



Distance Teaching: Comparing Two Online Information Literacy Courses

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This article explores the similarities and differences between two asynchronous online information literacy courses. Details of the courses and how the ACRL information literacy standards are incorporated will be outlined. In exploring distance learning and distance teaching, the article will discuss issues related to online information literacy learning experiences and suggest ways to address those issues and improve teaching and learning.

INTRODUCTION

As more and more universities add distance offerings to their curricula, librarians are providing a wide array of services in new ways. With this substantial growth of distance education and the increased use of online course management software for on-campus courses, many librarians have become involved in designing and teaching information literacy online. This article will describe my experiences in teaching two different online information literacy courses. In one case, I am an adjunct for another university, while the other course is taught through my home institution.

Although one of these courses is taught at my primary place of employment, the course was designed before I began working there, meaning that I function as a typical adjunct in both positions: I am teaching someone else's course, one where I had no input into the design. Although input and suggestions for change are welcome at both institutions and my comments have led to changes in both courses, there remains a marked difference between teaching a course or lesson of one's own design and teaching someone else's design, regardless of the delivery mechanism.

Both courses are similar in their enrollment patterns, with a predominance of returning adult students who elect distance courses because it allows them to continue with their work, community and family responsibilities. Despite the similarities in demographics, though, my position in relation to these courses, and the goals and the objectives of the two courses, the content and methodology are quite different. This article will compare and contrast the two courses, and based on the ACRL standards, course design theory and practice, and the characteristics of adult and online learners, will

explore issues that arise and suggest ways to design their courses that address these issues.

DISTANCE TEACHING AND LEARNING

Distance learning has shown substantial growth in the past decade. The National Center for Education Statistics (NCES) found that during 1994-1995, 33% of colleges and universities were offering distance courses, with another 25% planning to begin within 3 years.¹ During another study in 2000-2001, NCES learned that 56% were offering distance courses and 12% were planning to begin.² Additionally, according to these two reports, the number of institutions responding that there were no plans to offer distance learning opportunities decreased from 42% to 31%. Further comparison of the two reports also shows extensive growth in number of students and number of courses offered. According to the data, 753,640 students were enrolled in distance courses in 1994-95, while enrollment jumped to 3,077,000 for the 2000-01 academic year. Other interesting points arise, including the fact that the earlier study examined access to library resources, while the later report did not check this. The later report introduced statistics on how institutions accommodate students with disabilities, an issue absent in the first report.

As Christopher R. Wolfe reminds us, teaching online *is* teaching, and quick, easy access to information is not a replacement for education.³ Teaching online requires instructors to have different skills than needed in teaching face-to-face. Planning and developing asynchronous courses must be done completely before the course begins. Transforming assignments, texts, and other course materials into an online environment can be difficult, and learning to communicate

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effectively in a different medium can also be challenging for instructors.⁴

Similarly, online learning environments require students to have a variety of skills beyond those needed for being a successful student in traditional classrooms. Without the live interaction in a classroom, distance learners must be able to process written materials and texts at least as efficiently as they process lecture and discussion. Further, they must be able to make “connections between new and existing knowledge” on their own.⁵ Studies of the psychology of learning online and issues related to communication in the online environment abound.⁶ Most of these explore the issues that arise due to the concrete difference in the space where learning happens. The difference between physical and virtual spaces leads to profound changes in social interaction, from the simple process of holding a conversation to larger issues of depersonalization and identity.⁷

As many studies of distance education show, online learners are generally older than typical undergraduates, meaning that theories of andragogy must play an important role in designing courses, and these studies also show that the gender gap widens in distance education.⁸ For example, the ratio of female distance students and male distance students at Washington State University is 10:4.⁹ Adult learners have different needs, such as a desire for self-direction, a preference for individual choice in learning environment, clear connections between the course material and real life situations, relevant class activities, and the need for clear sequencing and reinforcement.¹⁰ Many of these can be easily met, or perhaps even better met, through distance learning, but these issues must be addressed.

Key studies of teaching information literacy online have focused largely on the needs of the students and a perceived tension between information literacy and online learning.¹¹ Leslie J. Reynolds discusses the importance of addressing learning styles and designing courses to foster interaction, noting that “regardless of the learning environment,” students must be “vested in ‘coming’ to class,” even if attendance is within a virtual space.¹² Kate Manuel also describes the impact of online learning on students. Manuel’s students, who were taking the online information literacy course in addition to on-campus courses, were all

new to distance learning, which led to numerous difficulties for the students.¹³ Elevating the threaded discussions to the level of a lively, in-class discussion also proved difficult, which affected those students who learn best in a collaborative environment and need direct interaction.¹⁴ All of these issues affect any online course and are certainly important to the two courses which will be compared here.

