A Faculty and Staff Support Program at the University of Maine at Augusta

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Introduction

In January 1991, The University of Maine at Augusta, in cooperation with the six other University of Maine campuses, began implementation of a three-year project to simultaneously expand the courses, degree offerings, and services available off campus and to improve teaching and learning through the use of technology for distant students. This project is one of seven funded nationally by the Annenberg/ Corporation for Public Broadcasting's Project, New Pathways to a Degree: Using Technologies to Open the College. The purpose of the project is to help open colleges to new students and new academic resources. The Center for Distance Education (CDE) was created to administer and to provide the faculty and staff support component of the project. Upon completion of the Annenberg/CPB project, at least 3500 students throughout the state will have enrolled in 20 new or restructured courses delivered over the university's telecommunications system, which links all seven university campuses, technical colleges, eleven off-campus centers, and high school sites throughout the state with fiber optic cable, point-to-point microwave, and point-to-multipoint microwave (ITFS). The two academic programs supported by the grant are the Associate Degree in General Studies and the Associate Degree in Liberal Arts.

This paper describes the faculty and staff training needs assessment conducted in the fall of 1991, outlines the major findings of the needs assessment study, briefly describes the components of the Center for Distance Education's 1991-92 Faculty and Staff Support Program, and concludes with major lessons learned as a result of our first year's experience.

The Needs Assessment

A central goal of the Center for Distance Education is the provision of training support to faculty and student services staff
working with distant students. A needs assessment was conducted to identify perceived training needs of both faculty and professional staff. The Center’s support program was developed in response to the findings of the training needs survey. The survey instrument was mailed to faculty who have taught at a distance during Summer or Fall 1991, those who were scheduled to teach at a distance during Spring 1992, and faculty who received Annenberg grants to adapt existing courses or to develop new courses for delivery at a distance (total N=69); and professional staff who were involved with presenting over the interactive television system in 'College Plus,' a series of weekly informational sessions outlining the various services available to students studying at a distance (N=20). The survey was designed to assess faculty and professional staff perceptions of the relevance, on a scale of 1 to 5 ('not at all relevant' to 'highly relevant'), of each of 39 skills to their work with distant students. The skills were grouped into ten major skill areas (see Table 1 for the list of skills).

The survey also provided respondents the opportunity to raise specific questions, concerns and issues related to each of the skill areas and to inform the Center for Distance Education of any additional training needs which might not have been included on the survey instrument. The initial draft of the survey instrument incorporated findings of interactive television classroom observations; recent literature in distance education and instructional design; discussions with faculty and professional staff; and findings of previous evaluation reports. The draft was circulated among members of a training planning group (consisting of both faculty and administrative staff) and revisions were made based on their comments. A follow-up letter was sent to non-respondents. The response rate to the survey was: Faculty 47.8 percent; Staff 45.0 percent; and Overall 47.2 percent, resulting in a total of 33 useable surveys from faculty and 9 from professional staff.

Mean rankings and standard deviations for each of the 39 skills were calculated. These results are reported in Table 1. While the table provides a summary of faculty rankings according to their level of experience on the interactive television system (those who have not yet taught over the system, those who have taught one course, those who have taught two or three courses, and those who have taught four or more courses), the small sample size within each group precludes any conclusions about how training needs change with experience. Rather, blocking by experience level was done to suggest areas for further investigation. Finally, the small sample size for student services staff precludes conclusive comparisons between faculty and staff rankings. Table 2 summarizes the rankings of skills by faculty and student services staff. Mean rankings are reported for faculty and staff, blocked as noted above. Skills ranked with greatest agreement (SD<1.00) and less agreement (SD>1.00) are indicated in order to identify areas of consensus. Again, blocking by faculty experience level was done to suggest areas for further investigation and these results should be viewed with caution.

An additional open-ended questionnaire was used to learn more about the concerns of those faculty who had considered teaching at a distance but had not yet made the final decision to do so. This questionnaire asked respondents to list their major questions about teaching at a distance along with any reservations that they had. Major questions and concerns were about the nature of facilities available at origination and receive sites, availability and continuity
of technical assistance (graphics support, working with the same technician from class to class), exam procedures (make-ups, monitoring, turn-around time, and quality of assessment procedures in large classes), 'humanizing' the distance education experience for students at remote sites, the level of interactivity possible over the interactive television system, and the effectiveness of interactive television versus 'face-to-face' instruction.

