

Using a Web 2.0 information management tool as a portal to improve outreach, information literacy, and assessment at Qatar University library

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ABSTRACT

Qatar University Library has recently used the Web 2.0 compatible tool LibGuides, a type of information management software, as a portal to engage its users and connect them to books and e-resources. This paper summarizes the ways Qatar University Library and other libraries have used LibGuides to make newsletters, course pages, subject pages, and information literacy teaching guides. A literature review of the use of LibGuides in university libraries is included. The use of statistics generated by LibGuides and its compatibility with course management software are also presented. The uniqueness of Arab learners and bilingual challenges are mentioned. An overview of the information literacy program is given and a case study is presented that demonstrates how the library developed and delivered some "one shot" information literacy sessions using blended instruction with LibGuides. The assessment results of these instructional sessions are presented and discussed.

Keywords: Information literacy, Assessment, LibGuides, Web 2.0

INTRODUCTION

Qatar University is the national university of higher education in the country of Qatar, which is a small petroleum-rich country located on a peninsula boarded by the Arabian Gulf and Saudi Arabia. The university and the library were established in 1973.

In 2003, Qatar initiated an aggressive education reform from primary through higher education. The university has embarked on many ambitious efforts over the past decade including achieving international accreditation for the departments of Foundation English, Biomedical Sciences, Chemistry and Statistics and the Colleges of Engineering, Business and Economics, Pharmacy, and Education. Until recently the university language of instruction was bilingual in English and Arabic with a larger emphasis on assessment and instruction in English. In early 2012 the Supreme Education Council, which oversees education in Qatar, announced that Arabic language would be the medium of instruction for the Colleges of Law, Business and Economics, and Arts.

For the past several years, Qatar University has been working to increase its academic and research standards in order to meet international institutional standards for application with the Southern Association of Colleges and Schools, a higher education accrediting organization in the United States. In order to meet these standards, Qatar University Library enacted an ambitious strategic plan, which included outreach to its students and faculty.

In the 2010-11 school year there were over 9,000 students at Qatar University, with 23% male and 77% female. Many of the undergraduate classes are traditionally taught and separated by gender.

University students and faculty are familiar with the Internet and search engines and access to the Internet is prevalent in Qatar. The Qatar University Library provides wireless access throughout its new 45,000 square meter building. There are three teaching computer labs with room for 40 students each. There are also over 150 computers throughout the library building. Many students have access to the technology on their mobile phones as well. Therefore, it made sense to use Internet-based Web 2.0 technology as an outreach tool. The university web pages, including the library interfaces, are controlled by a separate Information Technology Unit of the university. This makes frequent updating of web content more complicated, but as the library adds new materials and as the Internet is a fluid resource, frequent changing of online information is necessary.

The reference and instructional librarians at Qatar University felt they needed a platform for posting information on their web pages that they could easily change and would be compatible with many of the Web 2.0 advancements, including RSS feeds and widgets. LibGuides, produced by Springshare, is a proprietary web-based software that meets the requirements. LibGuides is hosted by Springshare on the Internet and libraries connect to their server with a simple URL (Springshare, 2010) The pages provided are attractive, have a tab structure, can be organized in many ways, are controlled by the library and can be easily changed. Broken links can be searched and fixed easily with a search tool so maintenance of the guide is simplified. Statistics can be collected through the software on the number of hits that the pages receive and what links are being followed by users. This helps the library collect the number of hits on subject and course pages, which makes it easier to assess liaison services.

The Qatar University Library has used LibGuides for student outreach in many ways. Our student reference workers at service desks are able to use the LibGuides to answer queries. The library newsletter has been uploaded and distributed through LibGuides. Subject specific pages have been made on topics in the news such as Arab Spring. There is a LibGuide for librarian resources, one for reference resources, one for biography resources and one for our special Qatari Collection. There are now 35 LibGuides. Most are subject-oriented and coincide with our major university programs, some are course-specific. Some of the LibGuides are in Arabic, some in English and some with combined language resources.

LIBGUIDES IN THE LITERATURE

Articles about LibGuides in the library literature are starting to be more plentiful. Cordes and Clark (2009) talk about managing and evaluating courses with LibGuides. Although using online instructional assessment is discussed, it is not clear how it is incorporated into the software. Daly (2010) highlights the process of automating the embedding of subject LibGuides into learning or course management software like Blackboard. Hemmig and Montet (2010) also talk about their success embedding library tutorials using LibGuides in course management software.

