Abstract

Academic librarians at colleges and universities have provided information literacy (IL) instruction to students to help them improve their research skills for many years. In recent years, academic librarians have made the transition from face-to-face IL instruction to online IL instruction. At Delta State University, librarians changed the format of the IL instruction course “LIB 101: Fundamentals of Information Literacy” a few years ago from face-to-face to online. The purpose of this article is to discuss the author’s experiences of preparing for, teaching, and evaluating the online course LIB 101 at Delta State University. More specifically, the author will discuss planning for the course, creating and uploading course content, information literacy topics covered in the course, application of information literacy skills, and the evaluation of the course. The author concludes the article by stating that the author and LIB 101 students benefitted from the course.

Keywords: information literacy, online courses, course preparation, teaching, evaluation
Teaching Information Literacy Online: One Librarian’s Experience

At Delta State University (DSU) in Cleveland, Mississippi, librarians have taught students important information literacy (IL) skills through a credit-bearing course. The course at DSU is titled “LIB 101: Fundamentals of Information Literacy.” When DSU librarians began teaching this course to students, they taught it in the traditional face-to-face format with weekly classroom meetings. Students who successfully completed the course earned one credit hour. The author and other DSU librarians began teaching this course in the face-to-face format in the fall 2004 semester. The author experienced a large enrollment in the LIB 101 course in the spring 2005 semester. However, the enrollment in the LIB 101 course at DSU declined after the fall 2005 semester in the author’s and other librarians’ sections of the course. In response to the decline, librarians made two changes to the course. First, librarians transformed the LIB 101 course into an online-only course. Secondly, the librarians changed the number of credit hours offered to students for successfully completing the course from one hour to three hours. After the LIB 101 course became a 3-credit hour online course, the author decided to join other DSU librarians in teaching the course in the online format. The purpose of this article is to discuss the author’s experience in preparing for, teaching, and evaluating the online LIB 101 course at DSU.

Literature Review

Reasons for Online IL Instruction

In the library literature, authors have noted various reasons for the transition from in-person IL instruction to online IL instruction. Two reasons mentioned at some institutions is the lack of availability of librarians who are able to teach students in the face-to-face format and increases in student enrollment. At East Tennessee State University (ETSU), for example, librarians needed to move from the in-person format of IL to the online format because of an increase in student enrollment and a shortage of librarians available to teach IL to their students in the face-to-face format. ETSU is a university of over 15,000 students, and approximately one third of the students participate in online education. In order to help these students without putting too many teaching obligations on the librarians, the librarians created an online learning module to help their students acquire IL skills (Adebonojo, 2011).

Other reasons found in the library literature for the transition from in-person IL to online IL include many students’ preferences for online learning and the potential for online IL instruction to support all learning styles of students. Slebodnik and Riehle (2009) mention students’ preference for online learning in their article and state that college students “prefer interactive, technology-based learning experiences.” Mestre also discusses the topic of online learning, and relates it to various learning styles of students such as visual and aural. After discussing the results of a survey of academic librarians and the results of interviews with students, Mestre concludes that librarians need to create online IL tutorials that support all learning styles of students. IL tutorials could support multiple learning styles of students by including the following features: text, images, screen captures, videos, sound recordings, captions, and hands-on activities (Mestre, 2010).
Examples of Online IL Instruction

The library literature contains several examples of online IL instruction. Some librarians have offered online IL instruction via online tutorials, while other librarians have offered it via credit bearing courses. At the University of Wyoming Libraries, for example, librarians used the tutorial method. The librarians at this university called their online IL tutorial the Tutorial for Information Power (TIP). First year undergraduates and other students used TIP and improved their IL skills. The librarians created five tutorial modules, and the modules covered the following topics: finding a topic, performing a search for information, finding resources in the library, evaluating resources, and using the information they had found ethically and legally. To assess the effectiveness of TIP, University of Wyoming librarians gathered the following data: Scores on pre-tests and post-tests, and the amount of time the students spent on the tutorial. After analyzing data, librarians who utilized TIP found that students who had spent 40 or more minutes on the tutorial earned 6% higher scores on their post-tests than students who had spent less than 20 minutes on it (Tronstad, Phillips, Garcia, & Harlow, 2009).

