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Digital Immigrants, Digital Learning: Reaching Adults through Information Literacy Instruction Online

Abstract

As information literacy programs become more robust, finding methods of reaching students beyond the traditional undergraduate has become a priority for many institutions. At [institution name], efforts have been made to reach adult learners in an accelerated program targeted to nontraditional students, much of which is provided online. This article will detail how theories of adult learning have helped the authors to create a multimodal approach to information literacy instruction online for adult learners in both undergraduate and graduate programs.

Keywords: adult learners, information literacy, online learning, credit-bearing courses, nontraditional students

While information literacy instruction for traditional undergraduates has been much of the focus of libraries and institutions of higher education in the past, educators must realize that information literacy skills are valuable to all. Focusing on the information needs of specific groups can be a challenge, but tailoring instruction to the learning styles and goals of different groups generates successful acquisition of information literacy skills. At [institution name], where the authors of this article teach and work as librarians, a special school for adult learners has been created to help adults continue their education at both the undergraduate and graduate level. This is called the [program name]. Through work with this program, the librarians have been able to reach adult learners and tailor their information literacy instruction to meet student needs.

Adult learners have responsibilities and time constraints that many traditional undergraduates do not have. Adult learners may have dependents and other family responsibilities; they may work full-

time jobs; they may be in leadership roles in their churches or communities. In any case, traditional information literacy instruction that takes place within the library classroom in “normal work hours” will not be sufficient for meeting the needs of adult learners. Information literacy instruction needs to be flexible, and one method of doing this is to take information literacy instruction to an online environment. At [institution name], information literacy instruction for adults occurs both face-to-face and online and has evolved from a basic information literacy component in a continuing-education course to a full, three-credit course.

Understanding adult learners and their needs is a reoccurring theme in the literature on information literacy for adult learners. Andragogy should be understood by librarians and all those who work with information literacy skills in adult learners. Andragogy, as Forrest and Peterson describe it, is “dedicated to teaching humans who perform socially productive roles and have assumed primary responsibility for their own lives.”¹ Thus, librarians and other information literacy educators must be sensitive to the learning styles of adults and sensitive to the other roles in which adult learners participate, with “student” being only one facet of an adult learner’s life. Being flexible and trying to incorporate the other aspects of the adult learner’s life into the educational experience are two methods that can show an educator’s concern for and understanding of the student.

Literature Review

Much of the current understanding about adult learners is based on the work of educator Malcolm Knowles. Knowles explains in his work *The Modern Practice of Adult Education* several assumptions about adult learners: adult learners are motivated, have plenty of knowledge and life experience, have a desire to learn that which is relevant to them, and like to apply their learning to their

lives.² These assumptions help adult educators tailor their instruction to the needs and attitudes of adult learners; this framework can and should be applied to information literacy instruction.

Many articles about information literacy instruction for adults emphasize the need for active learning and experiential learning.³ As Cooke states, “Traditional learning, which consists of rote learning and memorizing information, is not compatible with the way adults learn.”⁴ Plenty of educators would argue that traditional learning does not work for many (or even most) learners, but this appears especially true with adult learners, who can use their experience to actively develop knowledge.⁵ An educator of adult learners should expect the students to utilize their own experiences and understanding to attain learning objectives, and the instructor should facilitate the learner’s ability to make these connections. For information literacy skills, this means that educators can expect adults to arrive with some experience and understanding of research skills, evaluating resources, and using resources, though these skills may require some un-learning and re-learning.

Other Programs

Using the theoretical framework of androgogy, some other libraries at institutes of higher education have found methods of providing library instruction for adults. At UCLA, the library provided an adult education course on information literacy that took place in a face-to-face environment on two Saturdays.⁶ This course focused on creating effective search strategies, as well as searching databases, online catalogs, and indexes, by having students complete activities after lectures and demonstrations.⁷ At McGill, library instruction for continuing education included face-to-face workshops with enrolled students, and also encouraged instructors to integrate information literacy into their curricula.⁸ At [institution name], information literacy has been integrated into the curriculum, but it has also evolved into a three-credit, required course for the adult students. It remains a one-credit course for the traditional undergraduates.

