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Bringing the Library to the Students: Using Technology to Deliver Instruction and Resources for Research

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SUMMARY. To provide equitable services and access to off-campus students, librarians must meet the challenges of the digital divide and the geographic divide. Instruction and document delivery are key services that can determine how successful a library is in meeting its responsibility to distance learning. This session will focus on technological solutions to instruction, access, and document delivery in technology-challenged and remote environments.

KEYWORDS. Distance education, distance learners, technology, instruction

INTRODUCTION

Located in Huntington, West Virginia, Marshall University is a comprehensive, state-supported university with a student body of 16,000 and over 600 full-time faculty. The university offers 24 associate programs, 41 baccalaureate programs and 46 graduate programs. As one of the leading universities in the state, Marshall University attracts students from all regions

of West Virginia, as well as from the surrounding states of Ohio and Kentucky and throughout the Appalachian region. Primarily undergraduate courses are delivered through the School of Extended Education each year to nearly 5,000 students via ITV, WebCT, or as live Classes at a series of extension locations including centers in Point Pleasant, Beckley, and Gilbert, and at other settings in the Teays Valley area, Logan, and Williamson. The Marshall University Graduate College (MUGC), located in South Charleston, offers additional extended education courses at the graduate level. The curriculum for off-campus courses is diverse, encompassing traditional baccalaureate courses, with many majors, such as computer science, nursing, education, business, counseling, and social work. In order to mesh with a developing information literacy program, instructional efforts are aimed at courses traditionally receiving instruction on campus, such as freshman orientation (UNI 101), English Composition (ENG 101/102), courses in the major, such as Introduction to Women's Studies (WS 101), and graduate research courses, such as EDF 621.

***PART ONE:
DELIVERING INSTRUCTION TO DISTANCE STUDENTS***

Ever-changing technology requires frequent training. With the ever-expanding array of online resources, instruction is an important corollary to insure effective use of information resources. Recent acquisitions of NetLibrary, the Synergy collection, and, during this same period, Marshall University's conversion to the ILLiad document delivery service are only a few examples of the numerous changes during the past academic year that have impacted library instruction.

Training is often controlled by the location of the audience. Students who take classes at the regional centers or in facilities such as high schools, vocational centers, or Chamber of Commerce offices do so because travel to the main campus is inconvenient or prohibitive due to conflicting or tight work or family schedules. Providing instruction sessions to off-campus students frequently means grappling with a vast range of teaching environments—from the state-of-the-art computer classroom to a room in a modular building offering only desks and chairs. As a consequence, a great deal of planning, imagination, and flexibility are required for those times when the setting is totally devoid of the technology that the students will be using to do their research.

TECHNOLOGICAL CHALLENGES AND SOLUTIONS

Without a live connection, instruction loses immediacy and effectiveness. Alternate methods of teaching how to access and search online resources need to be created to restore the feeling of interacting with an online resource. Past presentations at the Off-Campus Library Services Conference, as well as numerous articles, have explored a variety of methods of simulating this "live" instruction, from using video clips (Adams, 1998) to combining presentation software and WebWhacker (Barnes, Holmes, and Stahley, 1998) to designing Web tutorials (Caspers, 1999).

Furthermore, articles by MacDonald (1998) and Kenny (1997) suggest that there can be benefits to "canned" instruction as they describe their instructional solutions to simulate live searching. One method is a multimedia program housed on a computer hard drive, which can enable instruction that is independent of the frustrations of network downtime (Kenny). Kenny's software and hardware solution for creating these simulated searches uses a multimedia authoring program, Authorware, to hyperlink screenshots to simulate searching. The resulting multimedia program is then housed on the computer's hard drive. In this situation students can perform simulated searches within defined parameters, which gives them the experience of searching without a live connection (Kenny). MacDonald describes a "portable" instructional unit that serves as an additional method of delivering instruction onsite when instructional classrooms are in use, or even as a backup for live connectivity when the network is down (p. 130). MacDonald's method uses PowerPoint slides and a program such as Snappy 95 to capture static screens from the World Wide Web, online catalog, and online databases (p. 129). This "canned" presentation may even be more effective, MacDonald offers, because instructional text and graphic examples can be interspersed with demonstration slides (on Boolean searching, for example) and make instruction more clear than searches alone (p. 130).

Marshall University Libraries' solution to providing instruction in the barebones lecture setting is an enhancement of this latter method described by MacDonald. A CD-ROM based multimedia presentation that is customized and stand-alone simulates connectivity by using a variety of software, including SnagIt and PowerPoint. Such an approach has proved successful in providing research instruction for groups as diverse as freshman composition classes, graduate students in technology management, and new students beginning doctoral studies in education.

