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Information literacy in competency-based education

Reflections on the Flex Option at the University of Wisconsin-Milwaukee

The Flex Option is a new, competency-based education program offered by the University of Wisconsin (UW) System. In the *C&RL News* article “Top trends in academic libraries,” Flex is described as a competency-based program that is “self-paced and based on assessment of mastery of skills, knowledge, and abilities regardless of where learning takes place.”¹

Prior to the November 2013 launch of Flex, librarians at the University of Wisconsin-Milwaukee (UWM) collaborated with Flex faculty to embed information literacy and distance services in three degree programs and an undergraduate certificate. As we reflect on our work in the first year of Flex, we realize that we were well situated to support this program. Ultimately we were able to borrow fundamental strategies from our embedded model for online programs, while considering the unique elements of the competency-based model.

Our experiences working with Flex faculty to build information literacy into the fabric of these four programs, map closely to the potential for deeper collaboration predicted by the ACRL Research and Planning Committee when they identified competency-based education as a top trend in academic libraries for 2014:

The process of articulating and defining program outcomes provides an opportunity for librarians to collaborate

across the institution to further define fundamental information literacy concepts and skills as well as to explore new models for how students will be assessed in their achievement of these competencies.

Information literacy defined in Flex

The UW System has a shared learning goal for information literacy that is embedded in general education courses throughout the system. Based on the American Association of Colleges & Universities’ (AAC&U) LEAP standards for information literacy, this shared goal played a key role in developing the competencies and assessments of student learning for Flex.

In Flex, course content is organized into competency sets, and students show mastery of essential knowledge by successfully completing assessments. The 15 week semester format is replaced by a three-month subscription period in which students learn key concepts and complete assessments at their own pace without scaffolded assignments to measure incremental progress. Yet, Flex follows the same standards for general education as face-to-face and online courses, and the assessments may require

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students to integrate information sources in their writing.

To meet the information literacy needs of online learners, our library established a model for embedded information literacy in online courses that relies on low-stakes assessments to measure student learning.

As online programs and instruction design coordinator for the UWM Libraries, the focus of my work over the past several years has been to establish and scale a model for delivering information literacy instruction to online learners. Partnering with our library instruction coordinator, we developed an embedded model in which we work one-on-one with faculty to identify specific information literacy needs in their courses.

In support of the information-based learning outcomes identified in this needs assessment, we deliver a LibGuide that includes links to essential resources and an instructional module that addresses specific information competencies in the course. Librarians recommend simple authentic assessment strategies that are integrated in the course. This model was initially developed to meet the needs of our composition courses and evaluated for evidence of student learning. As we embedded in additional courses and programs, we again evaluated the effectiveness of the model for evidence of student learning and ease of scale within our staffing model.

It is important to note that we were invited to participate in Flex during the competency design phase based on the success of our online model. Our successful collaborations with online program faculty who were redesigning their course content for the Flex format further recommended our embedded model as a quality marker in Flex.

In our efforts to understand what content delivery and student engagement would look like in Flex, it was necessary to learn a new educational vocabulary to describe the components of this new model. At the foundation are competency and assessment. *Competencies* are the skills, knowledge, at-

titudes, and behaviors students are expected to master. *Assessment* is a paper, exam, clinical observation, or other activity that allows students to show mastery of a competency.

The program operates in a mode that is self-paced/self-directed, meaning that students work at their own pace toward mastery. Faculty provide a recommended learning path and all essential reading is provided as a set of curated content. Work is completed throughout a subscription period, rather than a traditional semester. Students can begin work on the first day of any month and work at their own pace for up to three full months to show mastery. Finally, the academic success coach is a new academic role specific to Flex who serves as an academic guide and advisor.

Assessing student learning

The biggest difference between our online model and Flex would be the absence of low-stakes assessments to measure understanding of information concepts. However, in this competency-based model, students are assessed on their knowledge of concepts regardless of how they go about learning skills or assimilating knowledge. Faculty curate a set of texts, tutorials, and other learning resources that students can use to learn the content, but ultimately it is up to the student to engage with these resources in preparation for the assessment. Thus, the style of learning module we typically deliver to support online learning could also facilitate self-paced, student-driven learning in Flex.

Our early discussions with Flex faculty helped us to understand the model and therefore to recommend that faculty integrate an assessment method that would specifically measure information competency. Since faculty had already begun using AAC&U's value rubrics to assess written work, it was relatively straightforward for them to integrate AAC&U's information literacy rubrics into their assessments.

With the assessment model redefined, the focus of our needs assessment then

was to understand how faculty would be asking students to use sources in their assessments. The Flex programs at UWM include a Bachelor of Science in Nursing and a Bachelor of Science in Diagnostic Imaging, both of which are designed for students who already trained in vocational aspects of the degree. Students enrolled in the Bachelor of Science in Information Studies and Technology (BSIST) may already work in the information technology industry, and the certificate in Business and Technical Communications (BTC) is designed to develop strategic writing and communication among employees working in a variety of industries.

Students typically have some college credit but may need to complete general education competencies. These are also offered by the UW System in the Flex format, but they are hosted by the UW Colleges.

