Instructional Technology Seminars: Innovations in Faculty Development

Edith Starbuck, Information Services Librarian, Academic Information Technology and Libraries, University of Cincinnati Medical Center, Cincinnati, Ohio

Megan Schenk, Information Services Librarian, Academic Information Technology and Libraries, University of Cincinnati Medical Center, Cincinnati, Ohio

Leslie Schick, Associate Director, Academic Information Technology and Libraries, University of Cincinnati Medical Center, Cincinnati, Ohio

Alison Armstrong, Department Head, University Libraries Training and Educational Services, University of Cincinnati, Cincinnati, Ohio

Introduction

The Instructional Technology Seminar Series evolved out of the University of Cincinnati's desire to improve the information literacy of faculty members and to increase their use of technology in the classroom. Although the University of Cincinnati Medical Center Academic Information Technology and Libraries (AIT&L) has offered a program of workshops dealing with computer applications and information literacy over the last two years, faculty needs in this area continued to grow and expand. In recognition of the success and popularity of the current training program, the Faculty Development Committee invited University of Cincinnati librarians to apply for a Faculty Development Grant that would fund a training series specifically targeting faculty technology needs. The Medical Center Academic Information Technology and Libraries (AIT&L) and University Libraries Training and Education Services (TES) collaborated to apply for the grant and then to develop, prepare and teach the Instructional Technology Seminar Series.

This paper describes the evolution of the computer application and information literacy training program from the traditional Medical Center AIT&L bibliographic instruction program. The collaboration between the two departments to prepare the Instructional Technology Seminar Series, the course descriptions, the evaluation and attendance statistics and how the evaluations have shaped the ongoing development of the courses are also discussed.

The Faculty Development Grant

Faculty Development Grants at the University of Cincinnati are intended to support projects that will enhance the University's mission to provide the highest quality learning environment, scholarship, and innovation.

To achieve this goal, the current faculty contract designates $1.5 million per year to be used for faculty development efforts and programs that will update and expand the teaching and research skills of faculty members. The Faculty Development Council began awarding these grants in 1996. Projects supported by faculty development funds involve one of several university themes intended to support the mission of the University. These themes include pedagogical improvements, use of technology, interdisciplinary collaboration, and globalization.

In the January of 1998 the Faculty Development Council invited the two main educational departments of the University Libraries (AIT&L and TES) to submit a proposal for a training program which would help

faculty to improve and develop their technological skills for the classroom.

The Development Phase

The framework for the workshop series grew from the conviction that classes would be most effective if the primary focus was hands-on learning and practical application in the classroom. To confirm this conviction, a review of the literature was done. The literature revealed that the concept of hands-on application and bibliographic training was fairly universal. The articles that focused on faculty computer literacy and application training revealed some common themes. One was a pressing need for faculty to receive training so that they will integrate computers and technology into the classroom. Another was the importance of making the training relevant to faculty and to offer it in a non-threatening atmosphere. A third was how essential administrative support was to the training process. With those points in mind, the courses were developed and existing courses revised to specifically address the needs of faculty. Use of library staff to teach this series, ensured the incorporation of information literacy into the content of each course.

In conjunction with University Libraries Training and Education Services, the Medical Center Academic Information Technology and Libraries department submitted a proposal to the Faculty Development Council in January 1998. The proposal concerned a series of hands-on workshops that would be used to teach and motivate faculty to incorporate technology in the classroom. The series would be taught by library staff and begin during the Spring Quarter of 1998 and be repeated during the Fall, Winter and Spring Quarters of 1998-99. The workshops were to address three major themes: presentation technology, the World Wide Web and other electronic information resources, and multimedia technology. The original grant also proposed the inclusion of nationally known keynote speaker(s) who would provide inspiration, publicity, and a conceptual framework for the series. However, this portion of the grant was not funded.

AIT&L Instruction Background

Bibliographic instruction, begun in the early 1980s at AIT&L, initially focused on the print Index Medicus. An additional class entitled When Harrison's Isn't Enough covered Current Contents and Science Citation Index. In the mid-1980's, a database consisting of a subset of MEDLINE was created. This moved training from strictly print to include online instruction. Then in the early 1990's, MEDLINE and other databases were moved to a CD-ROM format. Offered once or twice a week, these classes were augmented by other special courses or workshops on how to use the online catalog, how to find a journal or how to use other databases like AIDSLINE. Other than MEDLINE, most of these courses were not offered on a regular basis. Classes were taught using overheads and statistics were kept based on class evaluations and attendance.