Another example of using the tutorial method for online IL instruction occurred at James Cook University in Australia. At James Cook University, all first year social work students were required to use an IL tutorial. Librarians at this university created this tutorial and made it available to the students via Blackboard. The tutorial taught the students how to perform effective searches, how to use social work-related databases and Web search engines, how to evaluate information, and how to cite sources according to APA style. To evaluate the effectiveness of the tutorial, the librarians involved with the tutorial conducted a survey and analyzed information gathered from focus groups. The results of the survey revealed positive student feedback regarding the tutorial, such as 82% of the students stating that the tutorial “helped them understand the basic concepts/ information skills better.” The focus groups also produced positive student responses, such as students stating that the online tutorial allowed off campus access and allowed utilizing the tutorial at their own pace. In addition, the students improved the quality of their work because of the tutorial (Johnston, 2010).

At the University of Arizona, librarians provided online IL instruction via a credit-bearing course. Librarians at this university created an online IL course titled “The Online Research Lab” (ORL). The ORL was a credit-bearing course that librarians offered to first-year students in the English 102 course. The course covered eight IL topics. Some of the topics covered included developing a research strategy, selecting finding tools, using finding tool features, and evaluating sources. To evaluate the effectiveness of this course, librarians placed students into the following four groups:

- Control group – English 101 students who received no IL instruction
- Treatment 1 group – English 102 students who received IL instruction in-person from their English composition instructors
- Treatment 2 group – English 102 students who received IL instruction in-person from a librarian
- Treatment 3 group - Students enrolled in the ORL course
Students in all four of the groups took the pre-test and post-test, which evaluated levels of IL skills which were taught in the ORL course. After analyzing the data from the pre-tests and post-tests, librarians found that “only the students in Treatment Groups 2 and 3 made significant progress or achievement in their IL skills.” In addition, the data gathered from the tests indicated that students in the ORL course were more successful in improving their IL skills than the students who attended a session taught by a librarian in the library (Mery, Newby, & Peng, 2012).

Preparing to Teach the Course

Planning

During the spring 2012 semester, the author began preparing to teach the online IL course LIB 101. In the first step of the preparation process, the author decided on what topics he would teach and he created a schedule of topics. The author reviewed his own LIB 101 syllabus from a past semester and the LIB 101 syllabus from another librarian to help in deciding which topics to cover. In addition, the author consulted the five standards of the ACRL document “Information Literacy Competency Standards for Higher Education” in creating a new syllabus. After looking over syllabi and the ACRL standards, the author decided which topics he would cover in the LIB 101 course. Topics such as using effective search strategies and evaluating resources were some of the topics the author decided to cover. For a complete listing of course topics, refer to the “Teaching the Course” section of this article.

While choosing which topics to cover in the LIB 101 course, the author was also creating a schedule of topics for the course. The author divided the schedule of topics into units, and he placed the topics into the units. For example, he placed the topic “Library Resources and Services at DSU” into Unit 1. A few topics, such as “Using databases to find articles” would cover more than one unit. Once the schedule of topics was completed, the schedule listed 15 units of topics to be covered. Most of the topics, which the author chose for LIB 101, were the same topics that the course covered in past semesters. However, the author knew that he would need to make updates as needed.

