if needed, rather than calling the library or searching for someone to help me in person and then scold me for asking "dumb" questions.

I have not used the librarian, but it is nice to have that option.