Many librarians are starting to use LibGuides to make online tutorials for their information literacy courses. Gustavson, Whitehurst and Hisle (2011) discuss using LibGuides to make an information literacy tutorial called Library 101: Introduction to Research. Yelinek, et al, (2010) use LibGuides as a new platform for an already existent tutorial. Archambault (2011) develops an English 110 worksheet that is presented in five modules on LibGuides. The study compares the blended method of having the students do half of the worksheet before class and the other half during the instructional sessions with having the student do all modules as a totally online tutorial. Assessment is done looking at the tutorial answers and using a rubric. The results of the study are mixed, although the online tutorial results are better overall.

The experiences of making subject and course pages are highlighted in other articles. Gonzalez and Westbrook (2010) are seeking best practices and mention that course-specific guides are more popular and that student workers can use the guides at service desks to assist users. More research is planned for using the guides as a teaching tool. Miner and Alexander (2010) use LibGuides to present political science subject and specific course information. They have also used it to provide degree requirements as a supplement to course advisory materials. Adebonojo (2010) collaborates with faculty to make customized subject guides for courses. McMullin and Hutton(2010) also make subject guides using LibGuides with the added emphasis of using them for promotion by making guides for specific events. Arvin and Blevens (2011) mention revamping their LibGuides to include more descriptive content information. They highlight working with faculty to make course guides but emphasize the need for general guides for some areas. England and Fu (2011) have a technical services use for LibGuides by using them as a collaborative platform to rate electronic resources. Hall and Gomes (2011) connect library users to the library with mobile phones via LibGuides. The use of LibGuides at the Qatar University Library still seems to be unique. The library's experience combines many overall uses for the guides along with our specific bilingual challenges for information literacy presentation and assessment.

BACKGROUND

"One Shot" Information Literacy and the Direct-Instruction Model

One of the most useful ways the Qatar University librarians have utilized LibGuides is for information literacy outreach and assessment. Information literacy outreach is provided in several ways by the library. There are a series of lectures given in Arabic in coordination with our Core Curriculum Program. Azmi (2006) presents a summary of the background of this information literacy component. The targeted class, where information literacy is

embedded, is a research methods senior course in which students are required to use academic resources for their research proposals and portfolios.

Classes in the Core Curriculum have a large student enrollment of about 45 students per class. Two library sessions are presented to each class. During these sessions, the students are shown usage of Arabic language databases and academic resources that help them with their research proposals and portfolios. Classes meet in the computer labs to allow interactivity and hands-on work.

The reference and information literacy librarians felt it was necessary to reach out to students earlier in their educational career. Also, they felt there was a need to coordinate with a class where library research was a component. Since many of the university majors required English competency and many of the librarians involved spoke English, a broadly required course where English was the language of instruction was sought out.

According to Nardine and Meier (2010), librarians tend to get the opportunity to teach "the one shot" information literacy session instead of a semester-long class or a component with multiple sessions. Although only a limited amount of information literacy training can be given in one session, it can be a valuable first step in expanding or starting an information literacy program, especially if that is all the time that is allotted to the library by the instructor or department. The disadvantage is that critical thinking skills may not be taught in depth during the session.

In his article, "Making the Most of the One Shot You Got," Kevin Deemer (2007) extols the virtues of the Direct-Instructional Method. Deemer explains that the Direct-Instructional Method is a teacher-centered approach that uses teacher explanations and modeling, student practice and feedback to teach student concepts and skills. The basic structure is the anticipatory set that gains the attention of the student, input or explaining new concepts, checking understanding, giving practice, and reviewing the key points or providing closure. With a limited time given for instruction as in many information literacy sessions, the Direct-Instruction Model can be an effective style of teaching. This method is very useful in computer-mediated learning environments. (Magliaro et al. 2005)

Arab Learners and Instructional Delivery

There are three main delivery methods of presenting information literacy instruction: face-to-face, online, and blended, which combines the two. According to a systematic review done by Zhang, et al. (2007), face-to-face and computer-assisted instruction are equally effective in teaching information literacy. Kraemer, et al. (2007) finds that face-to-face and blended instruction groups perform better on post-tests. They feel that students might have preferred the blended instruction because of its appeal to various learning styles. Although there have been examples in the literature of LibGuides being used for information tutorials (Yelinek et al. 2010; Archambault 2010; Gustafson et al. 2011) it was felt that an online tutorial would not be the best way to present information to Qatar University students.