As computer use became more prevalent at the University, the emphasis shifted from bibliographic instruction to include Internet and computer application instruction. Internet courses were the first to be developed. These classes were first centered on using the internet gophers and then the World Wide Web. They included an introduction to the Internet and how to get online, search engines and how to use them effectively, and later, a class that covered downloading free software, newsgroups, listservs and e-mailing from the Internet. Email classes were also developed to introduce several types of email software supported by the University.

In addition to the classes open to all University students, staff and faculty, Informatics courses were developed and added to the medical school curriculum. The first was a Clinical Informatics Elective developed in 1989 for fourth year Internal Medicine students. The Elective provided training in word processing, spreadsheet and graphics applications as well as Illiad diagnostic support system, QMR, Dxplain (diagnostic support systems/knowledge bases), and the use of the Patient-Centered Database. These systems and applications were elements of the Integrated Academic Information Management Systems (IAMS)

project, which fused library information resources and clinical information resources at the point of the user, with the patient as the "focus". Although some of the systems and applications have changed, this Elective continues to be offered year round in two-week sessions that focus on the use of varying information management tools in the clinical setting, including computer applications.

The second Informatics course was developed in 1996 and added to the curriculum for third year Ambulatory Care students. During the mandatory year round four-week sessions, students are introduced to Evidence Based Medicine and databases such as MEDLINE, Science Citation Index, Current Contents, as well as other resources like the Internet, Carl Uncover, and the Electronic Journal Center. The emphasis of this course is on using literature searching to solve a clinical problem.

Also in 1996, the University of Cincinnati Medical Center made the decision to standardize operating systems, applications and email software to improve information sharing between departments and strengthen technical support. Windows 95 and Office 97 became the computer software standard for the Medical Center and email software was limited to Microsoft Outlook for faculty and staff and Eudora for students. Prior to this decision, the Medical Center Libraries' responsibilities were expanded to include the Medical Center's Information Technology as well as the Libraries. Consequently, the Medical Center Libraries, renamed Academic Information Technology & Libraries (AIT&L), was the first to implement the new software and email standards and then to provide application training for the Medical Center.

To implement the new standards, AIT&L began work on several fronts. Construction of a new electronic classroom began, software and hardware were purchased, and AIT&L contracted with Rippe & Kingston, a local training firm, to train AIT&L Information Services librarians who were to be the primary application trainers.

By Spring of 1997, a 25 seat electronic classroom was completed, the computer lab doubled in size, and application and email classes grew to include introductory, intermediate, and some advanced classes in Word, PowerPoint, Outlook, Excel, Windows '95, Access and Eudora. The number of classes offered on a monthly basis increased as well to include bibliographic, Internet, email, and application instruction. Most often utilized by University Medical Center staff and students, AIT&L's classes, especially the application classes have proved to be popular and successful. This was the springboard from which the Instructional Technology Series was launched.

Workshop Development

The development of the individual workshops for each of the Faculty Development series was divided among the staff members of the AITL and TES departments. Each workshop was assigned to a one or two person team. This team took the responsibility to develop an outline, presentation, and handouts that could be used by both departments in presenting the course. Development of appropriate timeframes, PowerPoint presentations, and user guides for each course also fell within the responsibility of the team. As each course was developed, it was presented to the AITL and TES staff for review.

Each course was presented to the combined AITL and TES instruction staff during a series of five, two to three hour meetings, held in the Winter and Spring quarters of 1998 (Feb 23, March 9, April 6, May 4 and Nov 16). At each meeting, the designated team gave a "run through" of the course and distributed the handouts and other materials needed to teach the workshop. Feedback was also solicited and changes made to both the content and format of these classes based on the reaction of the group to the material presented.

Space on the AIT&L server was also made available to the instructors for the Faculty Development Grant Series. This provided storage space for the Faculty Development materials and allowed instructors to easily share files and collaborate on the development of presentations and handouts. This was particularly useful,

given the sheer number of classes that were being developed.

Once the workshops had been through the development and review process, specific instructors (generally members of the development team) were assigned to teach each one. Courses were taught on both the AITL and TES home campuses by members of staff affiliated with that campus. This allowed customization of the material to better fit the different needs and interests of the faculty of each campus. The only exception to this was the ClassWare workshop. This course was taught on both campuses by the faculty member from the University of Cincinnati College of Education who was responsible for developing the software.