The next step in the preparation process was deciding what course work to assign to students. In past semesters of teaching LIB 101 in the classroom, the author assigned 8 – 9 weekly assignments, two article summary assignments, a mid-term exam, and an annotated bibliography assignment. However, the author decided to make some changes to the course work. The author changed the name of the weekly assignments to “assignments,” since the LIB 101 students would not be meeting in a classroom each week as other LIB 101 students had in the past. In addition, the author eliminated the two article summary assignments and the mid-term exam. He eliminated the article summary assignments because he wanted LIB 101 students to have more time to focus on course topics. He eliminated the mid-term exam because it covered only the first half of a semester’s topics. As an alternative, the author added quizzes that would cover the topics of the entire semester. After eliminating the article summary assignments and the mid-term exam, the author decided that the students in the online LIB 101 course would be assigned eight assignments, four quizzes, and an annotated bibliography assignment.
Creating and Editing Course Information

After the author decided on course topics and course work, the author moved into the next phase of planning: creating and editing. The author edited some LIB 101 course documents and created other documents for the course. For example, the author edited the syllabus to include updates and created instructions for doing course work. In the syllabus, the author changed the information about the number of credit hours offered from one hour to three hours. In addition, the author edited all of the sections in the syllabus that mentioned course work, especially the sections that had discussed course work that the author no longer assigns. The section of the syllabus that the author edited the most was the “Schedule of Topics” section. After the author edited the syllabus, the schedule of topics listed all of the course topics in 15 units. The author also included all of the assignments, quizzes, and the annotated bibliography and their due dates in their units. In addition, the author edited and created the instructions for completing course work. More specifically, the author edited the instructions for doing the annotated bibliography and created the instructions for doing the assignments and quizzes. The author deleted the instructions for doing the article summary assignments and the information about the mid-term exam, since he had eliminated those requirements.

Once the author had the syllabus and course instructions created and up to date, it was time to begin creating and editing PowerPoint presentations for the course. In past semesters of teaching the LIB 101 course, the author gave in-person lectures to the students in the classroom. However, because DSU librarians had transformed the LIB 101 course into an online-only course, the author knew that he would not be giving in-person lectures to LIB 101 students in a classroom. Therefore, PowerPoint presentations would need to replace in-classroom lectures. In response to that need, the author created new PowerPoint presentations for course units that did not have enough or any presentations. In addition, the author updated the PowerPoint presentations that he had saved from past semesters of teaching the course. The author created 21 new PowerPoint presentations and edited eight PowerPoint presentations. Afterward, the author had 29 PowerPoint presentations for the LIB 101 course. The author created and edited presentations that pertained to the topics of the course, such as “using effective search strategies.”

After creating the PowerPoint presentations, the author created the eight assignments and four quizzes. To create the assignments, the author reviewed the weekly assignments from past semesters of teaching LIB 101. The author updated some of the questions from those weekly assignments and made them questions of the new assignments. However, most of the questions for the new assignments were new questions that the author created. The author created short-answer questions for the assignments that would require students to type in their answers. The short-answer questions the author created include questions based on the course units’ PowerPoint presentations and practice exercise questions, which required using resources, such as databases, to find the answers.

To create the four quizzes, the author reviewed the weekly assignments and the mid-term exam from past semesters. The author used questions from weekly assignments and the mid-term exam from past semesters to create some of the questions for the new quizzes. For the rest of the questions of the quizzes, the author created questions. The types of questions the author
created for the quizzes include true/false questions and multiple-choice questions. The author ensured that all of the questions of all four quizzes were relevant to the PowerPoint presentations of the course.

One other thing that the author did while creating and editing course information was edit the course’s evaluation test, which serves as a pre-test and a post-test. The author provides more information about this test in the “Evaluating the Course” section of this article.

Uploading Course Online

After the author created and edited all of the LIB 101 PowerPoint presentations, assignments, quizzes, and other course documents, he uploaded all of the course content onto Blackboard. Blackboard was the online educational platform used at DSU for teaching courses online. In Blackboard, the author created a home page for the LIB 101 course. To make the course syllabus, course work instructions, PowerPoint presentations, assignments, and quizzes easy to find, the author made all of these available on the LIB 101 home page in Blackboard. The LIB 101 students would be able to access everything by clicking on links on the home page. The author uploaded the syllabus, instructions, assignments, and quizzes onto Blackboard as Microsoft Word documents. The presentations serving as online lectures were the only resources that were PowerPoint presentations. The author blocked access to the LIB 101 course in Blackboard during the uploading phase since he wanted to finish the uploading process before students began working on course work.