Microsoft PowerPoint is a presentation software that is widely available, which makes it a good choice because it is frequently loaded on most computers that will be used in classroom or office settings. Screen capture software, such as TechSmith's SnagIt, enables video capture of catalog, database and Web searches. The video capture is replayed, using RealPlayer,

within the framework of a PowerPoint slide show and replicates exactly the search that was executed. SnagIt is a relatively inexpensive program (around \$80) that is easy to use. Presentation software surpasses overhead transparencies in visual impact and screen capture software simulates a live connection, adding to effectiveness. CD-ROM technology then provides the storage capacity and portability to travel with ease.

DEVELOPMENT STAGES

Planning the Presentation

Development of this multimedia presentation entails careful planning. First, it is important to determine the session objectives beforehand. Some examples might include: to teach users how to search the online catalog by author, title, subject; or to teach users how to locate articles in an online database, or to show users how to submit requests for document delivery of books and articles. An instructional segment might then be planned for each of these objectives.

Second, it is essential to assess the teaching environment to determine what tools are available. To utilize the PowerPoint slide show with video captures requires a projector, screen, and a computer equipped with RealPlayer and PowerPoint software. For best results, it is preferable to take a compatible projector and a computer loaded with the designated software.

Creating the Presentation

Following this careful planning comes the actual creation of the presentation, a series of steps that include (1) creating a PowerPoint show; (2) capturing the action with SnagIt; (3) integrating the information and action; and (4) saving the final version to CD using Adaptec's Easy CD Creator.

Creating the PowerPoint Show

Microsoft PowerPoint is a familiar presentation tool that appeals to visual and auditory learners. A presentation often begins with a Title Slide, which provides a template to list the presentation title and the presenter's name and title. Frequently that title slide is followed by a slide known as the bulleted list. For instance, this template might describe library services or provide detailed information about a database such as ERIC. Slides also effectively present visuals, such as pertinent photographs and clipart, to enhance a point. In order to incorporate a SnagIt video, insert a blank PowerPoint

slide in the appropriate location to serve as a backdrop for captured video sequences.

Capturing the Action with SnagIt

SnagIt software creates a video of actual online searches, capturing a search from start to finish: from clicking on a link from the Marshall University Libraries' Web page; to the step-by-step process of logging into a database, such as ERIC in EbscoHost; to devising a search strategy and typing in subject terms; and, finally, to the results of that search. Snagit captures mouse movements and screen changes. This software can capture actions that show students how to refine searches, and how to e-mail and cite articles.

Trial and error has yielded many important lessons and tips on using SnagIt. For instance, it is important to know what to capture before actually doing so. Practicing the entire search movement by movement before doing the real capture helps anticipate challenges and results in smooth and efficient movements. Experience has taught that shorter SnagIt videos are better, more efficient, and easier to follow than one long video. For instance, rather than taping methods of logging in to several databases in one long video sequence to demonstrate the concept of database searching, it is more effective to tape individual examples of database searching separately. This method allows the viewer to select and view only those videos that are relevant instead of sitting through several minutes of various database searches that may not be relevant to the user. Rehearsing and practicing the steps, the actual key strokes (Control, Shift, P) to begin and end taping, as well as doing a step-by-step rehearsal of each screen to be taped, is important for flawless and effective video demonstrations. It is also advantageous to think in advance about saving a SnagIt file. SnagIt files consume a great deal of disk space and often must be saved to the C drive, a zip disk, or burned to a CD. One also should think ahead about naming each file. Short file names that distinguish each step work well, such as ERIC, IDS (for Information Delivery Services), etc.

To create a SnagIt video, first open the program to be taped. For instance, to capture the steps of logging into a specific database, open Netscape Navigator or Internet Explorer and go to the Website that will serve as the starting point. Next, open the SnagIt program. Select the appropriate settings and start taping by pressing the Control, Shift, P keys. Next, methodically go through the steps of logging into a database and doing a search, which have been rehearsed prior to taping. To finish, press keys Control, Shift, P. Finally, save the Snagit movie to a drive that has enough storage capacity and name the file something short and recognizable.