Course Content

The presentation technology series is intended to help faculty create effective electronic visual aids and handouts for the classroom. Faculty are introduced to basic design concepts, given tips on teaching with technology, and learn the mechanics of putting together a presentation. This series consists of four workshops. The first is Basic Computer Skills. This course teaches the fundamentals of computing, including the components of a computer, keyboarding, mouse skills, basic vocabulary, and a brief overview of Windows '95. PowerPoint I and II introduce this popular and powerful presentation software. Participants are taught the fundamentals of the program, the basics of layout and design, and customization of presentations for effective classroom use. The final course, Tips for Presentations Using Technology, covers the "basics" of effective presentation and lecture delivery using technology. Aspects of design, format, font, and color use are addressed. The goal of this series is to teach faculty about this type of technology and give them the skills necessary to take advantage of it.

The World Wide Web and other Electronic Information Resources series introduces faculty to the computer, email, the Internet and the other electronic information resources available through the Libraries. The first course in this series is, again, Basic Computer Skills. The next course offering is Introduction to the Web. This workshop is an overview of the World Wide Web focusing on basic Web browsing, comparing and contrasting search engines, navigation, online help, and bookmarking. Integrating the Web into the Classroom teaches faculty how to take these new skills and apply them to the classroom setting. The Evaluation of Web Sites course offers faculty the tools and skills necessary to distinguish quality Web material. Faculty members are taught guidelines for resource selection and evaluation. The role of faculty in helping students become critical users of Web resources is emphasized. Attendees are taught the basics skills of Web page production in the Create a Web Page workshop. Information regarding setting up Web sites on the University servers and linking to the main University or Medical Center Web site is also given. Introduction to ClassWare focuses on this experimental UC project, which assists faculty in putting course material on the Web. In Connecting to the Electronic Library, attendees are taught how to connect to U.C.'s libraries from home or office. Basic search techniques and an overview of available electronic resources are the primary emphases of this course. The final workshop in this series, Integrating the Web and E-mail into the Classroom, provides an overview of how the web, e-mail and listservs can be used effectively in the classroom. This series is intended to increase the information literacy of the faculty and give them the skills to transfer this knowledge to their students. The emphasis is on practical knowledge and tools for accomplishing this task.

The third series of workshops is intended to acquaint faculty with the world of multimedia including images, sound, and video. Faculty members are taught to scan images, combine images with sound and motion, and to integrate these pieces in the development of a multimedia presentation or Web site. The first course is entitled Introduction to Multimedia and it covers the multimedia services available through the University of Cincinnati. The second workshop, Integrating Images into the Classroom, covers the process of creating digital images and gives participants hands-on experience in using a flatbed scanner and a digital camera. Incorporating Sound & Video into a Lecture demonstrates how to incorporate these elements into a

multimedia presentation or on a Web page, making them come to life using sound and motion. The final workshop in the series is entitled Multimedia and the Web. This course discusses the merging of multimedia and Web applications and the best techniques for incorporating both into the classroom. This last series is intended to help faculty integrate new methods and modes of information retrieval and communication into the classroom setting. These courses allow participants to take the knowledge learned in the other two series and take it another step forward. The final product being a lecture/ presentation/ course which integrates all of the various information and presentation technologies into an effective whole.

The first two series of workshops (Presentation Technology and World Wide Web and other Electronic Information Resources) were offered beginning in May, 1998. A total of 20 classes, 10 on each campus, were taught during this first quarter. Some of these workshops were repeated on West Campus during the Summer of 1998, due to the positive response of faculty. These classes were offered again during Fall Quarter of 1998, with the addition of several classes from the Multimedia Series. All three series will be repeated during the Winter and Spring of 1999.

Equipment

Although both AIT&L and TES had electronic classrooms available for use within their respective library facilities, additional equipment and software had to be purchased in order to make these facilities ready to meet the demands of the courses offered through the Faculty Development Grant Series. Thirteen flatbed scanners were purchased, along with two color laser printers, headphones and microphones for several computer workstations. Software programs such as Adobe Photoshop, Adobe Premiere, Claris Home Page, CorelDraw, Macromedia Director, Microsoft FrontPage, and Microsoft PowerPoint were licensed for use in the electronic classrooms. Many of these equipment and software needs developed as the content for each course was established. In some instances, different facilities and technical support led to the purchase of different software for the two campuses. Recognizing these differences, course content was adjusted to meet the preferred standard.