Teaching the Course

The author granted access to the LIB 101 course to students in Blackboard approximately one week before the fall 2012 semester began. Once the author granted access, the LIB 101 students were able to access the syllabus and other course documents and resources. The PowerPoint presentations, which served as the online lectures, also became available. In these presentations, the author taught the students IL skills in the following topic areas:

- Library resources and services at DSU
- Classification systems of library resources
- Types of resources available
- Research and search strategies
- Using search tools for finding books and electronic books (i.e. the catalog and EBSCO Ebooks)
- Using databases to find articles (i.e. Academic Search Premier)
- Using the Web
- Evaluating sources
- Copyright and plagiarism
- Citing sources
Library Services and Resources

Unit 1 of the LIB 101 course is the unit titled “Library Resources and Services at DSU.” In this unit, the author gave students a virtual tour of the DSU library, informed them about the library Web site, and familiarized them with library services. The virtual tour oriented students with the library’s departments and resources. In addition, photos of all of the library’s departments were included to make the virtual tour more like an in-person tour. The library Web site PowerPoint was the presentation in which the author familiarized students with the DSU Library Web site by identifying certain Web pages and stating the purposes of those Web pages. In the PowerPoint presentation about library services, the author listed the services offered by the library (i.e. the inter-library loan service) and discussed when to utilize those services.

In Unit 2 of the course, the author taught the students how library classification systems organize library resources, particularly in the DSU Library. The author covered the following three classification systems: Library of Congress, Dewey Decimal, and the Superintendent of Documents. Particularly, the author provided information about each type of classification system, such as whether they are alphabetical or numerical. In addition, the author provided examples of call numbers in each classification system and informed students about classification systems in the library. For example, the author mentioned that the library uses the Library of Congress Classification System for the general book collection).

The author taught the students about various types of resources in Units 3, 4, and 14. In Unit 3, the author taught students how to distinguish between primary and secondary sources. In addition, the author taught the students about various formats of resources, such as journals and encyclopedias, and he taught them when to select each type of resource. The author taught the students about United States and Mississippi government documents in Unit 4. The author gave the titles of selected federal and Mississippi government documents and stated some purposes they could serve. In Unit 14, the author familiarized the students with various career and occupational resources and taught them the specific purposes of these resources.

Searching for Resources

In Unit 5, the author familiarized the students with the research process and taught them how to search for resources effectively by using various search strategies. In the PowerPoint presentation about the research process, the author identified the six steps of the research process and discussed each step. For example, step one of the research process is “choosing a topic.” In the PowerPoint about search strategies, the author taught students how to use the following search strategies: search options (i.e. keyword), Boolean Operators (And, Or, Not), search limiters (i.e. full text only), and using a thesaurus to find search terms. The author also mentioned that these search strategies are available in the catalog and databases.

In Unit 6, the author taught the students how to use the DSU library catalog to find books and other resources in the library. Other topics the author taught in Unit 6 include using the WorldCat database to find out what books and resources other libraries have and using the EBSCO Ebooks database to find electronic books. In the PowerPoint presentations about these resources, the author taught students how to use the search strategies available, such as search
options and search limiters. In addition, the author provided examples of searches in the presentations.

Units 7, 8, and 9 were the units in which the author taught students how to find articles in databases. In Unit 7, the author introduced the students to general databases and taught them how to use the Academic Search Premier, JSTOR, and Electronic Collections Online databases. When covering these databases, the author discussed the search strategies available in the databases, discussed unique features of the databases, and provided examples of searches.

In Units 8 and 9, the author taught the students how to use subject specific databases. Unit 8 began with an introduction to subject specific databases. Afterward, the author taught the students how to use the following subject specific databases: CINAHL (nursing), ERIC (education), PsycINFO (psychology), Literary Reference Center (literature), and Business Source Complete (business). Similar to previous database presentations, the author taught the students search strategies available in the subject-specific databases, discussed unique features of these databases, and provided examples of searches. In addition, the author taught students how to access databases whenever they are not on DSU’s campus.

