Planning for the Next Wave: Assessing Current Faculty Distance Education Training and Development Needs

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Abstract

As part of a strategic effort to enhance support services for faculty engaged in distance education, a descriptive study was conducted to assess the perceived distance education training and development needs of faculty members at a southern region land-grant university. Results of the study indicated that those who responded felt distance education training should be conducted in a traditional format, such as a prescribed course or set of training materials, and that the best format would be self-paced training or a combination of formal, informal, and self-paced training. Respondents were almost evenly split on whether training should be mandatory or voluntary for faculty teaching distance education courses. Faculty respondents in this study, in almost equal measure, felt that training content should cover instructional design,

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technology use, and software use. They indicated that the most important skills for them to learn right now were Web editing/development and Web course tools. Concerns voiced most often were lack of time, lack of resources, and a need for ways to motivate faculty to take training and to teach distance education courses.

Introduction

The rapid growth of distance learning technologies designed to deliver academic programs has had a major influence on most facets of higher education over the past decade (Rahm & Reed, 1998; Trachtenberg, 1993). Certainly students and institutional administrators have been affected by the growth of distance education technology; however, it could be argued that faculty instructors may be the group that has been most impacted, in terms of substantive change in traditional roles, responsibilities, and experiences.

Although there has been a great deal of research directed at the distance education teaching and learning experience itself, less effort has been targeted at the process through which faculty instructors prepare themselves to teach in a mediated environment. Indeed, faculty training and development is a long-standing issue, and one that, although it transcends distance learning, has become more critical due to the rapidly evolving nature of distance delivery technologies.

Discussing ways in which to improve teaching in higher education, Dunkin (1986) called for more research on "teaching skills" in higher education, focusing on the efforts of faculty development agents. In 1995, Murphy and Terry pointed out that although the sender of information is a critical factor in the communications model, in distance education research, the "sender" (i.e., the faculty instructor), has been largely neglected. Miller and Carr (1997) argued that due to the unique characteristics of distance learning, professional development of faculty to teach at a distance was an important challenge of higher education in agriculture. Since that time, however, the evolution of new education technologies, including on-line distance education, combined with the growth and expansion of distance education programs at agricultural institutions of higher learning, has made it even more important to assess the

impact of institutional faculty development efforts aimed at training agricultural faculty to develop and teach effective distance education courses.

Conceptual Framework

Research has shown that there are a variety of perceptual and attitudinal factors that are involved in a faculty member's decision to adopt new instructional technologies (Spotts, 1999). According to Rogers (1995), the technology adoption process is influenced by perceptions of the social system or environment, characteristics of the innovation itself and the communication channels used to disseminate information about it. With respect to faculty training, Carl (1986) makes the point that it is not enough to provide a technological innovation to faculty and then turn them loose to figure out how to best use it.

The National Education Association (2000) stated that training and assistance is one of the benchmarks necessary for faculty to succeed in a distance education environment. However, as a cautionary note, Spotts (1999) indicated that if instructors are expected to use instructional technologies—including distance education technologies—they need both intrinsic and extrinsic motivations to do so, such as technical support, training support, time to implement what they learn, and recognition by the academic community and in the promotion/tenure process.

With respect to agriculture, Miller and Carr's 1997 needs assessment of academic deans and selected faculty in institutions interested in distance education training opportunities for agricultural faculty indicated that agricultural faculty were most interested in "teaching techniques, models of effective teaching, principles of teaching and designing instruction for credit courses" (p. 7). Surveyed faculty were least interested in learning about distance education hardware and software; planning, managing, and evaluating distance education programs; and site coordination and administration issues.

Purpose and Objectives

From the perspective of current faculty perceptions of their distance education training and development needs, it could be argued that current faculty might place more emphasis on training in Web-based on-line technology designed to facilitate

dialogue/interaction between instructor and student than they did before. It might also be assumed that faculty would have specific perceptions about ways in which training should be conducted in order to maximize their time and make best use of the resources available to them. Given the above, the purpose of this descriptive study was to assess the perceived distance education training and development needs of faculty members at a land-grant university engaged in a distance education program that has evolved to include both synchronous and asynchronous course delivery technologies. The primary objective was to describe respondents' perceptions as to the components, process and benefits/issues they associated with distance education training and development.

Methodology

The population for the study consisted of all teaching, research, and extension faculty in the University of Florida's (UF) College of Agricultural and Life Sciences interested in distance education training. In 1998, the university's agricultural distance education program, which has been in existence since the early 1990s, initiated an interactive two-way audio and video videoconferencing network composed of ten sites throughout Florida. Nine sites are located at agricultural research centers, and one is housed in the Institute of Food and Agricultural Sciences Communication Services facilities on the UF campus in Gainesville. Currently, in addition to video-conferencing, instructors also have the opportunity to use a variety of other interactive media for their courses, including on-line Web-based applications such as discussion forums, bulletin boards, chat, and multimedia.