Background of the Library's work with [program name]

The library's partnership with [program name], which has about 300 undergraduate students and about 460 graduate students, occurred at both the graduate and undergraduate levels, and in both face-to-face and online settings. Working with the unique needs of adult learners shaped how and when the instruction occurred. Students in [program name]'s various programs are often at different levels of preparation, ranging from those who have been away from higher education for a number of years to those who are recent graduates. Whatever their learning needs, [program name] students need to be able to pace their own learning, work at different times of the day, and use learning methods that work best for them. All of these factors shaped how the library delivered instruction to [program name] students.

At the undergraduate level, one librarian worked with both the online and face-to-face sections of [program name]'s adult seminar. The seminar, designed to facilitate the adult learners' transition to college-level work, needed a library component. The librarian hypothesized that for some students, the ubiquitous access to online resources provided by the library would be a completely new environment. For other students, the familiarity with online sources such as Google and Wikipedia could serve as the foundation for discussing the library's online resources.

In the face-to-face sections of the adult seminar, the librarian began each session by working with resources most likely to be familiar to the students, such as Google and Wikipedia. Students were shown how Google and Wikipedia could be used to identify search terms and bibliographies of sources. The face-to-face sessions, delivered in a computer lab, allowed the students to work hands-on and to support each other. The peer support proved helpful for students who had little or no familiarity with online searching. Those students who had used Wikipedia and Google in the past were quick to assist their peers; this kept both experienced and novice computer users engaged in the class.

Next the librarian demonstrated how [institution name] University's connection to Google Scholar could allow students to use their existing or newly acquired skill set to connect directly to the library's resources. [institution name] uses openURL technology to connect Google Scholar to full-text articles. Students had the opportunity to practice searching with Google Scholar. Only after the students understood how Google Scholar connected to library databases did the librarian introduce the students to the more complex searches from library databases.

For the distance learners, the librarian used a different strategy. To approximate the peer-support that worked so well for the face-to-face sections, the librarian used a discussion board within the Blackboard learning system. Throughout the semester, the librarian posted information to the discussion board about how to use the library, including how to search resources through Google Scholar. Through the discussion board, the students could respond to the librarian's postings, ask the librarian questions, and respond to each other's postings as well.

Beyond the value of peer support for learning, adult learners have other needs as well. The adult learners in the face-to-face sections needed to meet on Saturdays. Most of the students had full-time jobs and could only take classes on Saturdays. The librarian set aside one Saturday each semester to meet with the classes. In addition, the library extended its Saturday hours to accommodate the needs of the face-to-face students.

In the early stages of [institution's] efforts to promote Information Literacy across the curriculum, the instructors in the Adult Transition Seminar collaborated with a librarian to develop a graded library assignment. The instructors drafted tasks which they felt would be important to the success of students, and the librarian helped connect the tasks to the information literacy standards developed by Middle States, the accrediting body for [institution name]. Both the online and face-to-face sessions included the graded assignment requiring students to use the library's resources.

Periodically, the librarian continued to work with the course instructors to review the library assignment. Maintaining the relationship between the adult seminar instructors and the librarian paved the way for expanding information literacy efforts within [program name].

The graduate programs within [program name] also integrated information literacy skills within their own objectives. The graduate students were similar to the students in the undergraduate programs in that they required support for both face-to-face and online programs. Also similar to the undergraduate program, the graduate online students were distributed throughout the world, making it difficult to arrange synchronous instruction sessions.