Face-to-face learning in lecture style classes, or "chalk and talk" is the most common form of learning experienced by Gulf Arab students. (Vrazalic et al. 2009) In general, education systems in the Arabian Gulf follow traditional teaching methods, with little active or independent learning, rote memorization and reliance on the teacher as the main source

of information. Richardson (2004) makes similar observations of Gulf Arab students and suggests that students' "resistance to making the change to taking more responsibility for their own learning stems from their previous experiences in local Arab primary and secondary school where passive learning and memorization of tracts is the expected way of learning" (Richardson, 2004, p. 432)

Two authors mention that "students in Arab countries are used to being 'on the receiving end of information' and they are usually told exactly what to read, exactly what to study...learning to become Information Literate is not a simple case of re-learning a craft or vocation or a tool...but rather a case of very slowly, but surely, changing basic learning and knowledge transfer habits and attitudes." (Fahmy and Rifaat, 2010, p. 114)

Martin (2006) discusses her experiences with developing an online information literacy program that combines blended learning methods for Zayed University in the United Arab Emirates. Student feedback to the online component reflected that "they did not like to read extensively, did not feel comfortable in finding their own way around the information resources, and did not exhibit effective independent learning skills." (Martin, 2006, p. 3) Recently, Martin, Birks and Hunt (2010) have had better results with their students at and their online tutorial, Infoasis. In their extremely helpful and well-planned approach, they make certain to put a lot of multimedia into the tutorial and pay careful attention to use simple straightforward English. However, one of their problems is the technological upkeep of the tutorial.

Most of the research into learning with Gulf Arab students has been from the UAE, although one study by Rehman and Al-Awadhi (2011) dealt with students in Kuwait. These students had to take a compulsory 3-hour information literacy course and were given pre and post-tests that showed improvement in library skills.

Language competence can be an issue as most Qatar University students use English as a second language. Jackson (2005) summarizes that a barrier to using academic libraries by non-native English speakers can be language. The information literacy sessions at Qatar University Library are presented in English because the English 203 course is taught and assessed entirely in English. However, upon request, library instruction for other courses is offered in English or Arabic, depending on the instructor's preference. While there is limited research available on the learning styles and learning preferences of Gulf Arab students, most of the research bears out that students prefer a direct instructional, face-to-face model where an instructor leads them to learning.

It is for these reasons that the librarians chose to introduce information literacy by blending face-to-face direct instruction with online reference support through LibGuides. In this way, the students would become more competent with online resources gradually with an oral explanation and a computer hands-on session using an online LibGuide to introduce them to the necessary resources for their paper.

METHODOLOGY - USING LIBGUIDES WITH BLENDED INSTRUCTION

David Ward (2006) presents the argument that information literacy must be "systematically integrated and sequenced throughout the curriculum." Also, according to

Breivik (2005), the most effective way to increase library use is with faculty assignments that require the use of library resources. During the spring semester 2010, the reference and instructional librarians contacted the course coordinator and lead teachers of the English 203 classes at Qatar University with the idea to insert a "one-shot" library instruction session taught by reference librarians.

The English 203 classes of first and second year students had competency in English and needed to write a research paper with references as part of the class requirements. This would provide the students with the just-in-time impetus to successfully learn to use library resources in English. In this way, English learners would have some experience using library resources before their more extensive core curriculum research methods course, which is usually taken in their junior year. Most Qatar University students are required to take this course as part of their undergraduate studies. There were approximately 35 sections of English 203 in spring 2010. Sessions were planned within a 2 to 3 week period preceding the start of their major research paper.

In order to prepare the objectives and learning materials for the course, the librarians drew on the basic outline of the existing "by-request" library session which covered an overview of the library's online catalog, basic borrowing services, and simple searching of online databases. The library had recently begun using LibGuides for its library subject guides and it was felt that this would be an effective and useful medium for teaching the library sessions. Using a blended instruction methodology, classes met face-to-face with a teaching librarian and a LibGuide was used as the teaching medium. The students were given a hands-on demonstration on how to find the course LibGuide and how to use the tabs to connect to the resource links.

Several instructors were needed to teach all sections in a short period of time. Four full-time reference and instructional staff members were used along with a part-time librarian for a total of 5 instructors. The session times varied from 50 to 90 minutes. The instructors incorporated learning outcomes from the Association of College and Research Libraries Information Competency Guidelines for Higher Education (ACRL, 2000). The session topics included searching for books in the library catalog, understanding Library of Congress call numbers, searching for journals by name or subject, understanding the difference between scholarly and popular periodicals, searching for articles using simple Boolean operators, and using a citation website. Properly citing references to avoid plagiarism was also discussed and links to resources on citation styles were included in a separate "Citation Help" tab. The main objectives were to have the students be able to find a book in the library catalog and an article in an academic database for their paper.