Integrating the Information and Action

To insert this or other Snagit videos into the PowerPoint slideshow, while in Microsoft PowerPoint, use the Slide Sorter View to select the blank slide that will serve as the backdrop for a video capture. In this blank slide, use the Insert menu to select "Movies and Sounds" and then "Movie from File." Browse for the appropriate .avi file and insert it. For more effective viewing, re-size the inserted file to fill the entire slide. PowerPoint should display a prompt that will enable automatic play of the video in the slideshow. Test the first video capture by trying the Slide Show View and use Page Down to advance slides. If the Snagit file does not play automatically, click on the slide when it appears.

Creating the CD

When the PowerPoint slideshow with inserted Snagit videos is flawless and needs no further revisions, it is ready to be burned to a CD, which can be used for a presentation and/or distributed to students, faculty and other interested parties. A simple CD-ROM duplication program called Easy CD Creator is provided by Computing Services at Marshall University. Prompting the user step-by-step, this program allows one to "burn" audio and data CDs. Prior to burning the CD, select the type of CD to be created. Experience has shown more success in using a CD-R rather than a CD-RW because the CD-R is more successfully recognized by other computers. When burning the CD, remember to select and copy both the PowerPoint slideshow as well as all appropriate Snagit .avi files.

Sample Presentation

This process for producing a multimedia presentation was used to create CD-ROMs for new doctoral students in Education, who are also distance education students and who often do doctoral-level research from home or work. Because many of these students do not regularly use the main campus or the Marshall University Graduate College Library onsite, they must learn to become adept at doing literature searches, developing effective search strategies, retrieving full-text articles and documents, and knowing how to request books, dissertations and non-full-text articles. Each year, a librarian is invited to an orientation for these students, but unfortunately is given only 20 minutes to demonstrate these techniques. A CD-ROM, which these students could take home and view at their leisure, was created to provide them with the focused library instruction they needed.

On this CD-ROM, the first slide lists the title of the presentation and introduces the two librarians who produced the instructional CD. A table of contents slide is followed by bulleted slides describing services and resources. Inserted SnagIt .avi files demonstrate how to search the following databases: ERIC, E-Subscribe, Dissertation Abstracts, Digital Dissertations, PsycINFO, Academic Search Elite, Mental Measurements Yearbook, MILES (online catalog), and WorldCat. Another SnagIt .avi file shows students how to use Information Delivery Services to request items using IDS Express. The module ends with a slide listing contact information.

Revising this basic presentation is easy because the SnagIt .avi files were limited to single database searches. For instance, if drastic changes occur with regard to accessing and searching one database, revising that one SnagIt .avi video, not the entire cadre of SnagIt files, is easily managed by deleting the outdated SnagIt file and replacing it with a revised one. It is crucial to delete outdated SnagIt files because PowerPoint could divert to old SnagIt files.

Future plans include adding sound to explain and reinforce the action of the SnagIt videos, and also making these instructional modules available through the Marshall University Libraries' Website. Web-based access would allow continual updating without investing a great deal of time, effort, and money on producing CDs or even VHS versions of library instruction. Another benefit is that a wider audience could access these instructional materials.

PART TWO: RESOURCES ACCESS AND INFORMATION DELIVERY SERVICES

In addition to enhancing and expanding instruction, technology has also bolstered efforts to make resources accessible to the off-campus user. In technology-challenged and remote environments libraries strive to provide services that offer anytime and anywhere access or delivery, driven by users. In order to provide users anywhere in the world with access to Marshall University's online full-text journals as well as to see print and microfilm journal holdings, Marshall University has developed a Web-based system that enables the user:

- To know if the libraries provide online access to a journal
- To find out if the libraries own a print copy or own a microfilm copy of a journal
- To use Information Delivery Services when needed.

PHASE/PROJECT I:
MARSHALL UNIVERSITY FULL-TEXT ONLINE
(<http://www.marshall.edu/libtech/search/>)

The rapid growth of aggregator databases has presented libraries with both new opportunities for collection enhancement and new challenges of bibliographic control and access management. Marshall University Libraries provide access to numerous aggregated databases, which contain 6,774 unique electronic full-text/image journal titles. It is important that the libraries find efficient ways to manage and provide access to these resources.

To answer this challenge the libraries developed a Web-based, searchable database for the online full-text journals that are contained in the libraries' subscription databases. It can be searched by title and subject and also can be browsed by journal title (A to Z) and vendor/aggregator. It provides a single interface for the user to search for the full-text online journals contained in EbscoHost, JSTOR, ABI-INFORM, Project MUSE, EbscoOnline; Wilson OmniFile, Kluwer, Synergy and other publishers.

