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The World Wide Web: A Training Tool for Family Resource Management Educators

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The World Wide Web: A Training Tool for Family Resource Management Educators

Abstract

Cooperative Extension has actively explored new technologies as a means to provide education to its own staff and the general public. The study reported here concerned the development of a Web site used for Extension family resource management training. The study found that Extension educators use the Web for information and support using it for training. Educators appreciated having links that could be considered reliable and accurate. The data also suggest that such sites can provide a "refresher" to the in-service material, thus reinforcing the learning experience.

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Introduction

The mission of the Cooperative Extension Service is to provide education beyond the walls of the land grant universities. In performing that mission, the traditional Cooperative Extension System (CES) model has been to provide face-to-face programs. This method, however, is costly in terms of time and travel, especially when facing decreasing or static resources.

Over time, the Cooperative Extension Service has taken advantage of other technologies, such as films, slides, conference calls, video programs, satellite links, CD-ROMs, and computer-aided programs, as methods of educational programming. The exploration of new technologies continues as CES now explores the use of the World Wide Web or Web or Internet as a potential educational tool (Buck, 1995; Fasulo & Koekler, 1995; Fulton, 1992; Kelsey & Mincemoyer, 2001; Tennesen, PonTell, Romine, & Motheral, 1997).

In addition to educating the general public, CES must provide inservice educational programs to equip educators to meet the changing demands of their positions. In doing so it has used the same tools that have been used with the general public. Again since its introduction, Extension professionals are evaluating the possibility of using the Web for inservice training (Kelsey & Mincemoyer, 2001; Levine, 1995; Lippert, Plank, Camerato, & Chastain, 1998; Risdien, 1994).

The purpose of the study reported here was to determine the usefulness of the Web as an effective

learning experience for inservice training. The study also explored whether Extension educators would use a Web training site for on-going support and reinforcement. The study also considered if such information would also be useful to the general public. Issues regarding the resources necessary to undertake such a project are discussed at the conclusion of this article.

Background

Distance education is an important issue being evaluated on most university campuses. Congress defines distance education as "an educational experience where the delivery of information or instructional programming is made to geographically dispersed individuals or groups" (U.S. Congress, 1992). Current and prospective students are interested in the use of such technology as a means to receive initial and continual life-long learning. This technology is appealing because it allows students to proceed through courses at their own pace without the expense of time and travel. With the increasing need for skill and knowledge updating, the expanded use of distance education can be anticipated (Krendl, 1998; Porter, 1997).

Distance education is certainly not new. The oldest form, correspondence courses, began in 1892 (Robertson & Stanforth, 1998). As technology has changed, the ways in which distance education is offered have also changed (Miller & Scholsberg, 1997). The problem with earlier distance educational methods was that the classes were somewhat inflexible and that they were synchronous in nature, with all students watching or listening to the class at the same time. Another criticism of distance education has been the limited amount of interaction allowed (Robertson & Stanforth, 1998).

As new telecommunication tools arise, educators have explored how they can respond to students' desires in terms of offering education when and where the student wants it. Today, the Web is viewed as the distance educational tool for the new millennium. It represents a new pedagogy of learning. It is the fourth major communications medium after word-of-mouth, the printed word, and broadcast media (O'Neill, 1999). Whether used to supplement existing courses or as the primary communication medium for an entire course, Web-based courses are receiving great interest (Halal & Liebowitz, 1994; Kerka & Wonacott, 2000; Lippert, et al., 1998; Miller & Schlosberg, 1997).

The Web offers asynchronous learning meaning that students can interact with each other as well as the instructor. The Web also allows the student to take the course when and where they want. Being an asynchronous tool allows for an educational experience that is self-paced by the students, meeting at times convenient for them, and potentially "just-in-time" to meet their needs (Tennessee, et al., 1997).

The Cooperative Extension System, as part of the land grant university system, has used distance education tools when they have been introduced. These tools were critiqued on their ability to effectively provide information in a timely, cost-efficient manner (Fitzpatrick, Duncan, Williamson, & Smith, 1997). Such tools were used not only for educational programs with the general public but also were evaluated as possible inservice education methods (Lippert, et al., 1998).