The LibGuide helped to standardize the English content for instruction. It was like having a fluid and well-organized powerpoint presentation online that could be updated easily. All the contact information for the information literacy teaching team was available on the guide including links to Ask a Librarian. The course LibGuide followed the template instituted for all guides so that becoming familiar with one would help in using others.

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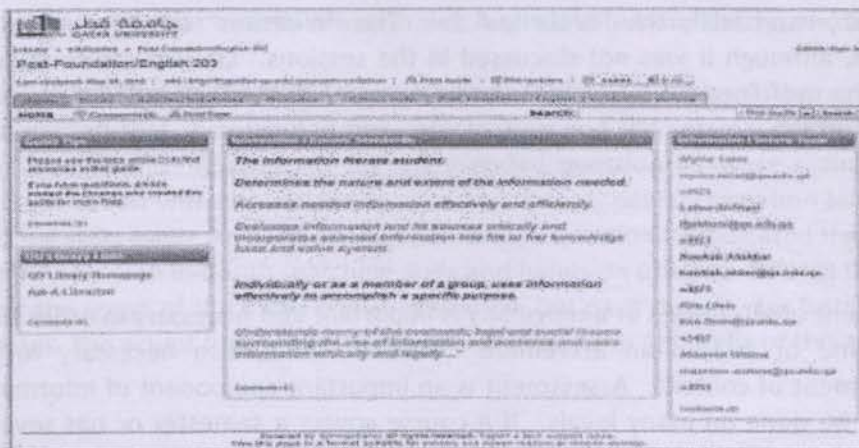


Figure 1: A Screen Shot of the English 203 LibGuide

Although the Qatar University Library had more than 80 databases, only two, Academic Search Complete and PQ Central from ProQuest, were put on the course “Articles/Databases” tab. The LibGuide also included information that the librarians did not have time to mention in the session but was available for general information. For example, the “Websites” tab gave criteria on how to evaluate websites, but there was not enough time in the class to cover this section. Two handouts were provided, an outline of the library session with web links for reference and instructions for Boolean searching in the two academic databases that were demonstrated.

After the spring 2011 sessions with the English 203 course, information literacy skills had been successfully integrated into the curriculum for two more semesters, fall 2011 and spring 2012. There were now four full-time MLS trained librarians and one full-time information literacy assistant teaching the sessions. Incorporating the principles of the Direct-Instruction Model, a hands-on exercise was added to the session to aid understanding and retention of information. The students were asked to find a paper book in the online catalog and list the call number; find an e-book and list the publisher; search either Academic Search Complete or PQ Central; and email an article on their topic to themselves. Although critical thinking skills may not be taught in depth during the session, they may be reinforced by the classroom teacher who was present for the session. Many teachers required a certain quality of reference be used to write the paper such as an e-book from the catalog or an article from a library database.

Because of the statistics that can be gathered with LibGuides the amount of hits on the course guide can be counted. Not only can guide hits be counted, but also the links that are selected. It has been shown in other cases that course specific guides receive more hits than general subject guides.(Arvin and Blevens, 2011) Also, a link to the course LibGuide can be embedded in its Blackboard page to make multiple access points for the students.

It had been the experience at Qatar University Library that whenever a session was taught using a LibGuide, the LibGuide hits increased. For example, the spring 2012 instructional sessions for English 203 were given during the first two weeks of April. In April, the guide hits for English 203 numbered 5377 and in May they numbered 2241 for a total of 7618. The LibGuide was being used by the students after the information literacy sessions were

over. The "Articles/Databases" tab had the most hits, then the "Books" tab, the "Citation Help" tab, and lastly the "Websites" tab. The "Websites" tab gave ways to evaluate websites, although it was not discussed in the sessions. LibGuide hits were one way to assess the usefulness of the guides but assessment of the instructional sessions was also very important.

RESULTS

Assessment of all courses at a university is important and necessary in order for the school to become or remain an accredited institution. It is also necessary for continuous improvement of content. Assessment is an important component of information literacy and can be done on many levels. If a course covers a semester or has several hours of teaching time, a pre-test and a post-test can be administered to measure the improvement of the students. There is also a cycle that can be followed called ILIAC which stands for the Information Literacy Instruction Assessment Cycle. (Oakleaf, 2009) The first step in the cycle is to review learning goals, the second step is to identify learning goals, the third step is to create learning activities, the fourth step is to enact learning activities, the fifth step is to gather data to check learning, the sixth step is to interpret data and the last step is to enact decisions. Then the cycle starts over again so that the instructor is constantly improving the teaching process.