The Faculty and Staff Support Program

The 1991-92 faculty and staff support program had two major components: general sessions (including workshops and demonstrations) and individual consultation. The instructional designer met individually with over forty faculty and student services staff members to provide assistance in course development and adaptation. General sessions during the 1991-92 academic year were:

Question-and-Answer Session --
Designed for new faculty, this session provided the opportunity to seek clarification on procedures outlined in a faculty manual sent in advance of the session.

Teaching Refinement Program Workshop --
The instructional designer provided an overview of the instructional design process for a group of eleven faculty who will be available to work with colleagues as teaching specialists.

Open House --
This session provided an introduction to distance education staff and facilities, with a focus on the electronic classroom. The session included faculty demonstrations of the available technologies and their application in classroom teaching.

Update --
This workshop included sessions on copyright issues for interactive television, planning and using television graphics, and developing student manuals.

Incorporating Interactive Teaching Strategies: The 'I' in ITV --
The first of two Annenberg/CPB workshops, this session outlined the importance of interaction from the perspective of a center director; presented faculty demonstrations of brainstorming, role playing, multi-site literature readings, and interactive study guides; and provided participants the opportunity to select teaching strategies and appropriate technologies to accomplish specified learning outcomes.

A Tool for Promoting Critical Thinking and Interaction at a Distance --
The second Annenberg/CPB workshop, an extension of the first, introduced structural communication, an instructional technique based on the principles of cognitive psychology. Participants were introduced to the theoretical foundation of the method and were presented with an example, in which they were asked to critique the classroom teaching of a fictional colleague. The session focused on the potential applications of the technique in promoting higher order thinking and three types of interaction: student-instructor, student-student, and student-content.
Spring Institute: Building Teaching and Learning Communities at a Distance --

The institute consisted of a three-day series of workshops at the University of Maine at Augusta campus. Goals were to provide guidelines for developing and adapting courses and materials for delivery at a distance; for assessing the effectiveness of instruction and services delivered at a distance; for promoting student engagement in the learning process; and for identifying, locating, and evaluating resources to support instruction. In addition, a major focus was to initiate an ongoing dialogue among colleagues statewide. Sessions included assessing the effectiveness of interactive television instruction, cooperative learning, producing learner support materials, incorporating interactive teaching strategies, developing a basic skills foundation, using electronic mail, developing computer graphics, using camcorders to support instruction, locating and evaluating instructional resources and materials, and connecting with remote site students using a multilink conferencing bridge. A forum involving a representative panel of students presented the students' perspective on distance education.

In response to a number of requests for less formally-structured time to meet with colleagues facing similar challenges, we scheduled 'Topical Working Group' sessions on student services, laboratory sciences, English and humanities, social services, and developmental studies, for faculty and staff seeking to establish a link with the K-12 school system, and for those interested in exploring alternative (less ITV-dependent) delivery approaches. In preparation, participants were asked to select a group and to complete an interest inventory that they submitted along with their registration materials. The interest inventories were then distributed to volunteers who facilitated each of the groups.

Lessons Learned...

1. Find a balance between the practical and the theoretical.

Although there was some interest in both adult education and learning theory, most faculty were more interested in intensely practical applications specific to distance education. Problems related to the actual implementation of recommended strategies are of major concern. While general guidelines based on theory are informative, our faculty and staff are wrestling with the nuts-and-bolts issues related to delivering courses and services on a daily basis. For example, while the guidelines on grading essay exams suggest grading one question on all exams before proceeding to the next, this presents a problem for an instructor faced with delays in receiving exams from some of the more remote sites in the state. An instructor who adheres firmly to these guidelines may risk increasing the turn-around time for the majority of students enrolled in the course. Experience has shown that prompt feedback is of major concern to our students.

2. Experienced faculty and staff are our most valuable resource.

To a large extent, the Center for Distance Education serves a clearinghouse function. We seek to diffuse both information and examples of effective practice. The level of experience of many of our own faculty and staff has consistently been one of our most valuable resources. It is this experience that helps us to strike a balance between theory and practice. We worked closely with faculty in planning the workshops and used numerous faculty
demonstrations. Participation of experienced faculty and staff during the Spring Institute was critical for responding to the concerns of those new to distance education. In fact, we find that the most valuable sessions are informal and loosely-structured. It is during these sessions that new faculty and staff have the opportunity to seek the advice of those with more experience.