Today, Cooperative Extension is using the Web with increasing regularity for providing general information and is slowly beginning to use it as a method to provide seminars and workshops. Effective use of such interactive media allows the student to access data from a wide variety of resources now available on line (Mayadas, 1997). This includes traditional written material plus video, audio, and full-color pictures (Halal & Liebowitz, 1994).

Web-based training sites help with one of the problems developing with the Web, that of information overload. With an estimated 800 million pages on the Web and over one million pages added per month, users find it difficult to know what information can be trusted. Even those who are comfortable using search engines become overwhelmed with data and uncertain of the information's reliability (O'Neill, 1997; Weber, 1998). Through the development and maintenance of an educational site with screened links, the Cooperative Extension Service can provide accurate, reliable, and research-based information.

The development of a Web site may also help overcome two problems associated with many training events. First, Web training is interactive. With active training, the student does not have to wait to return to his or her job before trying the new material. Students use the information gained as they learn it. Often students hear new ideas and intend to use them as soon as they return to the office, but then the person's regular routine and backlog of calls often take precedence and the new material gets put aside (Tennessee, et al., 1997).

The second issue is the loss of information that occurs between the time the training is done and the information is used. Even if the person can begin to use the material the next day, some of the tips and ideas may be lost. With an accessible Web site, the student can return again and again to refresh his or her memory and to can actually go through the training again (Tennessee, et al., 1997).

This study continues the work of Lippert, et al. (1998) with a different audience and different subject material. Three new research questions are asked.

1. Can a Web site itself be the medium to train the educator on how to use the Web?

2. Can a Web site be used as for on-demand in-service training as opposed to being used only in a more traditional setting?
3. Can the training site later also serve as a reference site for trainees and the general population?

Methodology

Existing written educational materials developed and refined over the past several years were used as building blocks for the family resource management (FRM) site <http://www.okstate.edu/hes/fci/mbro/frm>. The materials were modified in content and design to make them interactive and to fit into a self-paced, learner-directed experience.

The intended design of the FRM site was that it would be simple to use, interactive, and student-centered, and would be useful as both an educational site and as a support site once the training was over (Dooley, Van Laanen, & Fletcher, 1999). The design also included attempts to make it visually appealing with color and graphics (Lippert, et al., 1998). The site design was kept simple to make it less confusing for new Web users, to minimize download time, and to reduce the time spent in its development and maintenance. Before it was used, a variety of individuals were asked to test the site to ensure its completeness and smooth operation.

The FRM site offers two different curriculums. Because it was anticipated that some educators might have had little experience with Web navigation, the first curriculum, a self-directed set of pages, guides users through the tools used to move within and between Web sites.

The second curriculum guides/tours educators through existing family resource management Web sites, including those developed by Extension, government, non-profits, and commercial entities. These sites were prescreened for usefulness, accuracy, and ease of use. Hundreds of such sites exist. It is unnecessary to duplicate these efforts. The purpose of the site was to select those considered the best in each category. These Web sites are introduced with a short (2-3 sentence) description. For some sites, additional information is provided suggesting how to use the site.

The initial use of the site occurred in a controlled environment in December 1998. Although the site can be accessed from any computer in the world having Web access, Extension educators were brought to central computer labs in two states, Montana and Oklahoma, for three in-services. After being guided to the first page of the site, the educator was then allowed to proceed at his or her own pace. The centralized site allowed the developers to be prepared to respond to remaining design issues. It also allowed the educators to exchange comments regarding the site itself and the usefulness of the other Web links. This allowed the researchers additional understanding about the use of Web sites as a potential training method.

Results

During the three in-services, 55 Extension educators received training on the FRM site. Sixteen educators, or 29%, completed the on-line feedback survey. In the next 3 months, five additional Extension educators provided feedback, as did three individuals from the general public.

As anticipated, the majority of respondents, 21, were county/area professionals. All but two of the visitors' were female. The ages of the visitors ranged from 29 to over 55.