Promotion

There has been a strong ongoing publicity effort to promote the Faculty Development Seminar Series. Posters have been displayed throughout the UC campus. Brochures with a current workshop schedule enclosed are mailed to all faculty and professional staff each quarter. Information about the workshops is carried in both the UC Currents and the News Record each quarter as well. A Web site developed specifically for the Faculty Development Seminar Series provides the most current workshop information.

Evaluation

In order to measure the effectiveness of the seminar series, several types of evaluation measures have been used. First, evaluation forms are distributed and collected at each seminar. These evaluation forms ask participants to rate the effectiveness of the session on eight criteria using a five point ranking system. Written feedback is also encouraged and several questions asking for suggestions for improvement are included on the form. Second, the numbers of attendees at the seminar series is closely recorded. Third, a Web site has been created which incorporates a feedback/suggestion mechanism. Anecdotal feedback from both instructors and attendees is also being monitored. Finally, a follow-up study to evaluate changes in teaching styles is planned. The success of the seminar series will ultimately be measured by evaluating changes in teaching styles over time. With that in mind, attendees will be contacted every six months for the next two years to provide assistance/follow-up and to determine changes in faculty member's use of instructional technology in the classroom.

Initial Results

As this paper is being written, the 3rd quarter of training, Winter 1999 has begun. Attendees are in the process of being contacted for follow-up and to determine changes in their use of instructional technology in the classroom. The total attendance number for the Spring quarter series was 162. During the Fall quarter this figure slipped to 118.

Spring Quarter 1998		
Course	Average	Total Attendance
Basic Computer	4.96	9
Evaluating Web Sites	4.87	9
Power Point 2	4.86	25
Integrating the Web into the Class	4.72	17
Using Email in Classroom	4.69	10
Power Point 1	4.67	29
Create a Web Page	4.61	26
Intro to Web	4.60	10
Electronic Library	4.53	7
Tips for Electronic Presentations	4.32	20
Overall	4.68 (Out of 5)	162

Fall Quarter 1998		
Course	Average	Total Attendance
Basic Computer Skills	4.88	2
Digitizing Images	4.99	9
Electronic Libraries	4.48	8
Evaluating Web Sites	4.90	4
Incorporating Sound and Video into a Lecture	4.50	4
Integrating the Web and Email into the Classroom	4.55	9
Intro to Searching the Web	4.86	9
Introduction to Classware	5.00	8
Introduction to Multimedia	4.20	6
Powerpoint - Introduction	4.80	18
PowerPoint - Intermediate	4.50	12
Sound and Video	5.00	3
Tips for Electronic Presentations	4.50	4
Web Page - ClarisWorks	4.70	7
Web Pages - FrontPage	4.23	5
Web Pages - Netscape	4.65	10

Overall	4.67 (Out of 5)	118

Evaluation statistics for Spring and Fall of 1998 are very good. The average evaluation scores for each quarter were 4.68 and 4.67 on a 1 to 5 scale, with 5 as the best score. In addition, both written and anecdotal feedback has been excellent. So much so, that the Faculty Development Council has recently requested another grant proposal to continue funding the Series for another year.

This feedback has also been invaluable in improving the effectiveness of the various workshops in the Faculty Development series. Based on both instructor and attendee feedback during the Spring Quarter of 1998, some customization was done in order to meet the different needs of the Medical Campus and Main campus faculty. There are many examples of this. The instructors on the Main campus teach the Creating Web Pages class using Claris Home Page. At the Medical Center, two separate classes are being taught; one in Microsoft FrontPage '98 and the other in Netscape Composer. This was done as a result of the differences in current usage and technical support available at each campus. A course on advanced Web Searching was added to the schedule on both campuses in Winter Quarter of 1999 based on feedback from the faculty. A workshop on exporting Web search results was added to the University Libraries schedule during Winter Quarter of 1999. This was not perceived as a need on the Medical Center campus, however. Introduction to Multimedia, a course that introduces faculty to the services of the Main Campus Multimedia Services department, is taught only on that campus. Finally, the course on integrating sound and video into multimedia presentations has taken two very different tracks. The AIT&L version teaches faculty how to create their own digital sound and video and integrate that into PowerPoint presentations. The TES version uses pre-made video and sound and shows faculty how this may be incorporated into a Web page created with ClarisWorks.