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LIBS 150

The University of Maryland University College (UMUC) requires a one-credit information literacy course of all its students, and new students must take the course within their first 15 credit hours of coursework.¹⁵ UMUC is one of the eleven divisions of the University System of Maryland and as such is fully accredited by the Middle States Association of Colleges and Schools. UMUC has more than 80,000 students worldwide; approximately 15,000 of those are Maryland residents. In addition to extensive online offerings, courses are taught at twenty locations in Maryland and the Washington, D.C. area and at campuses in Germany and Japan. UMUC offers BA and BS degrees in 22 majors, with 17 of those available entirely online. What makes UMUC unique is that it has been specifically delivering educational opportunities to the military since 1949, and over 47,000 members of the current student body are also active-duty members of the military. Most of the others are returning or non-traditional students with full-time work and family responsibilities. While the median age for undergraduates across the university system is 21, for UMUC undergraduates, the median age is 33.¹⁶

The course, LIBS 150: Information Literacy and Research Methods, is a seven week course taught entirely online using a course management software package developed by UMUC. The course is designed to teach students about different types of information, how to search and

retrieve materials, and how to evaluate information resources. To meet the online environment and the needs of adult students, the course includes largely self-directed readings and exercises regarding logical fallacies, evaluation of websites, and practice in using information sources. In addition to the weekly activities, the students take a final exam and complete a research log.

All LIBS 150 sections use the same set of modules. Instructors can add exercises, but none of the programmed items may be omitted. Including supplemental material, such as discussion questions, is also optional, mainly due to the size of enrollment. Each section enrolls 100 students, which makes interaction difficult on many levels. However, including discussion questions that cover issues such as plagiarism, filtering, ethical use of information and other topics adds an important element to the course. The weekly activities in the modules consist of practical exercises related to the research log project, such as formulating a thesis statement, completing worksheets on Boolean operators and answering questions about types of reference books, as well as activities which require recording information about their experiences with searching in various information tools, such as the library catalog, article databases, NetLibrary, and search engines.

GEN ED 300

Washington State University is a land-grant research institution with a strong general education program and a writing portfolio graduation requirement. Established in 1890 as a state college, the university’s main campus is in Pullman, located in a rural area in the southeastern part of state. There are also three “urban” (branch) campuses in Spokane, Richland and Vancouver. In addition, the university supports a network of learning centers around the state and cooperative extension offices in every county. In 2002-2003, the Pullman campus enrolled approximately 16,000 students, with over 6000 more studying at the urban campuses and through the Distance Degree Program (DDP). While some departments have recently begun offering their own courses online, DDP was originally formed as a separate college and served all distance learners. DDP continues to provide learning opportunities via video, correspondence and online courses for many people in the region, offering

seven different bachelor's degrees, two master's degrees and two professional certificate programs.¹⁷ DDP currently enrolls around 2000 students, and the average age of a DDP student is 36, as compared to 25 years of age for the Pullman campus.¹⁸

Gen Ed 300, Accessing Information for Research, is taught online and on the campuses by library faculty. On-campus sections at Pullman focus on particular disciplines and are designed and taught by various librarians. While there is a core set of goals and librarians readily share activities and teaching ideas, no uniform course design is mandated. The online version of Gen Ed 300 has a standard curriculum that focuses more generally on the research process, allowing students in the particular disciplines to learn basic skills and concepts which can be applied to specific resources and tools. Although not required, DDP students are strongly encouraged to take the course and enrollments have remained steady. Section enrollment rarely exceeds twenty students.

The online Gen Ed 300 course is divided into four activities with various threaded discussions within the activities. These activities take students through the research process, from defining an information need, to planning the steps the research will take, to actually performing the research, and evaluating and citing the materials located. The final activity has students write about information literacy, its definitions and their learning experiences throughout the course.

