

Developing Library Instruction for Distance Learning

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Abstract

Librarians involved with the development, design, and delivery of bibliographic instruction to remote access patrons must be prepared to address the challenges posed by each method of delivery (videoconferencing, computer-mediated, and web-based). An overview of each instructional medium will be provided as well as discussion regarding issues to consider when teaching at a distance. Examples of each method of delivery will be provided as well as a list of utilities and tools those teaching distributed bibliographic instruction can use to present this material.

In May 2000, the Instruction Committee of the ACRL Distance Learning Section conducted a survey through the OFFCAMP list to determine the top priorities for research on distance learning library services. Among the top five concerns were the issues of developing web-delivered classes to teach library skills, the effectiveness of web-based library tutorials, and the evaluation of online library services for remote access patrons. While most academic libraries have addressed the needs of their remote access patrons by developing a wide range of online resources to match traditional library services, many libraries still have difficulty coordinating distributed learning bibliographic instruction programs suited to match the various mediums used to distribute distance learning courses.

At Kent State University, these issues were addressed and a plan to develop new ways to incorporate bibliographic instruction into the university's distance learning program was initiated. Although the librarians involved (myself, included) knew much about the elements necessary to develop and design instruction for distributed learning, the course planning and distribution proved to be a "lessons learned" experience. There are various challenges associated with each method of delivery (videoconferencing, computer-mediated, and web-based) and specific elements one must consider when presenting instruction in these mediums.

Videoconferencing

Videoconferencing is the ability of two or more distant groups to communicate face to face in real time by using a combination of audio or video equipment. At Kent State University, we rely on a V-Tel dial up system that sends compressed audio/video signals over a dedicated line. Each of the seven regional campuses is equipped with a V-Tel lab. However, very few courses taught in this format have included sessions for bibliographic instruction. One reason is related to the scheduling of a session during the delivery of the

course. Most V-Tel instructors wish to use all class time for the course material and assert that library time should be spent outside of class. Faculty/library collaboration in V-Tel instruction proves to be a great challenge, but there have been some successful attempts to coordinate bibliographic instruction in some of the business and educational courses offered through V-Tel.

In our experience, the following issues must be considered when developing a library instruction component for a videoconferencing course:

Instruction planning is a must. It is recommended thorough planning of the material to be presented be organized and outlined very carefully. Some instructors assume that they can "teach from the hip" in a videoconferencing course, but the contrary proves true. Unlike a traditional setting where a librarian provides a orientation to the library and its services to a group of students, a librarian using a videoconference to present information must be certain that students at the remote sites have access to the same materials being presented from the instructional site. For example, in one case the librarian at the instructional site presented to the class several business reference resources and distributed these materials to the on-site class. The students at the remote sites sat and watched the materials being passed around.

To address this issue, we felt that it was best to include the library staff at the remote sites during the presentation to assist in the distribution of materials. It was also wise for the students at all sites to meet potential library contacts at the other regional campuses. In addition, it is best to provide students and library staff a detailed outline and corresponding handouts to the instruction that will take place. This information is important should technical difficulties arise and the class cannot be delivered to one of the sites.

It is recommended that librarians do a trial run of their instructional session prior to the actual date of the presentation. It is difficult to accommodate to a new teaching medium and knowing how to troubleshoot potential problems that may arise with the technology is important to avoid what can become a very frustrating experience. Learning how to use the equipment to vary the instructional method for use of software, slides, and other library materials will also improve the overall quality of instruction.

Request a list of the names of the students at each site. Instructors should not initiate discussion by referring to a group of students by their site name. Students appreciate being called upon by their names. This practice will give you better control of the classroom and it will make the students at the remote sites feel included. It also will foster better interactivity among the students.

Avoid instruction in a 60-minute lecture format. Course material presented through a videoconference should be presented in segments. It is extremely difficult for students to pay attention to what we refer to as a "talking head." We suggest 10-15 minute segments to allow for questions, feedback, or demonstrations o review material. The objective is to keep the students alert. Breaking up the class into segments allows the opportunity for a

variety of teaching methods. For example, the first segment could include slides from a PowerPoint presentation, followed by a discussion/review session, followed by a segment of hands-on work. This time could also be used for students at the remote sites to work with their local library staff.