Unit 10 of the LIB 101 course was the unit in which the author discussed using the Web for finding information. In this unit, the author taught students about the four types of Web sites available on the Web. In discussing the types of Web sites, the author identified the four primary types of Web sites available on the Web: commercial, educational, government, and organizational. The author also taught students how to use search engines and Web directories effectively and provided examples of each, mentioning the differences between search engines and Web directories.

Using Resources

In Unit 11, the author taught the students how to evaluate books, periodicals, and Web sites. About books, the author taught them how to examine various aspects of a book, such as purpose and relevance to one’s topic. When discussing periodicals, the author identified the different types of periodicals, such as popular magazines and scholarly journals. Afterward, the author taught the students how to evaluate a periodical by certain aspects, such as the length of the article, intended audience, and the presence or absence of a works cited list at the end of an article. Regarding Web sites, the author taught students how to evaluate Web sites by certain aspects, such as authorship, currency, and objectivity. In addition, the author mentioned that evaluation is very important when using Web sites, since many Web sites do not undergo editorial processes like books and periodicals do.

In Units 12 and 13, the author discussed the topics of copyright, plagiarism, and citing sources. The author taught students how to avoid plagiarism and provided information about copyright and fair use of resources in Unit 12. Also in Unit 12, the author taught students how to use Turnitin, which is an online resource utilized by faculty to prevent student plagiarism. In Unit 13, the author taught students how to cite sources according to MLA style and APA style. Particularly, the author taught the students how to create in-text citations and works cited lists in
both citation styles. In addition, the author provided examples of in-text and works cited list citations.

Regarding Unit 15, the author covered no topics in this unit. This was the unit focusing on the annotated bibliography assignment.

**Application of Information Literacy Skills**

The author created eight assignments and four quizzes that pertained to the same topics that the LIB 101 PowerPoint presentations covered. The author designed the assignments and quizzes to be relevant to the PowerPoint presentations so that the students would review the PowerPoint presentations before completing the assignments and quizzes. The annotated bibliography assignment was also useful in helping students apply some information literacy skills they were taught.

**Assignments**

In the eight assignments, the author asked the students two types of questions: questions based on the course units’ PowerPoint presentations and questions requiring the use of library resources to find the answers. An example of a question based on a PowerPoint presentation is the following research-related question from Assignment #3: “What are the six steps of the research process?” Examples of questions that require using resources to find answers include “In which journal was this article published?” (Assignment #4) and “List three of the subjects covered in this article” (Assignment #5). See Table 1 to view the eight assignments and their corresponding units and topics.

**Quizzes**

In the four quizzes, the author asked the students true/false questions and multiple-choice questions. An example of a true/false question from Quiz #1 is “The reference service, in which...
reference librarians provide answers to patrons’ questions, is available to all patrons.” An example of a multiple-choice question from a quiz is the following search strategies-related question from Quiz #2: “When using the catalog or a database, what search option would you need to use to find resources on a certain topic?” The author provided the following options at the end of this question: A. The subject search option; B. The keyword search option; C. The abstract search option; D. The title search option. See Table 2 to view the four quizzes and their corresponding units and topics.

Table 2

The LIB 101 Quizzes

<table>
<thead>
<tr>
<th>Quizzes</th>
<th>Topics Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiz #1</td>
<td>Library Resources and Services at Delta State; Organization of Library Resources (Units 1 and 2)</td>
</tr>
<tr>
<td>Quiz #2</td>
<td>Sources of Information; Government Documents; Research and Search Strategies (Units 3, 4, and 5)</td>
</tr>
<tr>
<td>Quiz #3</td>
<td>Finding Books and Other Resources; Finding Articles – General Databases; Finding Articles – Subject Specific Databases and Off Campus Access (Units 6, 7, 8, and 9)</td>
</tr>
<tr>
<td>Quiz #4</td>
<td>Finding Information on the Web; Evaluating Sources; Copyright, Avoiding Plagiarism and Turnitin; Methods of Citation APA and MLA; Career Resources (Units 10, 11, 12, 13, and 14)</td>
</tr>
</tbody>
</table>