TEACHING TO THE INFORMATION LITERACY STANDARDS

The curriculum of both courses is based on the Association of College and Research Libraries (ACRL) information literacy standards,¹⁹ although Gen Ed 300 is more closely tied to the standards. For example, the first standard deals with the determination of the "nature and extent" of the information that is needed and offers four specific performance indicators.²⁰ Assignments in Gen Ed 300 directly address each of those four performance indicators, asking students to answer questions about all aspects of the standard. LIBS 150, on the other hand, has focused on several outcomes within the first performance indicator, which is to define and articulate the information need. Similarly, Gen Ed 300 assignments address all five performance indicators within the second stand-

ard, while LIBS 150 focuses on the third performance indicator, with active learning related to the search and retrieval process.

The third standard deals with evaluating information sources. Since neither of the two courses requires students to actually write a research paper, some of the performance indicators do not apply. Both courses do cover evaluation techniques and require students to write evaluative statements about the sources they choose to collect for their projects. The fourth standard relates to how effectively the student uses the selected information sources. While Gen Ed 300 has students report on their process and plans for future research, LIBS 150 uses a research log format for students to record information about their searches, the tools used, and the sources chosen.

Both courses address the fifth standard in terms of plagiarism and citation. Other aspects of this standard, such as Netiquette, using passwords and following institutional policies, are obviously met by students who successfully participate in the course, although those issues may not be explicitly taught. As noted earlier, LIBS 150 instructors may add additional components to the course space and several instructors, this one included, do add threaded discussions to address issues of filtering, ethical use, copyright, and other concepts. Addressing issues in standard five can be tricky, given that many of them deal with ethical or moral concerns. Although there are some differences in the approach and extent of coverage, both courses are clearly grounded in the information literacy standards.

COURSE DESIGN ISSUES

Just as both courses approach the standards in different ways, the course designs also differ in key aspects. The similarities between the two are mostly due to their shared delivery method. Both courses are organized into modules, which feature readings and activities. Both courses rely on text-based material and do not include multimedia elements. The fact that this type of design does not reach all learning styles is something these courses share with many distance courses across all disciplines. The key differences between the two courses are found in student-student and student-instructor interaction, the design and grading of the learning activities, and the final course projects.

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The class size and the assignment design both have a profound impact on interaction. As noted earlier, LIBS 150 enrolls 100 people per section. Experts in distance learning normally recommend a much smaller number, but as Donald Hanna points out, if student interaction is not crucial, the class size can be as large as needed.²¹ Before developing LIBS 150, librarians at UMUC created another online information literacy course for graduate business students. In that case, the course was designed to be self-paced with self-graded quizzes and activities, since at least 1000 students would need to take the course within a year; faculty interaction was minimal and student interaction was not a component of the design.²² Given the enrollment in LIBS 150, there is no requirement for students to comment or react to each other's work, and the instructors who do include threaded discussions in order to address more information literacy concepts do not require students to review their peers' postings. Gen Ed 300 is limited to 20 people per instructor, which falls into the typically recommended range for asynchronous online instruction. In Gen Ed 300, all activities are done as threaded discussion and a substantial portion of the students' final grade is based on their interaction with each other. Students are required to read and comment on other students' postings in a constructive way.

The design of the learning activities shows two significantly different approaches to teaching information literacy. In Gen Ed 300, the threaded discussion format allows all information to be available to all students and enhances communication and feedback, but the format can be problematic for students. Some students have difficulty reconciling the need to describe their search process with the more formal writing style they feel is necessary for a discussion posting. It is sometimes difficult for them to describe or replicate their search process and results into a traditional narrative format. On the other hand, LIBS 150 relies on assignments that are set up as worksheets that students fill out online and submit to the instructor. The exercises

and answers are converted into email format, and the instructor and student both receive copies. While it is much easier to record search terms, results and other data related to the search process, these worksheets often do not provide space for students to make explanatory notes, and none of the students are able to see or comment on one another's work.

Each course has two major final projects. In LIBS 150, the students complete a research log and take a multiple choice, unproctored final exam, while in Gen Ed 300, the students produce an annotated bibliography and write an essay about information literacy. While both sets of activities are similar in intent, the implementation of the goals is quite different. In LIBS 150, the size of enrollment again drives the design of the curriculum. Five times per year, 1500-2000 students would need a seat for a proctored exam, which would be logistically impossible. The exam is delivered online and students are able to review the course materials, assignments, and notes in completing the multiple choice items. The exam questions address theoretical issues, such as identifying steps in the research process and choosing among sample thesis statements, as well as more practical matters, such as identifying correct citations and correctly identifying what an advanced keyword search string will locate. The research log project is intended to be an ongoing project, and several of the sections directly match weekly learning activities. The students choose one of three general canned topics, develop a thesis statement to focus that topic and work with that topic through the research process. Students select a search engine, an article database, and a library catalog and build proper search statements for each tool. They select one website, one article and one book, record details about those items, answer evaluative questions, and write citations and annotations for the items.