3. Remain open to viewing instructional design as a dynamic, not a linear, process.

Although the prescription of instructional design models is to 'start at the beginning' (conduct a needs assessment, formulate course goals, conduct a content analysis, specify objectives), faculty rated the elements of the initial planning phase (formulating goals, converting goals into objectives, and sequencing objectives), as being among the least relevant of the 39 skills. Faculty often sought instructional support at the media selection and media production stages of the model. In many cases, this initial contact provided the opportunity to take a step back and to examine overall lesson design issues. By taking advantage of the high level of interest in improving television graphics, for example, we established a working relationship with faculty who might not otherwise have requested our services. The findings suggest that a more dynamic, less linear approach to the instructional design process may represent a first step toward increasing the utility of the model among faculty.

Table 1.

List of Thirty-nine Skills Relevant for Faculty and Staff Working With Distant Students.

[Editor's note: Due to space and format restraints, only the 39 skills are listed in this table. Contact the author for complete information about rankings, means, and standard deviations.]

Course and workshop planning: the 'big picture'
1. Formulating goals.
2. Developing an effective course syllabus for distance education.

Lesson/session planning
4. Converting goals into lesson/session objectives.
5. Sequencing objectives for optimal learning and retention.
6. Identifying elements of an effective lesson/presentation and incorporating them into a plan.

Selection and use of instructional strategies
7. Using questioning strategies appropriate for different levels of objectives.
8. Using questions effectively in the classroom (redirecting questions, waiting for students' responses, etc.).
9. Incorporating laboratory experiences.
11. Team teaching.
12. Incorporating strategies to personalize the distance learning experience for students at receive sites.
13. Incorporating interactive teaching strategies. For example:
- Case studies and simulations
- Brainstorming exercises
- Small group projects
- Guest interviews
- Role playing exercises
- Debates
- Panel discussions

Locating and obtaining permission to use instructional materials
15. Obtaining copyright clearance for use of instructional materials.
16. Using on-line searches to locate library resources.

Use of specific technologies
17. Selecting the most appropriate technology for a set of objectives and a specific context.
18. Using computer software for producing paper-based materials (word processing, desktop publishing, etc.).
19. Planning effective television graphics (design issues such as layout, color, builds, etc.).
20. Producing television graphics using computer software.
21. Using electronic mail and computer conferencing systems for instructional purposes.
22. Integrating videodisc technology.
23. Integrating hypermedia.
24. Developing and incorporating videotape productions.
25. Communicating with remote students during a class session or presentation.
26. Communicating with remote students during non-classroom time.
27. Using communication technologies to network with colleagues at other universities and to identify resources.

Assessing students' progress
28. Assessing students' mastery of prerequisite knowledge and skills.
29. Developing efficient methods of assessing students' performance in large classes.

Assessing instructional effectiveness
30. Evaluating instructional materials and methods.
31. Using evaluation data to revise instruction.

Provision of academic support services
32. Using available technologies to facilitate advising and tutoring functions.

Logistics
33. Distributing materials to students at remote sites (both by mail and electronically): procedures, deadlines, etc.
34. Presenting a positive image on ITV (attire, body language, etc.).
35. Working within the allotted time for class sessions and presentations (knowing when to start class, when to end class, etc.).
36. Managing assignments and exams returned from sites.

Application of learning and adult education theories
37. Applying learning theory to increase motivation, understanding, and retention.
38. Accommodating diverse learning styles.
39. Identifying and accommodating the needs of the adult learner.

Table 2.  
Summary of Skill Rankings by Distance Education Faculty and Staff (Mean)

Faculty with no ITV experience

Greatest agreement --
4.80  Incorporating videotape productions
4.67  Communicating with remote site students during class and at other times
4.50  Planning television graphics
4.50  Using e-mail and computer conferencing for instruction
4.50  Using technology for advising and tutoring
4.40  Distributing materials to remote students

Less agreement --
4.20  Integrating videodisc technology
4.00  Developing a student manual
4.00  Using questions effectively
4.00  Assessing students' performance in large classes
4.00  Evaluating materials and methods
4.00  Accommodating learning styles and needs of adult learners
3.83  Incorporating interactive strategies
3.83  Managing assignments and exams returned from sites
3.83  Applying learning and adult education theory
3.83  Assessing prerequisites
3.80  Personalizing experience for remote site students
3.80  Using evaluation data to revise instruction
3.80  Producing television graphics using computer software
3.75  Using computer software for producing paper-based materials (desktop publishing, etc.)
3.60  Converting goals into lesson objectives
3.50  Identifying sources for instructional materials
3.50  Selecting appropriate technologies
3.50  Developing an effective course syllabus