The Web was already used by all the respondents as a source of information. Daily use was acknowledged by 76% of the respondents. The rest indicated they used the Web two to three times per week. Everyone indicated that their use of the Web was 100% business related. All respondents used the Web for e-mail, and 80% indicated they also used it for both research and education. One-third indicated they used the Web to make purchases, and one person used it to make travel reservations. The primary site to access the Web was from respondents' work office (76%) as opposed to the home (8%) or the general office area (4%).

All but one individual indicated that they planned to bookmark the site for future reference. Comments about the site indicated that educators appreciated it because: it was "information you could trust"; the site was "very helpful, organized" and had "frequently used information" and was "easy to follow." Also, the site provided links that were: "wonderful" and "easy to use." One participant noted that the site would be "basic information to refresh my memory." Another noted that the site should be required for every Extension educator.

In responding to what they looked for in a Web site, educators wanted useful information that was easy to use and read. One person commented that the site must "load quickly." This comment recognizes the fact that not all county locations have access to high-speed data lines and instead must use regular phone lines and slower modems. Care must be taken to limit large file size, usually images, graphics and pictures.

Discussion

The study supports the finding of Lippert et al. (1998) that Web sites can be a "feasible method of training." The respondents in this survey were highly favorable about this method. They

recognized the Web as a new communication medium, one that could save them travel time and keep them abreast of updated information practically instantly. They appreciated the links being already tested and available. Another positive comment was the permanent nature of the site. They no longer had to remember all of the links but could go to one spot to retrieve them when needed. As noted, every respondent already used the Web in his or her job. While limited by the small response rate and respondent in-service self-selection, the strength of the numbers seems to suggest that future Web-based training sites could be found useful and supportive.

Several respondents supported the concept of using the site as a training refresher. Over 90% of the respondents planned on bookmarking the site for future use. Because the site can be accessed anywhere, its continuation makes it an easy way for continuous reinforcement of the training. Everyone who has ever attended a workshop knows that, while intentions are good, when faced with the realities of the job it becomes easy to forget what was said or how to use what was learned.

The Web sites offer other advantages. They can be considered "just-in-time" education and can provide assistance around-the-clock, 7 days a week. Web sites allow educators to tap the tremendous amount of existing worldwide information. By screening the links, Cooperative Extension sites can continue the tradition of providing reliable and accurate information.

Limitations

There are several limitations in the study. The size of the respondent pool was small, and no information is available to determine if people did actually bookmark the site as they indicated. At the time the site was developed, the ability to track actual use was a technology limitation. Thus, no reliable data exists for the total number of site visitors. The only data about site contacts came from those who filled out the on-line survey and from comments made during the sessions.

These limitations make it difficult to offer more than brief comments about the site's ability to provide on-demand in-service training. As noted, the majority of the information gathered came from three planned in-service sessions. While the limited data received from Extension educators who visited the site on their own would suggest that it can, additional data is necessary before any strong support can be acknowledged. Also, any recommendation on such a site's usefulness to the general public is impossible with only three respondents. One individual from a financial institution commented that the site would "allow me to see what sites are being recommended in higher education." This same individual saw the sight as a support site to supplement training for the bank's internal training program.

Conclusion

Recognizing the level of resources necessary to develop such a site is important as one might plan to offer training via the Web. In this study, two state specialists and one county educator committed approximately 160 hours over an intensive 6-week period, typically during the evenings and on weekends and holidays. The time spent to build and test the site was in addition to the time already used to develop the original written materials and to search for all of the linked sites.

In addition, two other resource issues must be considered. The first, site storage, would not be an issue for most university-based professionals. However, the second, site maintenance, is a serious consideration. In this project, maintenance has proven to be a greater task in terms of hours expended. Not only is it necessary to continually update links, the developers of the site must search for new links and provide some change in the site. Today's Web consumer expects a site to reflect changes in the resources available and to renew visual appeal (Mayadas, 1997).

Several final notes are necessary for the educator thinking of using Web-based training. First, not everyone will have his or her educational needs met by a Web site. People learn in different ways, thus a Web site will not meet the needs to the entire population. Also, although Web-based learning can defray travel costs and time, there are the costs associated with acquiring technology. Finally, the speed with which one can connect to the Web must be taken into account in the site design stage.

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