Gen Ed 300 measures the students' overall grasp of information literacy with a final essay, rather than an exam. Students are asked to define information literacy, giving specific examples of what they learned and drawing upon their own experiences to further demonstrate their understanding. The annotated bibliography project is also one that can be worked on throughout the course, as they learn about different types of information tools and resources throughout the modules. In Gen Ed 300, the students choose their own topic, usually matching a research

paper assignment they have for a different course. In rare cases, students may have no research paper assignments in that semester. In those cases, they can choose any topic, but it must be approved by the librarian teaching the course to ensure that they will be able to perform all the research functions required throughout the class. Throughout earlier modules, the students gather ten sources of various types that relate to their research paper. In the final project, they cite and annotate those ten items.

While the size of the LIBS 150 class would make choosing individual topics a time-consuming process for the instructor, using canned topics can decrease the students' engagement with the process. Adult learners, who need those concrete connections to real life situations, may particularly find the exercise less useful. The annotated bibliography project cannot capture the same level of detail about the search process as the research log can, but Gen Ed 300 students produce a bibliography that is related to their interests and is directly useful for their other courses.

LEARNER-RELATED ISSUES

Even the best course design can be undermined if proper attention is not given to learner-related issues. In teaching LIBS 150 and GenEd 300, a good deal of energy is expended dealing with matters related to student motivation and characteristics of adult learners, as well as computer literacy, literacy, and disabilities and health issues.

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One issue that regularly recurs in LIBS 150 involves students who think that online courses are self-paced like postal mail-based correspondence courses or online training modules they may have seen in relation to their employment. Many students have rushed ahead, doing all the activities in one sitting. Unless the instructor happens to be checking email at the same time, the student can make a mistake or have a major misunderstanding in an early assignment, causing the need to redo some or all of the subsequent work. This can also conflict with grading

policies, if students are not typically allowed to submit work more than once. On the other hand, those who rush ahead but do well are then frustrated because the final exam cannot be distributed to them ahead of schedule.

One LIBS 150 instructor reported a situation where he gave feedback to a student who was rushing ahead and making many errors, mentioning that if the student would follow the course schedule, then the student would be able to benefit from the lessons he would be teaching each week. The student responded with great surprise, asking the instructor how he would be teaching if the class wasn't together, face-to-face.²³ For that student, teaching and learning was a group experience, together in a classroom, seeing and hearing the instructor deliver the material live. Understandably, this instructor viewed the explanatory notes and extra course-related materials he was creating for each week's module as teaching, regardless of whether he was delivering the material in person or online. Such anecdotes can be useful for distance educators who are considering what the students' attitudes may say about the efficacy of online learning or even the perceived value of an online degree.

Adult learners, although often very busy, are also often very serious, over-achieving students. In Gen Ed 300, there have been students who are comfortable with the software, but read the instructions too literally and get off track, or are so worried about covering every aspect described in the grading rubrics that they lose sight of whether what they are writing even makes sense. A good deal of time can be spent clarifying points and justifying grades given, but it is important to understand and be sensitive to the adult and/or distance learners' motivations and needs.

Given that many distance students are returning adults with varying degrees of computer skills, the course management software often is a huge hurdle. Their lack of computer literacy or ease with technology causes difficulty in acclimating to the course. They can be so hampered by the software that they may be unable to follow simple written directions for finding the syllabus, discussions, activities, and other key areas of the class site. As we know, online course management software does present a learning curve, some brands steeper than others. In the first weeks of class, a number of students will call or email asking for help. Reading them the same set of steps that is posted in the class

site elicits joyous thanks. For email queries, literally cutting and pasting the contents of the introductory class announcement from the class site also brings notes of thanks which proclaim that they now understand. Why was the information so mysterious when presented in the class site? Perhaps it is merely the issue of comfort level: email is familiar, but the course software is not, meaning that the change in medium makes the message clear. In addition, learning styles may contribute to the explanation. Those who have trouble reading and comprehending written information and need to hear instructions will not fare well wading through the text of an online course.