Faculty with one course experience

Greatest agreement --
4.57  Obtaining copyright clearance
4.50  Distributing materials
4.00  Accommodating learning styles and needs of adult learner

Less agreement --
4.29  Assessing students' performance in large classes
4.25  Incorporating interactive strategies
4.00  Selecting appropriate technologies
4.00  Communicating with remote students during class
3.86  Communicating with remote students during non-classroom times
3.83  Using e-mail and computer conferencing for instruction
3.75  Planning effective television graphics
3.71  Using computer software for producing paper-based materials (desktop publishing, etc.)
3.71  Using questions effectively
3.71 Incorporating videotape productions
3.71 Assessing prerequisites
3.67 Presenting a positive image on ITV
3.63 Developing an effective course syllabus
3.63 Developing a student manual
3.63 Identifying sources for instructional materials
3.63 Personalizing the distance learning experience for remote site students
3.63 Producing television graphics using computer software
3.60 Managing assignments and exams returned from sites
3.60 Applying learning theory
3.50 Integrating videodisc technology

Faculty with two or three courses experience

Greatest agreement --
4.50 Personalizing the distance learning experience for remote students

Less agreement --
4.00 Communicating with remote students during class and at other times
4.00 Planning graphics
3.92 Assessing student performance in large classes
3.75 Incorporating interactive strategies
3.75 Obtaining copyright clearance
3.70 Incorporating videotape productions
3.67 Presenting a positive image on ITV
3.67 Using e-mail and computer conferencing for instruction
3.67 Developing an effective course syllabus
3.58 Using questions effectively
3.58 Evaluating instructional materials and methods
3.58 Using evaluation data to revise instruction

Faculty with four or more courses experience

Greatest agreement --
3.83 Accommodating needs of the adult learner
3.67 Developing and using self-instructional materials

Less agreement --
4.17 Assessing students' performance in large classes
4.00 Incorporating interactive strategies
4.00 Using technology for advising and tutoring
4.00 Identifying sources for instructional materials
4.00 Obtaining copyright clearance
3.83 Developing an effective course syllabus
3.83 Planning effective television graphics
3.67 Personalizing the experience for students at remote sites
3.67 Communicating with remote students during class
3.67 Assessing prerequisites
3.67 Using evaluation data to revise instruction
3.60 Using questions effectively
3.50 Developing a student manual
3.50 Communicating with remote students during non-classroom time

Faculty overall
4.07 Communicating with students during class
4.07 Assessing students' performance in large classes
4.03 Personalizing experience for remote students
4.00 Communicating with students at other times
3.97 Incorporating interactive strategies
3.96 Planning graphics
3.94 Obtaining copyright clearance
3.82 Developing and incorporating videotape productions
3.73 Accommodating needs of adult learner
3.73 Using questions effectively
3.71 Developing an effective syllabus
3.70 Using e-mail and computer conferencing for instruction
3.70 Using e-mail and computer conferencing for instruction
3.64 Identifying sources of instructional materials
3.62 Presenting a positive image on ITV
3.58 Developing student manuals
3.55 Using technology for advising and tutoring
3.53 Using evaluation data to revise instruction
3.53 Accommodating diverse learning styles
3.52 Distributing materials

Student services staff

Greatest agreement --

4.88 Personalizing experience for remote students
4.67 Accommodating diverse learning styles
4.56 Planning graphics
4.50 Communicating with remote students during presentations
4.50 Presenting a positive image on ITV
4.50 Applying learning theory
4.50 Accommodating needs of adult students
4.17 Using technology for advising and tutoring

Less agreement --

4.29 Developing and incorporating videotape productions
4.00 Obtaining copyright clearance
4.00 Identifying and incorporating elements of an effective presentation
3.88 Producing television graphics using computer software
3.88 Developing a student manual
3.86 Distributing materials
3.83 Using questions effectively
3.83 Working within the allotted time for class sessions and presentations
3.83 Identifying sources for instructional materials
3.80 Converting goals into objectives
3.80 Selecting appropriate technologies
3.71 Using e-mail and computer conferencing for instruction
3.71 Communicating with remote students during non-classroom time
3.67 Formulating goals
3.67 Sequencing objectives for optimal learning and retention
3.60 Evaluating instructional materials and methods
3.60 Using evaluation data to revise instruction