To conduct the study, a 24-item survey, based on a thorough review of the literature, was developed and sent electronically to a convenience sample of faculty who subscribed to the college's faculty listserv. The survey, which included a series of ranked choice items and several open-ended questions, had been reviewed by a panel of faculty experts in an agricultural education and communication department for face and content validity prior to distribution. A follow-up reminder to respondents was completed one week after the survey was distributed via the listserv. Due to the nature of the study, procedures to control for non-response error were not considered to be a factor, based on the reasoning that those faculty

who responded represented those interested in distance education training and development, constituting a sample of faculty likely to have specific perceptions about perceived needs. This approach is consistent with Miller and Carr's 1997 study, which also did not control for non-response error, reasoning that "coaxing a reponse from faculty who were not interested in distance learning would have yielded inappropriate data" (p. 4).

Findings from this study were intended to be used to assist in institutional decision-making with respect to faculty training and development programs. Since the respondents were self-selected, findings cannot be generalized beyond this study; however, it can be reasonably assumed that the findings might provide distance education practitioners with an overall idea of what faculty currently perceive with respect to the content and skills they feel should be taught in a distance education training and development program.

Quantitative responses from the survey were analyzed using the SPSS data analysis program. In addition, qualitative responses obtained from open-ended questions were examined for common themes using the constant comparative technique (Glaser, 1978).

Findings

Of the 65 respondents who answered the survey, 60% were female and 40% were male. Additionally, 36.5 % held the rank of professor, 14.3% were associate professors; 22.2% were assistant professors, 4.8% were instructors, and 22.2% were county extension faculty. When asked if they would be interested in participating in a distance education training program if one were offered, 53 respondents indicated that they would be. Of the 12 who said they would not participate, six said they were not interested in teaching at a distance, four said they did not currently have a teaching appointment, one said his/her course did not lend itself to distance education dissemination, and one did not have the equipment necessary for distance education teaching.

Of the respondents who indicated that they were interested in distance education training, 19 (36%) said the training should take the form of formal training—a regularly scheduled prescribed course or set of training modules; four (7.5%) said

informal sessions—"brown-bag-type" meetings; 24 (45.3%) said self-paced/self-directed (CD-ROM-, videotape-, or Web-based); and six indicated "other," including a combination of formal, informal, and self-paced training. When asked which of these formats most appealed to them, 12 (22.2%) said formal, four (7.4%) said informal, 20 (37%) said self-paced, and 15 (27.8%) said a combination of self-paced, informal, and formal formats. Faculty were almost evenly split when asked if the training should be mandatory, with 51.9% saying it should be mandatory, and 48.1% saying it should be voluntary.

Faculty also said that the training should consist of both topics that are prescribed by trainers and those that are chosen by faculty members. Nine said the faculty member should choose the topic; two said the topics should be prescribed, with faculty having no choice; and 39 said the training program should be selected with a combination of chosen and prescribed topics. (See Table 1 for frequency responses.)

Table 1. *Distance Education Training Formats*				
	Format Training Should Take		Format that Most Appeals to You	
	Frequencies (n)	Percents	Frequencies (n)	Percents
Formal	19	35.8	12	22.6
Informal	4	7.5	4	7.5
Self-Paced/ Self-Directed	24	45.3	20	37.8
Combination			15	28.3*
Other	6	11.4	2	3.8
	53	100.0	53	100.0
*Tabulation of open-ended response.				

Respondents' Rankings of Training Components

When asked which of three content areas (instructional design, technology use, and software use) the training should consist of, 76% of respondents chose software use, including specific software applications; 73% chose technology training; and 62.7% chose instructional design (respondents could choose more than one item). Rankings for specific equipment

and technologies that respondents said they would be interested in learning more about were:

1. Computer multimedia,

2. Video delivered over the Web (streaming video),

3. Videoconferencing,

4. Digital photography, and

5. Audio production.

Faculty respondents were interested in learning about the following specific software applications (in order of rank):

1. Web development/editing,

2. Web course tools (WebCT),

3. Graphic animation software/photography manipulation,

4. Interactive on-line elements (chat rooms, bulletin boards),

5. Presentation software (PowerPoint),

6. Graphic design.

Faculty ranked the primary technology they would use in a distance education setting as follows:

1. WebCT,

2. Web,

3. Videoconferencing,

4. Video/audio delivered over the Web, and

5. Audio delivered over the Web.

When asked a follow-up question as to what skill level they saw themselves at with respect to the primary technology with which they planned to teach, responses suggested that many faculty perceived themselves as novices. In terms of skill level, 34 said they were beginners, 15 considered themselves intermediate, and only three considered themselves advanced.

When asked an open-ended question as to which technology or software was most important for faculty to master, respondents indicated that Web-related software was most

important. Mastering Web development/editing software was indicated by 16 respondents, followed in order by Web course tools (nine), and presentation software (five).

Respondents also indicated that they would like some latitude in the topics that would be included in a training program. Nine said a faculty member should choose the training topic, and two said the topics should be prescribed by an instructional designer, while 39 said the topics should be selected jointly by a person's choice and prescribed choices, and one had no opinion.

Training Formats and Incentives

Addressing the format trainings should take, faculty respondents indicated that they would like training sessions that occur occasionally and were held over several weeks or were self-directed. Few wanted day-long or full-week sessions (Table 2). The 23 faculty members not on the main university campus overwhelmingly said that they would prefer a self-paced training program by CD-ROM, the Web, or videotape.