Along with a wide range of computer literacy skills, there are also issues with literacy in general. Written communication skills are not always at what might be considered a collegiate level. Returning students are often insecure about their writing skills, and some may lack or need to refresh their abilities in reading comprehension. With virtually all course material delivered as text and all interaction between students and faculty occurring within email or threaded discussions, written communication skills are crucial.

Online learning is popular with many adults since they are able to keep their jobs and other community ties and have no need to travel, commute, or move their household in order to attend university courses. The online learning environment also appeals to those who have physical or mental health issues that make it hard to commute or attend classes held in a face to face environment. This provides a great opportunity for many but also may contribute to a lack of academic success. While some students do identify themselves to their school's student support services and have documented disabilities, there can be a tendency for faculty to go beyond the stated accommodations due to the added problems the student is having with lack of computer skills. One may even be faced with a decision about allowing accommodations for undocumented or unofficial situations once the students share their personal situations. Consider denying a request for an extension knowing the student is scheduled for chemotherapy. Imagine not accepting a late assignment from a student upon learning that she had no access to her computer because she had gone to seek refuge at a women's shelter. Although these examples may seem dramatic, I have personally dealt with them and many

other similar issues since I began teaching online courses in 2001.

Documented disabilities have also brought up numerous issues that attest to the need for reconsidering course design elements. Students with visual impairments have particular difficulties with online course management software, unless their computers are outfitted with a wide array of software and peripheral equipment. Coordinating services among various offices on campus can be daunting, but managing at a distance can be quite difficult. While all of these issues related to the learners are important in face-to-face teaching, the online environment can exacerbate some of them. Teaching online requires a different level of attention to these types of issues.

CONCLUSION

Opportunities for distance learning and teaching continue to grow, and librarians will continue to be at the forefront of supporting and participating in these online programs. Various approaches to teaching information literacy online have been developed, and we should build on those models while addressing the changes and improvements in technology and the growing understanding of student needs in online learning. Many educators are familiar with Chickering and Gamson's principles for good practice in undergraduate education.²⁴ A later piece by Chickering and Ehrmann connects those principles to technology.²⁵ Although written in 1986, before web-based courses exploded, Chickering and Ehrmann's work is relevant and would serve ably as a guide for online course designers and instructors. Chickering and Ehrmann stress the importance of solid communication between students and instructors and cooperation between students. The technologies used in online courses can enhance both of these crucial types of communication. Keeping in mind Chickering and Ehrmann's exhortations that educational experiences stress active learning and provide prompt feedback would have only a positive impact on any online learning environment.

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In reflecting upon my experiences in teaching these two particular courses, I believe that a combination of design elements from both could lead to a very successful course. Both courses can serve as models for effective integration of the information literacy standards, the critical backbone of any course. Both also provide useful frameworks for designing active learning opportunities that introduce students to or enhance their skills in searching, selecting and using information resources. Some activities are better suited for the threaded discussion format than others, though, and combining the discussion format with worksheets for mechanics-based exercises may help students focus and be better able to finish assignments more clearly and completely. Chickering and Ehrmann support the idea of using time wisely, of being sensitive to the time requirements for various learning activities. Regularly scheduled activities are crucial for reinforcing key concepts and tools, but the format should enhance the learning objectives and foster collaborative learning and peer feedback when most appropriate.

As a culminating project, the research log format has many advantages in its holistic approach toward the research process, and there is particular value in its ability to require students to focus on all the steps of the process. However, an annotated bibliography may be a more realistic assignment and may provide a stronger, more transferable learning experience. Students are likely to be writing papers or creating presentations for other courses, and may in fact even be asked to create an annotated bibliography. Some students may miss the connections between the research log and a works cited page, particularly when the research log is being done with an assigned topic. The learning outcomes of the research log are vital, but I believe students would gain even more from the experience by choosing a topic that is related to another course or their major.

Most important, we need to take advantage of available technologies to improve course design and better serve students with diverse learning styles and students with disabilities. Institutions with well-developed distance learning programs should take the lead in creating or transforming course software that will easily allow for audio and video delivery of materials and that will improve communication channels. Online courses have increased prospects and opportunities for many learners and have also provided

exciting new opportunities for instruction. It is in our interest, if not our responsibility, to insure that the online learning opportunities we create are grounded in solid principles, address the information literacy standards, and provide students and instructors with opportunities to learn and grow.

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