Librarians teaching through a videoconference must also realize that when they create visuals for their presentation, these guidelines should be followed:

- All television screens are wider than they are high by a ratio of 4 to 3. Visuals should be created in the same manner to coincide with the aspect ratio of the screen.
- Create all slides in a landscape rather than portrait orientation to optimize the use of space on the screen. This set-up is better for viewing graphics and other images on the screen.
- Leave a 10% border around the entire visual to provide an "essential area" for which to work. This set-up will accommodate to most monitors and ensure that the entire visual is seen.
- Be wary of visuals with a great deal of detail. It is best to present text and information in smaller units (additional slides) so users have time to process what they are reading. Too much information on a given slide can be difficult for students to follow, particularly if the slide sequencing is fast.
- Limit the number of words on a page or slide to seven per line and seven lines per page. This amount of text seems to be the maximum level at which most readers can process.
- Text should be written in 24-30 point size and in a font that has normal spaces. Do not use scripted fonts, but rather universal fonts such as Ariel. Make certain that the case of the text is written consistently throughout the presentation. Use different texts within a slide show sparingly.

An example of a videoconference lesson may include subject-specific library instruction targeted for a group assignment. For example, one business marketing class had to design a marketing campaign for a product and the librarian involved with assisting them to do research made use of the library resources to use when developing a marketing plan. One of the instructional sites the library demonstrated via the conference room computer was a site to do company research: <http://iws.ohiolink.edu/companies/>. The students then were encouraged to create PowerPoint outlines for the resources they used for their project.

Computer-Mediated Instruction

Another delivery method use to distribute distance education courses is through computer-mediated instruction. This medium also occurs in real time, but much more planning in the development of course content is needed since files and other online materials for instruction must be created. At Kent State University, each of the regional campuses as well as several departments on the Kent Campus have computer-mediated instructor labs referred to as I-link labs. In these labs, during a given time period, several

different classes can be going on at once since students log into the course they wish to receive. These labs include microphones and cameras with each computer as well as specific software that enables participants to engage in online chat and other bulletin board activities. All files for the courses are stored on a host server at the Kent Campus, but can be retrieved by the instructor at a remote site.

To adapt bibliographic instruction into this medium, it was decided to develop three subject-specific training sessions on the use of the databases; ERIC, CINAHL, and LEXIS-NEXIS. The reference department had already developed content for traditional instruction on the use of these databases for the library's program 60-minute seminars. The decision was to transform these mini-courses into computer-mediated modules by which remote access students could attend during a scheduled time period.

Since many of the handouts were already developed into text files, the library staff was easily able to transform these files to the server. Using screen capture software, illustrations of search queries and retrieval results were downloaded into the module. The librarian teaching these sessions could then show students sample searches and then revert to the active search screen to allow students the opportunity to engage in their own searches. Problems arose when students attempted to replicate the same search the instructor had just completed. Some students received error messages and some computers even froze. This problem was easily resolved by assigning students different search queries to complete.

As with instruction in the videoconference format, careful planning, particularly a trial run of the course, and organized instruction segmented is necessary to ensure the success of computer mediated instruction.

The following guidelines were found to be important when teaching in the CMC format:

- It is important to include library staff at the remote sites to assist during the instruction. In one course session, students did not know what to do when the instructional screen froze. The students did not tell the instructor that there was a technical problem and the instructor failed to take note that the students at the remote site were not participating in the class. This situation illustrates why it is important to know how to use the equipment and be able to monitor potential technical difficulties. In class sessions where technical staff cannot be immediate present, instructors ought to designate one student at each site to be responsible for reporting any problems that may occur during the instruction.
- It is important that a basic orientation on how to use the equipment be provided to the students who may not be involved in a CMC course. When the library staff first developed these courses, they were associated with computer-mediated courses that would use these databases. However, after the courses were marketed as distributed learning versions of the 60-minute workshops series, students at the regional campuses not involved with distance education signed up to participate in these classes. As a result, it was necessary to provide a preliminary orientation to the features of the computer-mediated interface, the use of the chat room, the

- use of the microphone and other equipment. Library staff at the remote sites took time before the actual class session to acclimate students to the equipment and to answer any questions.
- Interaction is crucial in a computer-mediated course. The chat room and bulletin board capabilities of this medium should be used to promote interactivity in the lesson. Librarians teaching in this format as well as V-Tel need to remember to divide attention equally to remote sites. In a computer mediated situation (as with videoconferencing), there are several types of interaction:
 - Student to Instructor
 - Student to student
 - Panel discussions
 - Student to technology
 - It is recommended that librarians make use of each type of interaction to make the class more interesting. Students can be asked to complete individualized or group searches. Students from remote sites can form panels that research specific topics and students can interact with the lesson, itself. For example, the students can go to the database and conduct a search for their assignment. In the 60-minute sessions we conducted, teams consisting of students at the various sites were created to compete in locating answers to a library assignment. Students were allowed to consult the instructor only once and had to spend more time collaborating with one another to find the answers.

