

Teaching Smart: Developing Reusable Instructional Modules on the Web

By

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Abstract

With the advent of the Internet both teaching and learning are taking on new shapes and boundaries. As a consequence, the librarian's responsibilities for teaching, and the impact of that teaching on learning, are both under critical evaluation.

Requests to librarians for information literacy training has reached the proportions of an educational epidemic. A tipping point was reached when librarians alone were unable to meet these demands. Old ways of instruction are now giving way to newer and more efficient methods of teaching, reaching an ever-larger number of students. Additionally, the increasing ratio of students to librarians in large public research universities is an important factor stimulating the development of reusable instructional modules for information training that require minimal revision.

This paper discusses a web based library instructional module that was specifically configured to be reused for multiple sections of the same course. The module was designed to be embedded seamlessly and explicitly into the course work of a lower level undergraduate communication studies course at a large public research university in the United States. Textual analyses of students' responses to an online questionnaire that was embedded as part of the tutorial contain some surprising revelations regarding what students most value in information literacy instruction and what they consider to be least useful.

I. Introduction: Information Literacy as Educational Epidemic

Grassian and Kaplowitz suggest that the movement toward modern day library instruction was sparked by Patricia Knapp's research in the early 1960s at the Monteith College Library. Even today librarians often cite Knapp's comment that "students tend to be uncritical in their choices of sources of information ...they tend to be content with something on the subject regardless of its validity". (1)

Since Knapp's experiment in the library of a small Mid-western college, library instruction programs have gone through different phases culminating today in all encompassing information literacy programs. Following the promulgation of the 1994 Middle States Commission on Higher Education in the United States, when information literacy first became a requirement, information literacy instruction has reached the proportions of an educational epidemic reaching what Malcolm Bradbury calls the tipping point. (2) During the past three decades, the role of librarians as classroom teachers has steadily expanded, boosting the teaching responsibilities of librarians to new heights. Unfortunately, the down side of this upward trend has been a lack of resources to keep pace with demand. Recent studies, in fact, suggest that librarians often cannot fulfill the requests that come from many sources to develop online tutorials and conduct in-class instruction. (3) Have librarians thus become the victims of their own success?

However, despite what appears to be a phenomenal accomplishment in instructional and information literacy programs, other studies have found that librarians are poor advertisers in promoting their services and marketing the critical role they play in the learning process. More importantly, some argue that librarians have failed to measure the

results of student learning that are presumed to flow from information literacy instruction. These studies seriously question the effectiveness of information literacy programs in higher education. For example, Massey-Burzio laments in her recent lead article in *College & Research Library News*, "... It is interesting that we've been trying to market "information literacy" programs and classes since the 1970s without any success. No one has ever proved that library instruction classes have value for students or that students who have taken the classes learn any more than students who haven't. [as a consequence] we have eliminated our traditional information literacy instruction program at Johns Hopkins...."(4) Another study that explored the interaction between academic librarians and faculty found that only one third of the faculty responded that teaching/instruction by librarians is "somewhat important"; more to the point they noted that it is one of the least valued services that librarians offer. (5)

These studies are a clear indication that librarian's responsibilities for teaching are under critical evaluation, for learning is taking on new shapes and boundaries with the advent of the Internet. Old procedures are no longer appropriate yet new methods are not fully tested or even known. These changes and uncertainties affect the relationship between librarians, students and teaching faculty, regarding what aspects of information literacy should be taught at different levels, how they should be taught and who should be involved in teaching. While new technologies provide novel tools for teaching and learning, Gurak also insists that technologies, old and new, are not value neutral. As a consequence, they should never be employed without full consideration of their social and psychological impact. (6)

Among the different approaches utilized by librarians in the past for teaching information literacy, studies have shown that course integrated library instruction is especially effective. In recent years, therefore, academic librarians have sought to integrate library instruction more fully into course work. Not surprisingly, web based instructional modules have been in popular demand due to their flexibility and their 24/7 accessibility. However, library instructional programs must be a balanced part of the curriculum of academic units and integral to the content of specific courses in order to maximize their impact on student learning. While many have stressed that 24/7 web-based library tutorials are best used in connection with academic classes rather than in isolation, the connection should clearly include some sort of active and collaborative learning. (7)

II. The Case Study

This paper is a case study of course integrated library and information literacy instruction using a web-based tutorial. The study addresses how to teach students in the same course but in different sections without the librarian needing to repeat the same instruction multiple times. The project illustrates the importance of a partnership between the course instructor, the Chair of the academic unit and the librarian in order to seamlessly integrate web-based instructional modules into the content of normal class instruction.

High enrollment classes are on the rise in large public universities that offer multiple sections of the same course. These courses are popular because lower class undergraduates are experimenting with different disciplines before deciding on a major.