Annotated Bibliography

For the annotated bibliography assignment, the author expected the students to use the knowledge and skills that they had gained from the course units to create an annotated bibliography. The author also required that the students’ bibliographies contain citations to at least one of each of the following types of resources: books, electronic books, scholarly journal articles, government documents, and Web sites or Web documents. In addition, the author required the students to create an annotation (summary) of three to five sentences for each citation. Regarding topics, the author allowed students to choose their own topics, but required that all resources cited in a particular annotated bibliography be on the same topic. To help ensure that the students cited sources properly, the author required the students to cite their sources according to the latest edition of a citation manual. The author informed the students that they could use the Publication Manual of the American Psychological Association (APA style) or the MLA Handbook for Writers of Research Papers (MLA style). Furthermore, the author required the students to identify which citation style they chose for their annotated bibliographies.

Evaluating the Course

To evaluate the effectiveness of the LIB 101 course, the author required the students to complete a pre-test at the beginning of the fall 2012 semester and a post-test at the end of the semester. The pre-test and post-test contained the same questions, so that the pre-test and post-test scores could be compared to each other. DSU librarians, including the author, had used
these tests in previous semesters of teaching LIB 101. Therefore, the author proofread the questions of the tests and updated some of the questions. During the process of proofreading and updating the tests, the author ensured that the tests contained at least one question for every topical unit of the LIB 101 course (Units 1-14). The test did not have a question for Unit 15 since that unit focused only on the annotated bibliography assignment of the course. The tests contained 26 questions. All of the questions except for the last three were multiple-choice questions. The last three questions were short-answer questions that required typing in the answers. All of the questions pertained to IL-related topics. Some of the questions of the tests included the following:

- What classification system does our library use for books in the reference and general collections?
- What is the difference between a keyword search and a subject search?
- What is the best resource for finding articles on abnormal psychology?
- What are some criteria for evaluating Web sites?

Of the 30 students who enrolled in the LIB 101 course for the fall 2012 semester, 27 of them took to pre-test at the beginning of the semester. At the end of the semester, 18 of those 27 students also took the post-test. After the fall 2012 semester ended, the author compared the pre-test scores and post-test scores of the students who completed and submitted both tests. Of the 18 LIB 101 students who completed and submitted both the pre-test and the post-test, 16 of them performed better on the post-test than on the pre-test. For example, one student who received a score of 14/26 (14 out of 26 correct) on the pre-test had received a score of 23/26 on the post-test. Regarding the other two students who took both the pre-test and post-test, one student received the same score on both tests and the other student performed better on the pre-test. The author was encouraged by the fact that a large majority of the students who took both tests (16 out of 18) performed better on the post-test. The data from the pre-tests and post-tests strongly suggest that the LIB 101 course helped improve the LIB 101 students’ IL skills.

The author had hoped to be able to use online evaluation forms from DSU students who had evaluated the LIB 101 course in the fall 2012 semester in addition to pre-test and post-test scores. Unfortunately, the response rate from students evaluating the LIB 101 course on the online evaluation form was very low. Only one student evaluated the LIB 101 course on the evaluation form. The author decided that this response rate was too low for meaningful evaluation.

**Conclusion**

Teaching the LIB 101 course online has differed from teaching it in the classroom. For example, the online version of the course required more preparation work than the in-classroom version required in past semesters. However, the online course was well worth the work, because the students benefitted from the course, as indicated by a large majority of students who performed better on the post-test than on the pre-test. The author also benefitted from the course. DSU librarians, including the author, will continue to teach the LIB 101 course online to DSU students in the future. The author hopes that many DSU students will take the LIB 101 course in the future so that they will gain important IL knowledge and skills because of taking the course.
References