All students in the [program name] graduate programs are required to take an introduction to graduate studies course. To reach all of the students, a special Blackboard site was co-developed by the lead faculty member of [program name]. All of the first-semester graduate students were enrolled in the course. The library's liaison to [program name] co-developed the library section of the Blackboard site and created a series of webinars. The webinar series consisted of five sessions, including an introduction to the library's services, an overview of the library's subscription databases, an introduction to the process of graduate research, a session on citation resources, and a session covering using citation generation software.

When trying to decide the best times and methods for delivering the webinar series, the librarian and lead faculty member surveyed the faculty and students enrolled in the special Blackboard site to ascertain the best times for delivering the instruction. Because of the nature of the programs, the responses were quite varied. To try to accommodate as many requests as possible, the librarian decided to deliver synchronous webinars at various times. For example, one webinar was held at 9:00 PM EST on a Wednesday night, while another was held at 12:00 PM EST on a Saturday afternoon. In the first semester, the webinars were held in the library's classroom so that students could attend the webinars

live or online. All of the webinars were archived so that students who were not able to attend the live sessions could view the webinars at their convenience.

Providing different times for the webinars gave students flexibility; however, students sometimes reported being confused as to when the webinars would occur. Also, students from the face-to-face programs were attending the webinars from their homes instead of traveling to campus. After the first two semesters, the webinars were no longer held in the library classroom because frequently no one would travel to attend the live sessions.

The webinars are currently offered at a predictable time during the semester. The number of students who attend the webinars synchronously continues to decline, but students have reported watching the webinars at a time most convenient to them. Students who do attend the webinars synchronously often stay after the recorded portion of the webinar has ended to ask questions specific to their own current projects.

To accommodate the various needs of the graduate students, the webinars can be watched through Blackboard or downloaded as a movie file for off-line viewing. The audio-only portion of the webinar can also be downloaded as an MP3 file so that students can listen on their own personal audio device. The PowerPoint sliced from the webinars and other support materials are always available to students through the Blackboard site.

In these various ways, the library has addressed the needs of the adult learners to learn in their way, at their pace, and at times convenient to them.

Creation of the Information Literacy for Adult Learners Course

The Director of the Information Services Division contacted the Associated Dean of [program name] in 2011 to discuss the creation of an information literacy class with the new hire of the Instruction

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Librarian. The Instruction Librarian was then given the task of creating a three-credit course to be provided both face-to-face and online, [course designation]: Information Literacy for Adult Learners. Trying to anticipate the needs of adult learners while creating the class required feedback from other instructors from the program, so the Instruction Librarian met with the instructors of the Adult Transition Seminar, the required study skills course in the [program name] program, to coordinate the two courses and to learn more about the needs of adult learners. The Adult Transition Seminar instructors confirmed many of the assumptions about adult learners from Malcolm Knowles, emphasizing in particular the need of adult learners to understand the applicability of what they are taught to their own lives. The Instruction Librarian and the Adult Transition Seminar instructors discussed what would be covered in each course to avoid repetition in course content, and the course was piloted in spring of 2012.

The online version of the course was created on the LMS Blackboard, with course content divided into weekly lessons. Using Camtasia Studio, the Instruction Librarian created several short tutorials for these lessons. Links to outside readings and tutorials to be viewed, along with weekly readings in the textbook, were also included in the course. Each week students completed small assignments and posted to the discussion board. In addition, students completed two major assignments and two quizzes. The course content ranged from rhetorical analysis to critical thinking to the future of information so that learning would move beyond the basic research course, though research skills were covered. Since the course is not discipline specific, it emphasized research strategies rather than proficiency with a specific resource or resources. The Wimba classroom allowed for some synchronous interaction so the students and instructor could discuss issues with the course and talk about more difficult concepts. As an online course with much of the instruction occurring asynchronously, students were not required to enter a library.

Teaching an online course differs greatly from teaching face to face. The organization of the course site is very important, along with making student objectives, due dates, assignment directions, and grading criteria clear. For those librarians wishing to create an online course, finding institutional support through other distance learning programs can greatly benefit the quality of the course design. If the institution has standards or checklists for online courses, these can be very helpful in creating an organized and coherent course experience for the learners. The [program name] provided the Instruction Librarian with many helpful resources, including an experienced e-coach who reviewed the syllabus and assignments.