Gustafson (2012) explains the differences between formative and summative assessment. Formative is an attitudinal measure of perceived effectiveness by the learner whereas summative is more in-depth and actually measures knowledge gained. It often takes more time to use summative assessment measures and they would be associated with a longer in-depth instructional period.

A simple way that Gustafson (2012) evaluated learning in the first year of her information literacy program was to use UCLA's 3-2-1 formative assessment. This assessment required the students to write down 3 things they learned, 2 things they did not understand and 1 thing they would do differently. This type of assessment is combined with authentic assessment that requires the student to meet a specific goal such as finding a book. The ILIAC cycle of introspection completes the assessment process.

The assessment portion of the English 203 library sessions was made up of a short survey using Survey Monkey. The survey was placed on one of the tabs of the course LibGuide and the students were given the last few minutes of the session to complete it. It was a simple formative assessment like the 3-2-1 but did not contain as much writing. This was to make the survey easier to complete by non-native English speakers. The survey asked six closed-answer questions with four level Likert scale responses and two open ended questions: 1) Tell us something you liked about the session and, 2) Tell us something you need more help with when using library resources.

As part of the ILIAC assessment cycle, the reference and instructional librarians looked at the surveys and comments from students and tried to improve the teaching sessions each semester. Analysis of the survey results from spring 2011, fall 2011, and spring 2012 had been significantly consistent in responses, with more than 95% of respondents reporting they strongly agree or agree that the session was well-organized, the presentation was clear and understandable, the instructor was well-prepared, the handouts or web guides

were clear and useful, that new information was learned about the library, and the session was useful for coursework.

The results of the survey appeared to validate the learning goals of the session with students reporting that they learned new information and the session would help them with their coursework. Answers to the open-ended question #1 were mainly positive indicating satisfaction with the instructor, session content, new information learned, and new searching skills used. Answers to the open-ended question #2 indicated that students needed more help with in-depth searching skills and hands-on practice. Both of these areas were out of the scope of the initial one-shot session, but pave the way for future sessions and directions. The actual survey questions are included in the Appendix of this article.

DISCUSSION

At Qatar University Library information literacy outreach using LibGuides has been successful according to the formative assessment measures used. Using LibGuides will continue to be used as a teaching platform. The reference and information literacy librarians are always looking for more classes with which to partner and offer more advanced research skills instruction. It is difficult to use more rigorous forms of assessment without more time with the students. Information literacy pre and post-testing and standardized testing takes more time than "one shot" sessions will allow.

The university has increased the number of majors that will be taught in Arabic, although engineering, the health sciences and sciences will continue to have English as the language of instruction. LibGuides works well with both languages. More course guides can be made as they may be embedded in Blackboard and, from the statistics, are the most popular with students and faculty. LibGuides in Arabic for the research methods of the Core Curriculum courses can be made to reinforce what is learned. The library intends to reorganize reference services by offering a chat service and a more advanced Ask a Librarian platform that can be connected to the guides and help patrons answer immediate questions about the library or research.

Using the example of Martin, Birks and Hunt (2010), perhaps an online tutorial could be used for part of the information literacy training but put on the easier to manage LibGuides portal.

CONCLUSIONS

Incorporating Web 2.0 information management tools is important for any modern university library. Qatar University has used the proprietary web-based software pages called LibGuides as a portal to connect library resources and web content with its faculty and student users. LibGuides has many uses including program and course support, teaching enhancement and assessment simplification. It is controlled by the library and can be changed and updated easily by librarians. It can be used as a teaching platform for information literacy at the class and individual level. It has become a platform for information literacy tutorials. It is an ongoing process to continue to use and measure the success of any web-based tool and this will continue to be done at Qatar University Library. At present, it is the preferred portal from which to add connectivity from the Internet to subject and course information for the students and faculty.

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APPENDIX
Qatar University Library
Post Foundation Information Literacy Survey
Spring 2012

Please give us your opinion of the library teaching session. Your comments will help us improve future sessions. This survey is anonymous and IP addresses are not tracked.

1. Date of Library Instruction: _____

2. The class session was well organized.

Strongly agree agree disagree strongly disagree

3. The presentation was clear and understandable.

Strongly agree agree disagree strongly disagree

4. The instructor was well prepared.

Strongly agree agree disagree strongly disagree

5. New information was learned about the library.

Strongly agree agree disagree strongly disagree

6. The handouts or web guides are useful.

Strongly agree agree disagree strongly disagree

7. The library resources will help me with my coursework.

Strongly agree agree disagree strongly disagree

8. Tell us something you liked about the session.

9. Tell us something you need more help with when using the library resources.