Table 2. Length of Distance Education Training Program		
Length	Frequencies(n)	Percentage of Responses
Full day	4	7.8
Two full days	3	5.9
Full week	1	2.0
Series of sessions over several weeks	25	49.0
Self-directed, on faculty member's time	14	27.5
Other	2	3.9
Don't know	2	3.9
	51	100.0

With respect to incentives, responses ranged from financial and hardware and software incentives to release time, although the majority of respondents did indicate that, if given an option, they would prefer to receive graduate assistant support as an incentive to completing distance education training (Table 3).

Table 3. Incentives Faculty Would Like to Receive After Completing Distance Education Training		
Type of Incentive	Frequencies (n)	Responses
Financial incentive	6	12.2
Hardware	6	12.2
Software	4	8.3
Graduate student support to develop course	12	24.5
Graduate student support to execute course	5	10.2
Release time the semester prior to teaching course	7	14.3
Reduced course load during the semester the course is offered	3	6.1
Other	6	12.2
	49	100.0

Benefits and Issues of Training

In response to a series of open-ended questions, faculty members stated that they believe the university does receive benefits as a result of faculty completing distance education training. Faculty said that better interaction with students at a distance, better teaching methods, and more students accessing courses result from distance education training. The primary benefit for individual faculty members ranged from being able to reach more people, reducing their teaching load, and making a greater impact across the state to issues of personal satisfaction and professional development. In response to a question that asked respondents to indicate what they perceived to be the primary problem or issue critical to distance education training, respondents seemed to agree that it was lack of time and resources. Faculty members also indicated that incentives, motivation, and control over the distance education class were concerns.

Discussion/Conclusions

Faculty respondents in this study indicated overwhelmingly that they did need training in distance education. Although

they generally believed that training should be in a traditional formal format, such as a prescribed course or set of training materials, they also seemed to feel that the best format for them would be self-paced training or a combination of formal, informal, and self-paced training. Interestingly, faculty respondents were almost evenly split on whether training should be mandatory or voluntary for faculty teaching distance education courses.

Faculty in this study wanted the ability to select or assist in the selection of distance education training topics. They felt that training should be conducted in short sessions and over several weeks. Incentives should be in the form of graduate assistants to help faculty prepare for and execute the course, and release time to plan for and implement the course.

Extending from the Miller and Carr (1997) study, faculty respondents in this study, in almost equal measure, felt that training content should cover instructional design, technology use, and software use. And, perhaps in recognition of the major impact on-line interactive technologies have made in distance education, faculty indicated that the most important skills for them to learn right now were Web editing/development and Web course tools. Concerns voiced most often were lack of time, lack of resources, and a need for ways to motivate faculty to take training and to teach distance education courses.

Because time commitments and constraints are a concern, faculty in this study wanted training that fit their schedules. They wanted short workshops, held over several weeks that would not take large portions of their time. Self-paced training, especially, was preferred.

As a result of this needs assessment, several potential recommendations for distance education training program development could be made:

- Conduct training programs in short sessions/workshops over several weeks.

- Implement self-paced modules, using CD-ROMs, the Web, and/or videotapes.

- Allow faculty members to select some of the topics, but provide prescribed courses/programs as part of a faculty member's overall training program.

- Provide content in instructional design, technology use, and software use.
- For faculty who will teach on-line, emphasize Web development/editing software and Web course tool software packages.
- Provide training at various knowledge levels (beginner, intermediate, advanced), but focus more efforts on beginners until all faculty have similar, adequate knowledge.

In addition, training and development specialists and university administrators may want to look at ways to provide increased incentives to faculty who complete distance education training. Based on the results of this study, these incentives do not have to be costly. Incentives in the form of graduate assistant support and release time for faculty to design and execute their distance education course seem to carry the most weight with faculty overall. Other, less tangible but perhaps more difficult to implement incentives could include academic recognition and weight given in the promotion/tenure process.

In general, this study supports what distance education researchers have expressed for some time: training is critically important to adequately prepare faculty for the distance education environment. Faculty want quality training, the focus of which may continue to change along with the rapid evolution of distance education technologies. Faculty believe such training will improve them personally and professionally, providing an intrinsic reward. However, faculty members also note that to be able to implement what they have learned, they need time, resources, and extrinsic motivation in the form of incentives (graduate assistant support, release time, recognition, financial rewards, hardware, or software).

This suggests that although intrinsic motivations are important, university administrators must think carefully about establishing extrinsic rewards and motivation if they want to be successful in encouraging faculty to make full use of the technologies and training available. As one faculty member said, "The trial and error methodology many of us use in upgrading our computer skills is time-consuming and at times quite frustrating. This is not a minor problem and there are no short and easy answers; however, that seems to mean that we

need to transfer the technology more efficiently and effectively, but with appreciation for the broad diversity of the faculty, the subject matter and the students. This may mean there are no quick fixes, but there are likely some things that can and should be done."

Kekwords

Distance education, faculty training, technology training.

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