Tailoring assignments to the learning needs of adult learners was a primary goal in assignment creation for both the online and face-to-face versions of [course designation]. Weekly assignments asked students to apply what they learned in real-world situations and gave general guidelines that allowed some flexibility so that the students would see the relevancy of the skills learned, could apply their previous knowledge, and could also take control of some of their learning. For example, in the week in which evaluating information was introduced, students were asked to evaluate the websites of two products or services that they were considering purchasing and determine which did a better job in presenting the information. They were also asked to compare two news stories about the same event and evaluate them based on accuracy, coverage, and authority. Students then described which news story they would share with friends or family and why to consider how their evaluation might influence what they shared.

Two major assignments were created for the course – an annotated bibliography and an information need analysis and search. The first assignment asked students to find six sources that they would use for an academic research paper, and asked them to try to connect this with an assignment in another class. Unfortunately, students in [program name] are not always enrolled in the same courses

or even any other course, so some students had to find some other academic topic. In any case, this allowed them to practice research skills in an academic setting, while the information need analysis and search allowed students to apply the information literacy skills they learned in the class for the benefit of someone else. This assignment asked them to describe their search strategy to find information on a particular topic (an information need of an employee, child, parent, friend, etc.) and to describe the search tools they used, describe the information they found, and critique their own search process and explain how they would improve their search if they had more time. This assignment allowed students to see how the information they learned in the course could be applied beyond the classroom and academia.

Discussion board questions were open and relevant to both coursework and real-world applications. Adult learners who participated in these discussion boards were able to engage with other students and also to share knowledge. Since adult learners have real-world experience related to information literacy, such experience can help to show others the importance of learning objectives and course content and how this relates to their careers, family, finances, and more. Students were given example postings of responses to discussion board questions, from excellent to poor, and a grading rubric. Students were required to post to each question and at least two responses, but with engaging questions, most students posted beyond this requirement. Questions asked students to research urban legends or questionable medical advice of their choice, to discuss online privacy issues, and to describe unpleasant problems with technology and how these problems were overcome.

The two quizzes in the course contained a mix of closed and open-ended questions. The closed-ended questions were kept to a minimum so that open-ended questions could emphasize application of the learning outcomes. Having an application-based test also prevented the potency of cheating during the online quiz. Even if students looked up information in their textbooks or online, they then had to

apply this information to various real-world situations in the quiz. Students in both the online and face-to-face sections took the quizzes through the testing function of Blackboard.

Differences between the Online and Face-to-Face Course

Initially, the face-to-face course used the same assignments as the online course, but the face-to-face course included an additional presentation of the students' annotated bibliography research topics via a PowerPoint presentation. In the face-to-face class, students had time to complete several of the activities during class sessions, so they could ask the instructor for guidance as they worked through the assignments; online students did not have this advantage and had to ask the instructor for advice via e-mail or chat. The face-to-face course was held in a computer classroom so students could follow along with demonstrations of search strategies and practice these skills in class. While the face-to-face version of the course did not have a required discussion board element, students engaged in discussions during class time. However, the face-to-face version did use Blackboard so that course materials, assignments, and relevant links could be easily accessible.

Later versions of the face-to-face course began to deliver instruction incorporating additional Blackboard elements moving toward a blended course structure. Students began using the Blackboard discussion board and often extended the face-to-face classroom discussions into the work week. Students who were not active participants in the face-to-face classroom often became strong contributors in the online environment. Instructors observed that some adult learners may require more time to reflect and respond than the face-to-face class time allowed, and the Blackboard discussion permitted the more reflective students to contribute to the learning environment.