For a variety of creative ideas to use in online library instruction, The University of Minnesota provides an excellent faculty guide entitled: "Designing Effective Research Assignments for the Distance Student' at <http://www.lib.umn.edu/dist/instruct/assignments.html>.

Web-Based Instruction

Many libraries have organized projects to provide web-based bibliographic instruction through their library's web page. Such instruction ranges from simple "how-to" guides presented in an online format to more complicated course tutorials created through the use of software such as WebCT. Although most libraries rely upon the software available at their campus to create web documents, there are actually dozens of World Wide Web page creation tools available. A complete list along with reviews can be found at <http://union.ncsa.uiuc.edu/HyperNews/get/www/html/editors.html>.

When librarians decide to create web-based instructional materials, it is important that they follow the guidelines for universal page design to ensure greater accessibility for all students. All web-based documents should be created using web accessibility guidelines. The WAI site provides an extensive array of information regarding accessibility issues. (See <http://www.w3.org/TR/WAI-WEBCONTENT/>).

Web based library instruction should always include clear objectives for the student in the form of an outline. As with course planning for videoconference and computer-mediated instruction, it is important to organize a web-based documents so students can

easily navigate through the lesson. Lessons should be focused. (Dewald 1999) notes "tutorials designed to impart basic library skills to students should contain not only simple mechanical step-by-step directions, but also a conceptual understanding of the skill being learned."

It is important that librarians are aware that web-based library tutorials are best used in connection with academic classes rather than in isolation.

Page Design

Text presented on a given page should be limited so that scrolling can be avoided.

Breaking text into instructional units (smaller parts) can enhance learning. Using links is much more easier for students to follow than sequencing pages of text. Librarians using the web for instruction must realize that reading information from a screen can be as much as 30% slower than reading it from a paper (DeBra 1996). Nelson (1997) suggests that instructional text on the computer should be about 50% as long as would be the case if the same text were presented as hard copy.

It is also recommended that the text be broken down into multiple columns on the screen. Text and graphics should also be broken up to make the length of text more manageable to follow.

Images

The inclusion of graphics should relate to the text displayed. Dynamic moving graphics should be used sparingly to avoid distraction. Graphics should always serve an instructional purpose. Pages that are filled with multimedia take much longer to download. This set-up can be extremely frustrating for students with slower modems.

Hyperlinks

Hyperlinks should only be included if they serve a direct purpose to the text. Links should be clearly labeled to give learners a better sense of organization of the site.

Links on one page to other places within the same page should be avoided because it can cause confusion to learners.

At Kent State University, there are a variety of online instructional formats being used to teach students about library resources and services. These resources include the following:

Library Services for Students - <http://www.library.kent.edu/students>

Virtual Tour of the KSU Library - <http://www.library.kent.edu/tour>

Online tutorials

Navigating the Library - <http://www.library.kent.edu/ntl>

The Library Tutor - <http://www.library.kent.edu/tutorials>

It is best that those librarians using web-based documents evaluate the use of these materials to assess their use. All too often, web documents once created are forgotten and the hyperlinks that are listed on the page no longer work. Librarians using web documents to supplement their instruction should include their email address on the web site as well as a traditional address with office phone number to be contacted for questions and assistance.

Conclusion

Although there are a variety of methods to present information to remote access students, distributed learning will not completely replace traditional methods of bibliographic instruction because most students do still prefer human interaction when they need assistance for their research projects. Librarians thinking about developing bibliographic instruction for distributed learning should explore other library sites to get ideas. The World Lecture Hall (<http://wnt.cc.utexas.edu>) offers a variety of library-orientated online courses. The Distance Education Clearinghouse also provides a great resource for additional information.

Perhaps the most important element in the entire process to develop library services for distance education is to coordinate collaboration with faculty. All too often, faculty who are developing distributed learning courses do not consult with the library staff for information regarding the use of the library. A research study I conducted examining the role of the library in distance education at Kent State University indicated that less than 3% of the distributed learning instructors worked with library staff in the coordination of assignments for their courses. This situation has proven to be our greatest challenge in developing bibliographic instruction for distance education. Additional research related on increasing collaboration must be done. According to the ACRL Distance Learning Section Research team, it has proven to be the number one priority.