Feedback from both campuses has lead to the consolidation of Integrating the Web into the Classroom and Integrating E-mail into the Classroom into one workshop, beginning with Winter Quarter of 1999. Based on low attendance rates, the Winter and Spring Quarter workshops on Connecting to the Electronic Library and Tips for Electronic Presentations are being offered only once each quarter. The first is being taught only on the Main campus and the second on the Medical Center campus.

Conclusions

The real success of the Instructional Technology Seminar Series will be measured by faculty's increased use of technology in the classroom, which is a long term objective. In the short term, faculty response has been very positive in terms of feedback and evaluations. But it's not known whether after two quarters, technology has increased in the classroom. The first follow up study should provide that information.

The Seminar Series has revealed several things through the evaluations, feedback and instructor observations. One is that the idea of classes targeted specifically to faculty has seemed to be very popular, especially those workshops that addressed how to incorporate technology successfully into classroom instruction. Another is that there is wide spectrum of familiarity with technology and of instruction needs. The majority of attendees were less computer literate than we expected. Many faculty were grateful for the Basic Computer course which focused on introducing computer hardware, software, the basics of Windows '95, and how to use the mouse. There also appeared to be an appreciation for providing courses in a non-threatening setting.

Also of interest is the drop in attendance between the Spring 1998 and Fall 1998 quarters. The Winter 1999 quarter has seen a further drop in attendance, although evaluations and feedback remain very positive. The reasons for this have yet to be determined since there has been no change in attendance opportunity or amount of publicity. Possible reasons for decreasing attendance may be differences in faculty work load, the

Series is no longer something "new", or faculty have discovered that many of the courses are offered on a monthly basis by AIT&L among their regular course offerings. Perhaps a better measure of attendance would be to look at faculty attendance to training sessions overall since the Instructional Technology Seminar Series began.

Has the Instructional Technology Seminar Series proven to be an innovation in faculty development? The proof remains to be seen, but it does have the potential to be an innovation for the University of Cincinnati if the use of technology increases in the classroom.

Bibliography

1. Drazdowski, Thomas A; Holodick, Nicholas A; Scappaticci, F.Thomas, " Infusing technology into a teacher education program: three different perspectives," Journal of Technology and Teacher Education (April 1, 1998) v6 n2/3 p141-149.

2. Greene, Benjamin B., "A survey of computer integration into college courses," Educational Technology (July 1, 1991) v31 n7 p37-47.

3. Hazari, Sunil, "Microcomputer training for higher education faculty," Educational Technology (October 1, 1991) v31 n10 p48-50.

4. Hirschbuhl, John; Faseyitan, Sunday O., "Faculty uses of computers: Fears, facts and perceptions," T.H.E. Journal (April 1, 1994) v21 n9 p64-65.

5. Koltay, Zsuzsa; Trelease, Ben; Davis, Philip M., "Technologies for learning: instructional support at Cornell's Albert R. Mann Library," Library Hi Tech (December 1, 1996) v14 n4 p83-98.

6. Lee, Judy Raven; Johnson, Chris, "Helping higher education faculty clear instructional technology hurdles," Educational Technology Review (December 1, 1998) n10 p13-17.

7. Mackowiak, Kate, "The effects of faculty characteristics on computer applications in instruction," Journal of Research on Computing in Education (April 1, 1991) v23 n3 p396-410.

8. Patterson, Betsey, "People first, technology second: introducing your faculty to computer technologies," Information Today (May 1, 1991) v8 n5 p39-41.

9. Pullman, Howard W; Parsegian, Elsa V., "An introduction to microcomputer applications packages for university faculty," T.H.E. Journal (June 1, 1990) v17 n10 p47-48.

10. Ritchie, Donn; Wiburg, Karin, "Educational variables influencing technology integration," Journal of Technology and Teacher Education (June 1, 1994) v2 n2 p143-153.

11. Shifflett, Bethany; Richardson, Lisa; Ghiasvand, Farazeneh; Plecque, David, "Computing needs among college educators," Computers in Schools (December 1, 1993) v9 n4 p107-117.

12. Williams, C Joseph; Crowell, Charles R., "Providing institutional support for educational technologies: a case study," T.H.E. Journal (November 1, 1993) v21 n4 p114-118.

Evaluation

Brochure (NOTE: Only viewable in Microsoft Word Page Layout format)

Return to Contributed Papers Session TOC