Assessment

One weakness of the original Information Literacy assignment developed collaboratively with the instructors from the School of Leadership was assessment. While the instructors reported that students had scored well on the assignment, no follow-up was conducted to see if the assignment had any relationship to students demonstrating competency with Information Literacy skills later in their academic careers.

After viewing the webinar series, students and faculty completed a survey. The students and faculty self-reported whether they believed the webinars had been worthwhile. The survey also asked whether there had been challenges associated with the logistical aspects of the webinars. While the response to the webinars revealed that students and faculty valued the webinars, the logistical challenges of attending a live webinar had a negative effect on attendance.

The course solves some of the assessment issues by using quizzes and assignments, so it is clear to each instructor if the learning outcomes are being met. In addition to the formative assessment that instructors conduct throughout the course and the summative assessment of the projects and assignments, the instruction librarian and other instructors of the course are collecting annotated bibliographies (with student permission and IRB approval) of both the online and face-to-face versions. These will be evaluated using a rubric based on the rubrics found on the Rubric Assessment of Information Literacy Skills website and will allow a programmatic view to determine if students are successfully meeting the learning objectives of the course. Future goals include assessing skills after the entire academic program.

Course Challenges

The material covered in the course for an eight-week period can be overwhelming and difficult for students to juggle with their other obligations of work and family. However, devoting an entire course to information literacy skills for adult learners provides a more desirable way to delve into the

topic, rather than a session or two where they are overwhelmed with information, and this allowed students to build upon the skills learned through the Adult Transition Seminar. The online course format seems to work well for adult learners. With all the responsibilities the adult students have, they can make the course schedule work for them. However, some students still struggle to meet weekly deadlines and to post consistently on the discussion board. This means an online instructor must have a clear policy for late assignments and for extensions.

Finding relevant, engaging, current, and appropriate course materials proved to be one of the biggest challenges of creating the course. The initial textbook chosen, *Information Literacy and Technology*, 4th edition, by Carla J. List-Handley (2008), is dated, but has in-depth chapters on search strategies, evaluating, and other relevant topics, along with some assignments that could be used in class. The Instruction Librarian chose it because it is not as condescending to an adult learner as some of the other information literacy textbooks. However, the textbook had to be supplemented with other readings and tutorials because of its dated nature. Many instructors of the course have since moved to current articles and have asked permission to link to tutorials from other libraries as a way to supplement the online lectures in the course.

Lessons Learned

Most students in the online version of [course designation] did not express anxiety over the use of technology and seemed very comfortable with technology, but this may be because these students chose the online format. Knowing that students have this comfort enabled discussions about more sophisticated information technology, like e-readers, semantic search engines, and augmented reality, along with focusing more on privacy and security issues with information technology. For those students who did have issues with the technology, providing extra assistance over the telephone or in

person solved those problems. Students did seem unsure of how to perform academic research with library resources, so this will continue to be a major component of the course.

For the most part, reaction to the course was positive. Other [program name] instructors stated that students mentioned the applicability of skills gained in [course designation] to their other courses, and several students expressed the desire to have taken the course sooner. Others stated that they were pleased that the course was required for all [program name] students. This contrasts with some of the statements made by the traditional undergraduates who take the required, one-credit information literacy course. Since adult learners are motivated and can see the application of the content, they may be more likely to appreciate information literacy instruction. The fact that [course designation] is three credits rather than one may also influence the perception of the importance of the class. In any case, the experience with information literacy instruction at [institution name] shows there is a need for targeted information literacy instruction for adult learners and that this instruction will be appreciated if presented correctly.

For those wanting to provide information literacy instruction to adult learners, they must have an understanding of the needs of adult learners and know the basic ideas behind andragogy. When implementing a course or other instruction methods, they should include flexibility in instruction formats and in expectations of students, a reliance on active learning to generate student involvement in their education, and content that applies to real-world situations. By implementing these strategies, instructors will create satisfied students who understand the value of information literacy in their daily lives.

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