In the database record, holdings are listed and a URL links to a journal title level whenever it is possible. Therefore, it identifies what issues are available and then with a click puts the user directly at the site of the requested resources instead of the vendor/aggregator provider site. For example, any titles in JSTOR, Project MUSE, Kluwer, Synergy and EbscoOnline are linked to the individual title.

The next step in providing "seamless" access for distance students is to implement EZProxy, which will allow authorized Marshall University users easy access to online collections without using individual passwords for each database.

PHASE/PROJECT II: MU JOURNALS
(<http://www.marshall.edu/libtech/mujournals/>)

An essential part of a library's function is to provide its users with an effective and efficient means of accessing print resources as well as electronic resources; however, it is not easy to search for all of the journals that the libraries own or have access to because there are many places to look and many clicks to navigate. A recent development is another Web-based database system for Marshall University journals, titled MU JOURNALS. It includes all formats of journals owned or accessible through all Marshall University libraries. For users it is simple and easy, and all journals, regardless of format, are there. Users can browse journal titles (A to Z) or search for journals by any of the following criteria:

- Journal title
- Subject
- ISSN
- Call number
- Vender/Aggregator
- Location
- Format

Users can view, on a single screen, all of their possible options for obtaining a given journal title with coverage in all different formats and in all different locations. When a user searches for a journal title that is not found in MU JOURNALS, the system directs the user to Information Delivery Services. The database also provides usage reports at the database level and title level. This database has greatly enhanced journal access and expanded the libraries' collection.

INFORMATION DELIVERY SERVICES
(<http://muntids.marshall.edu/illiad/logon.html>)

IDS Express

Once students have learned in instruction sessions how to access resources, they require a strong information delivery system to deliver the materials. A Web-based end-user interface system, IDS Express, using ILLiad software, provides automated interlibrary loan and document delivery service which allows users to submit (or cancel) requests and track the status of their request 24 hours a day, 7 days a week from around the world-anywhere they have access to the Internet. Through IDS Express, users can retrieve/view/print/save electronic photocopies on the same "anytime/anywhere" schedule via the Web. Users can view a list of checked out items and renew loans online and also can view their entire request history, including cancelled and completed items with all tracking and notes.

IDS Express provides convenient and fast delivery of materials to distance students. Distance students use it to request any materials needed regardless of the libraries' ownership. Their requests are filled either from the Marshall University Libraries' collection or from other libraries or institutions via interlibrary loan or document delivery. If a distance student chooses electronic delivery, journal articles owned by MU are scanned or any articles received electronically via Ariel can be delivered directly to the student in PDF format (Adobe's Portable Document Format) through the World Wide Web using

capabilities built into ILLiad, IDS Express. The student can then log in to IDS Express to download/view or save the electronically delivered articles. Home delivery service is provided to a user registered with a patron status of distant student in his/her IDS Express profile.

With IDS Express there are no more labor-intensive paper files. Requests are handled more quickly, easily, and accurately by getting rid of the problems arising from hand-written requests. Using IDS Express has enabled the libraries to meet the increased demand for ILL and document delivery services. In 2000-2001 patron requests dramatically increased 87.45% over three years ago (1997-1998). IDS Express provides a responsive, user-friendly gateway to ILL and document delivery.

UNMEDIATED DOCUMENT DELIVERY

Marshall University Libraries give faculty, staff and graduate students on-mediated access to document delivery service via the Marshall Ingenta Gateway (previously called Marshall UnCover Gateway). Ingenta is a multidisciplinary journal article database that covers approximately 20,000 journals (coverage 1988-present). The Gateway allows authorized users free ordering of articles. When a journal is not available from the libraries' collection, Marshall University faculty, graduate students and staff may order articles online directly from Ingenta and have these orders automatically charged to the libraries' account. The Libraries will cover the cost of articles from journals not held by the Libraries up to \$40 per article for faculty and staff in MU Medical School and up to \$30 per article for the rest of MU authorized users. The articles are available electronically (html or pdf) or via fax. Electronic articles are available for downloading and viewing immediately, and most faxed articles are delivered within 24 to 48 hours during the normal business week. Fax deliveries are sent to the number designated by the requester. A maximum of 30 articles per patron may be ordered in an academic year.

Unmediated document ordering and delivery offers a value-added service with expanded access, convenience, and faster speed of delivery. It is a cost-effective alternative to traditional interlibrary loans, and the range of titles ordered demonstrates the value of access over holdings because no title has been ordered significantly to justify purchase. Bringing the library resources and services to distance students continues to be very exciting and accompanied by lots of change, challenge, new technology and system implementation.

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