At Rutgers, Communication 201 fulfils such a mission. Every semester the course enrolls over 300 students in seven or nine sections taught by a core of instructors who each teach one or two sections.

In recent years, the author (who serves as Communication Studies Librarian at Rutgers, the State University of New Jersey), has received repeat invitations by different instructors to guest lecture in different sections of the Communication 201 course (Interpersonal Communication and Process). In the summer and spring semester, 2002, the author contacted the Chair of the Communication Department and expressed an interest in developing a web-based tutorial for all sections of the Communication 201 course. The Chair supplied the librarian with the textbook used in the course and the syllabi developed by the different course instructors. Based on the information that was gathered from these sources, a draft text of the tutorial was written and subsequently reviewed by the Chair and course instructors; this was later developed into a web-based tutorial with the aid of several colleagues fluent in the relevant technology. In the fall semester, 2002, a draft web-based tutorial that focused specifically on interpersonal communication topics was completed. Three sections of Comm 201 students, all taught by course instructors, then tried out the draft tutorial.

III. Methodology

The U.S. Middle States Commission on Higher Education suggests that information literacy can be taught using different curriculum models. This project adopted what is known as the integrated or distributed curriculum model where various disciplines and co-curricular activities address a core set of information literacy skills. One big advantage

of the distributed approach is that it places information literacy in the context of the discipline, thereby deepening information literacy within a student's chosen field. (8)

Following this model the content of the tutorial focused on the immediate assignment given to students in the Communication 201 course. The purpose of the assignment was to familiarize students with core communication literature. One of the course assignments, therefore, was for students to locate three to five communication specific or allied scholarly journal articles on a topic that dealt with an aspect of interpersonal communication processes. Students selected specific topics to investigate in accordance with their interests. The tutorial consists of seven sections that appear on the sidebar as an outline. Section I is on how to find scholarly journal articles; Section II deals with the process of writing a research paper; Section III is a link to the Communication, Journalism and Media Studies Subject Research Guide available at the Rutgers homepage; Section IV provides a link to a site that gives instructions on how to access library databases from off campus; Section V is a link to the library's homepage, *About Rutgers Libraries*; Section VI is a video clip about academic integrity; and Section VII is an online questionnaire entitled, *What do you think about this guide?*

Each class started off with Section I with instructions on how to find scholarly journal articles in the field of communication studies (or its allied fields) in the following sequence:

1. Definition of scholarly journals

Different hyperlinks are provided to the sites that detail the differences between general interest/professional journals versus scholarly or academic journals.

2. Article level determination.

This section illustrates how scholarly journal articles on the topics that students chose can be identified via different databases, specifically, by focusing on communication specific databases (such as ComAbstracts and Communication Abstracts) and allied disciplinary databases such as Sociofile and PsycInfo.

2. Basic searching and advanced Boolean Searching

The concept of developing search terms (or key words), use of basic Boolean operators and search statements are explained with examples utilizing graphics.

3. Interpretation of bibliographic citations

Illustrates how to interpret the elements of bibliographic citations for journal articles and book chapters.

4. Journal level verification

Verification of journal holdings, the electronic accessibility of journals (if not linked from the database) or the availability of books via the Rutgers online catalog, are explained.

5. Physical location of journal articles

This final step explains how the journal articles (and books) can be physically located either in electronic or print format.

6. Searching exercise

Students were then required to conduct an exercise in class covering five predetermined author or subject search questions designed by the librarian. Author searches are normally for Rutgers communication faculty authors whose names are likely to be recognized by the students. It is at this point that students were informed

why the entire class cannot search the same database at the same time, explaining the nature of proprietary databases (and costs) that help students understand the legal and economic issues surrounding information.

Seven classes were held in the library's Information Handling Labs that house fifty (50) individual workstations as well as four large hanging screens. A "Tech Commander" was installed in these labs that allows instructors to take control of any individual student's workstation, or of all fifty workstations, to demonstrate navigational processes as appropriate. The web page for the tutorial is a mix of text, hyperlinks, and graphics. The portion of the web page used to capture student input is implemented via a standard html form. A ColdFusion script takes the student's responses, formats them as email, and automatically sends the email to the specified recipients, that is to myself and my colleague Ronald Jantz who helped develop this portion of the site.

Five course instructors (two instructors taught two sections) scheduled the library session in their syllabi and classes were held in the Information Handling Labs. Two instructors taught their own classes (one of these instructors taught two sections) and the librarian taught four sections. Course instructors taught two sections without the librarian present in class; the librarian attended one of the sections where the course instructor had primary responsibility for teaching using the library instruction module; the author taught four sections with the course instructor attending all classes; indeed, it could be said that the classes were team-taught because of the active involvement of the course instructors in lecturing, and assisting students during the in-class search period.