Focus on evidence in student learning outcomes

One need identified by all programs was a learning module that would address general information literacy needs. Flex students are typically in the workforce, therefore faculty anticipated that students would probably seek out their own sources or use known reference sources related to their current career specialty. In addition, students may not be familiar with the UWM Libraries or using scholarly and professional literature.

The UWM Libraries Information Literacy Tutorial² was embedded in each LibGuide to provide an introduction to research strategies, including how sources can be used in writing, narrowing, and extending a search and citing sources. It also addresses local practices and utilities, such as interlibrary loan services and the link resolver.

With lower order skills and library access supported by the tutorial, we then undertook the task of identifying learning tools for the specialized information skills measured in the four subject areas. While each program has its own methodology

and pedagogy, it is significant that all four programs assess students on their ability to use evidence from the literature to support their writing. A diagnostic imaging assessment measures information literacy as a specific competency by requiring students to find and evaluate health care articles. Another requires students to locate sources related to the healthcare concept of cultural competency.

To prepare students for these searches, we incorporated a video produced by the Physiotherapy Association of British Columbia titled “Understanding ‘Levels of Evidence’—How to Limit Your Medline and CINAHL Searches by Publication Type” in the Diagnostic Imaging LibGuide.³

This content was also incorporated in the Flex LibGuides for Nursing to meet the requirement that they integrate evidence from the Nursing literature into writing and case studies. The certificate in BTC requires students to use sources to support decisions and proposals in business communications, including public relations scenarios. To support this assessment, we developed a new video that addresses strategies for researching corporate and organizational crises.⁴

Finally, a BSIST competency requires integrating sources into a business plan, which is assessed with a rubric that measures the quality of the overall plan, including the use of supporting research sources. For this we chose to highlight appropriate databases for this task and then pointed to a video provided by IEEE Explore that illustrates basic searches in their interface. Our needs assessment helped us understand that information and information competency have a specific value in defining mastery of knowledge, skills, and abilities in the Flex Option.

The LibGuides we developed for each program linked to the essential subject databases, the information literacy tutorial, and the specialized learning objects that model relevant online search strategies for the discipline. In order to manage this added workload, we followed the same strategy

for scale we have used for designing online instruction.

We look first at reusing local learning objects, then incorporating learning objects created elsewhere that have been licensed for reuse (OERs), and finally developing new learning objects. New learning objects are designed for reuse in other courses and Creative Commons (CC)-licensed for use by other institutions. To develop content for Diagnostic Imaging and Nursing, we reused a screencast under an open license. A new screencast was developed to model a search for literature related to crisis management and public relations. This video was published with a CC license and has since been reused for other online instruction on the UWM campus.

With the basic and specialized needs of each degree program packaged in LibGuides and delivered to the faculty for inclusion in their course sites, we were able to accomplish our initial goals for embedding the library prior to the launch of the Flex option. Key factors in this endeavor included a system-wide shared learning goal for information literacy, a new use of our embedded information literacy model to facilitate self-paced learning, and a shared understanding of how information competency would be evaluated.

This last element is perhaps the most important in understanding the potential of competency-based learning as an opportunity for librarians and faculty to build a partnership around information literacy in the curriculum. A shared understanding of how student learning will be measured drives the way in which we think about supporting students in their skillful use of sources to show mastery of essential knowledge.

Especially in competency based education then, we have begun to articulate the value of information literacy for students. Building information literacy into the assessment rubrics for Flex shows the value of information in the curriculum and, therefore, the direct value of information to the student.

As we reflect on the one-year anniversary of the Flex option, we have new goals for further integrating information literacy into the fabric of the program and a continuing dialogue with faculty on the role information literacy is playing in student success. In order to continue moving forward with our embedded model, we have added an instructional design librarian to our team to work with our subject specialists as we develop additional online, self-paced learning tools.

New tutorials, such as our evidence-based practice tutorial are designed with self-directed learning in mind. They emphasize a path from basic understanding of the concepts and skills to a more specialized strategies and applications.

The working relationships we have established with Flex faculty allow us to further assess student needs and deliver targeted learning modules that support not only student learning, but also information competencies identified by faculty as essential to mastery of knowledge in the discipline.

Notes

1. ACRL Research Planning and Review Committee, "Top Trends in Academic Libraries: A Review of the Trends and Issues Affecting Academic Libraries in Higher Education," *College & Research Libraries News* 75, no. 6 (June 01, 2014): 294-302.
2. Kristin Woodward and Kate L. Ganski, "The Information Literacy Tutorial," UW System Board of Regents, <http://guides.library.uwm.edu/infolit> (accessed December, 2014).
3. Kristin Woodward, "Diagnostic Imaging Flex Degree LibGuide," UW System Board of Regents, <http://guides.library.uwm.edu/imaging> (accessed December, 2014).
4. Kristin Woodward, "Business and Technical Communications Public Relations Research," UW System Board of Regents, <http://guides.library.uwm.edu/btc/strategicwriting/pr> (accessed December 2014, 2014). *WU*