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Engaging Learners Through Self-Guided Tutorials: Flipped Information Literacy Instruction at Bryn Mawr College

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Project Summary
From 2014-2016, Library & Information Technology Services (LITS) staff members received Mellon Curricular Development funding for “Flipping the Library Classroom at Bryn Mawr College.” The goal of the project has been to improve information literacy (IL) instruction for Bryn Mawr students by exploring a pedagogical technique that has elsewhere been shown to enhance IL learning through in-class librarian instruction sessions (Arnold-Garza, 2014; Holderied et al. 2011; Ross & Farno, 2011). We created interactive, self-guided online tutorials, using Articles@ArticleOne e-Learning Software, that teach basic IL skills. We made the tutorials publicly available online and also partnered with faculty members to explore a flipped model for IL instruction. An assessment study of our online tutorials and in-class instruction has shown the model to be effective at promoting student learning. As a result, the “flipped” IL instruction format, which began as a pilot project, is becoming regular practice for the Research & Instructional Services (R&IS) librarians at Bryn Mawr.

We have published the tutorials to faculty members via e-mail and advertised them to students as part of our preparation for upcoming in-class instruction sessions. Several faculty at Bryn Mawr, in addition to our assessment partners, have incorporated the tutorials into their classes (Table 1).

Usage data for the publicly available tutorials indicates that this academic year (Sep 2015-May 2016):
• 94% of users viewed the Flash versions of tutorials (6% viewed the HTML5 versions).
• 70% of users were directly referred to the tutorial (probably from a link emailed to them); the remaining 30% of referrals came from the Research Guide, one of the Tri-College library websites, Google, or Bryn Mawr LITS’ Ask a Librarian system.
• “Tutorials” is one of the top search terms (413) in our Research Guides system.

Developing the Tutorials
We created four tutorials: Introduction to Tripod, Requesting Books, Finding Articles, and Finding Empirical Research. Topics covered by the tutorials include how to search Tripod, the Tri-College Libraries catalog, how to obtain materials from EZ-Borrow and InterLibrary Loan, and how to develop effective searches in PsycINFO, PubMed, and Google Scholar.

After the initial tutorial development, we conducted brief User Experience (UX) that resulted in numerous small modifi cations, including: moving to a higher contrast color scheme, re-wording some checkpoint screens, splitting one longer tutorial into two shorter ones, creating HTML5 versions of the tutorials, and making other aesthetic changes. Our hope is that students will find it useful to be able to complete the tutorials at their own pace, on their own schedule, and as many times as needed to feel confident about the material.

Redesigning Instruction
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1024-2016 Assessment Study
We conducted an assessment study of our flipped tutorial model over two academic years, in partnership with three classes in the Department of Psychology and Graduate School of Social Work and Social Research (Castello & Pfundt 2016). The study had three components (Figure 7):
• Tutorials: Participants were asked to complete three parties to complete tutorials in advance of class and we gathered Moodle data on their tutorial activity. In-class session: Participants experienced an interactive, in-person instruction session led by a librarian where they got to practice their IL skills and ask questions.
• IL quizzes: Participants were asked to complete IL quizzes composed of questions based on the ARCL Information Literacy Competency Standards for Higher Education (Figure 8).

The data we collected revealed interesting, statistically significant patterns:
• In 2014-2015, students who completed all tutorials tended to score higher on an IL quiz than those who did not engage with any tutorials.
• In 2015-2016, students IL quiz scores improved, relative to their pre-tutorial baseline scores, after they experienced the tutorials and in-class instruction session.

Future Directions
The goal of the Flipping the Library Classroom project has been to explore a pedagogical technique with the potential to improve student learning and IL skills, particularly those taught through in-class, librarian-led instruction sessions. We have had a positive experience developing and deploying the new online tutorials, and two years of assessment data have indicated that our model of flipped IL instruction has a learning benefit for Bryn Mawr students. Our project has also pointed to new directions for our outreach and teaching:
• Exploring accessibility improvements in Articulate Storyline version 2.
• Adding screencast how-to videos, as well as third-party IL modules and how-to documentation to menus of IL resources where appropriate.
• Continuing periodic UX testing of our tutorials.
• Publicizing successful faculty tutorial usage and partnerships.
• Framing tutorials as an IL resource for courses, whether or not they involve librarian-led instruction.

Selected References