IV. Findings

Seven sections of the Communication 201 were taught in the spring semester 2003 using the online tutorial entitled [Library Navigator for Communication Research](#). The embedded online questionnaire, constructed as part of the tutorial, was designed to give students an opportunity to comment on the clarity and effectiveness of the tutorial, thus providing the librarian (and course instructors) with an opportunity for revisions and improvements.

A total of 202 students attended the library sessions. Of these 134 students, or 66% (two thirds), responded to the online questionnaire entitled, “*What do you think about this guide*” located on the side bar of the menu. The questionnaire was designed to collect students’ first impressions. It consisted of the most useful /least useful aspects of the guide, the sources most frequently consulted when doing research, any technological problems that were encountered in using the guide, comments on how to improve future guides and about the libraries in general, and an overall rating. Students’ comments were then sent to the author’s email address and their comments were collected and analyzed. Despite the fact that 99% of the students rated the overall quality of the guide as either extremely useful or useful, their comments ranged widely from simple commentary on the Web design factors (e.g. make it more colorful and interactive, increase font size, etc.) to more sophisticated suggestions regarding content.

The analysis of students’ responses identified the most and least useful aspects of the guide. While twenty-two percent of the students responded that everything was helpful, the highest percentage (31%) specifically indicated that learning about databases that they were previously unaware of was the most useful. Twenty four percent of

students mentioned that learning how to use databases properly, executing advanced, Boolean searching to obtain specific results, and developing proper search terms and/or keywords was most useful. Seventeen percent of the students found that a step by step navigational process was the most helpful; their comments covered such items as directions, the ease of use of the side bar menu as an outline, direct links from examples, the big screens, etc. These responses confirm the findings from an earlier study by Nash and Wilson regarding the importance of students' ability to understand both the macro and micro elements of information resources. (9) Surprisingly, only a small number of students (3%) mentioned the convenience or usefulness of the 24/7 accessibility and availability of the tutorial on the Web.

In the second question regarding the least useful features of the tutorial, forty-one percent of the students left the section blank (interpreted as no comment) or noted, "nothing to improve." Twenty five percent stated that the tutorial lacked clarity (for example, too many links, lack of examples, texts using different fonts, etc). Twelve percent also commented that they wanted more in-class search time with their own chosen topic. They felt reassured in their search exercises by the presence of the course instructor and the librarian who provided them not only with the techniques for searching but with broader discussions on chosen topics. This finding confirmed the bottom-up rather than top down teaching and learning trends noted by Wilson and Wilson. (10) A small number of students (3%) responded that the tutorial was either too slow or too fast. A surprising finding was the students' attitude toward academic integrity. Fourteen percent of the students thought this section was the least useful and one student pointed out that undergraduates are tired of "plagiarism tirades."

In the section which asked about the most frequently consulted sources for research, thirty-eight percent of the students responded that they search both library and Internet resources. Many further stated that the Internet is their first choice. This finding undercuts the general concern of librarians that undergraduates indiscriminately rely solely on Internet sources for their research. Professors (21%) and friends and family (18%) are consulted much less frequently than the Internet, library online catalogs and other databases, with reference librarians (13%) trailing a distant third.

Nearly eighty percent did not experience technological problems except in cases where certain databases were over subscribed for a number of simultaneous users. This experience reinforced student understanding of the issues surrounding intellectual property rights. Where comments were solicited about how to improve future guides, sixty-nine percent commented “nothing to improve” and expressed their appreciation for the guide with special emphasis on the help it provided for their course. Others made suggestions to allow more in-class search time and to construct the simplest possible site in terms of content and design.

There were no appreciable differences in students’ responses from classes taught by the course instructors or the librarian. Therefore it can be said that course instructors can be effective teachers of information literacy given the proper tools. This is an area that requires further investigation in the future.

III. Conclusion

The upward trend of information literacy instruction has increased the librarians’ teaching responsibilities in recent years. The increasing ratio of students to librarians in

large public research universities in the United States has presented an opportunity for librarians to rethink how to reach the largest number of students with minimum resources. Librarians are largely responding to these trends by vigorously applying technology in their teaching and by strategically partnering with teaching faculty.

This paper illustrates a web-based instructional module that can be reused for multiple sections of high enrollment classes. In place of repeating the same lecture seven times, the librarian collaborated with the Department Chair and course instructors in developing a standardized module. Some course instructors volunteered to teach their own classes using the module as part of their course work. Clearly, the participation of course instructors in teaching information literacy will allow more time for librarians to develop similar instructional modules for other courses. The responses collected from students via an embedded online survey revealed the ways that this module and others can be improved. One instructor noted that the module will henceforth be a critical part of the Communication 201 course. The study revealed that this is an exciting time for librarians to experiment with and test new methods of teaching information literacy in collaboration with students and teaching colleagues.

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