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Teaching a Forage Crops Course to Extension Agents via Distance Education

Edward K. Twidwell

Louisiana State University, etwidwell@agctr.lsu.edu

Bradley C. Venuto

USDA-ARS, bvenuto@grl.ars.usda.gov



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Teaching a Forage Crops Course to Extension Agents via Distance Education

Abstract

An opportunity arose at Louisiana State University (LSU) to teach a forage ecology and management course over distance education to 30 Extension agricultural field agents. Many of these agents had not taken a college-level course in several years. All of the agents performed well in the course. While the distance education technology worked reasonably well in this course, the majority of the agents indicated that they would still rather take courses in a conventional classroom setting. Results of this teaching experience indicate that distance education technologies provide unique opportunities but that maintaining direct student-instructor interaction can be a challenge.

Edward K. Twidwell

Extension Specialist and Professor
Department of Agronomy and Environmental Management
Louisiana State University
Baton Rouge, Louisiana
etwidwell@agctr.lsu.edu

Bradley C. Venuto

Research Agronomist
USDA-ARS
Grazinglands Research Lab
El Reno, Oklahoma
bvenuto@grl.ars.usda.gov

Distance education via compressed video is an increasingly popular method of teaching college agricultural courses. This technology provides student access from remote off-campus locations. These courses have been well received, and student performance is similar to that in conventional classroom settings (Latour, 2003; Diebel, McInnis, & Edge, 1998). In 2000, an opportunity arose to teach a Forage Ecology and Management course over distance education to 30 Extension agents. This article discusses the experiences of the agents and instructors and presents an evaluation of the utility of this method of enhancing agent education.

Course Rationale and Methodology

In the spring of 1999, the LSU Agricultural Center developed a specialization program for Extension agricultural field agents. This program allowed agents to take five graduate-level courses in a given field of study, such as agronomy, animal science, horticulture, etc. Upon completion of the courses, the agent was granted "specialty status," with the potential of serving as a specialization agent for a multi-parish area. The forage course was selected as a core course for specialization in agronomy or animal science.

Because many of the agents had a 3- to 4-hour commute to campus, the course was taught in the spring semester of 2000 via distance education from a studio classroom located on the LSU campus. Agents had access to the class from seven remote sites throughout Louisiana.

The course consisted of 10 lecture sessions (one 3-hour block on Thursday evenings), two problem sets, one field trip, one group project, one mid-term, and one final exam. All lectures were tape-recorded, and notes were sent out via e-mail prior to each lecture. A course evaluation was given, and 90% were returned.

The problem sets were designed with the agents' current Extension responsibilities in mind. They were scenarios that were somewhat unfamiliar to the agents and were intended to improve problem-solving ability in the field of forages. The group project involved dividing the class into eight groups, with each group developing a 30-minute oral presentation. Each group had to analyze a forage-based production system that was unfamiliar to them. The Internet had to be the primary source of information.

Prior to the course, the instructors attended a 3-hour technical training session. However, a technician was present to assist the instructors and correct technical problems. Each location had a coordinator to assist with technical problems. The mid-term and final exams were proctored by the coordinators.

Agent Background and Response

Approximately half (52%) of the agents were specializing in agronomy. Most of the agents were over 25 and had M.S. degrees, primarily in vocational education or Extension education. Although many of the agents had some prior professional experience with forage crops and were able to apply this experience to the class, 24% had not taken a college-level class within the past 5 years.

The majority of the agents indicated that the course was well organized (84%) and the topics were adequately covered (68%). The agents agreed it was helpful to have class notes prior to each lecture (92%). This allowed the agents to concentrate on lecture content rather than note taking. The agents indicated that they could apply the information learned from this course (88%). The majority of the agents indicated that the exams and problems sets were fair measures of student performance (96%).

The class was divided on the value of the group project, and only 44% thought it was worthwhile. The class was also divided as to the effectiveness of the distance education technology, and, when asked which type of setting they preferred, most (80%) chose the traditional classroom. However, a majority of the agents (68%) indicated they would take additional courses taught over distance education.

Challenges and Benefits

Challenges

1. It was difficult for instructors to assess, in real time, student attention and understanding of the lecture material.
2. Although this technology is interactive, the instructors observed that agents were reluctant to use the technology to ask questions. Attempts to encourage interaction were not highly successful.
3. Several students had difficulty maintaining their attention on a video screen for long periods.
4. The agents didn't appreciate the requirement to use the Internet as their sole source of information for course assignments, although these types of exercise have shown some positive benefits in other courses (Agarwal & Day, 1998).
5. Some agents were reluctant to present group projects orally to the entire class.

Benefits

1. Instructors, particularly those with research and teaching appointments only, can benefit by teaching and getting to know agricultural agents.
2. The course did successfully provide agents with formal training. The agents performed well and indicated that they would use information gained to assist in extension programs.
3. The agents' familiarity and use of the Internet for information access was enhanced.
4. The oral presentations provided the agents an opportunity to gain experience in using remote broadcasting. This experience could be quite valuable in the future as the use of technology is expanded to reach clientele groups (Schmidt, Swistock, & Sharpe, 2003; Swistock, Sharpe, & Dickinson, 2001).

Summary and Recommendations

Maintaining student focus and interaction can be difficult. The instructor needs to be very familiar with the equipment and should vary the lecture presentation as much as possible. When using PowerPoint or overhead notes, switch the camera back and forth to the lecturer. Stop and ask questions periodically to stimulate interaction.

The instructors would not have changed the group project. This was stressful for some agents, but data collection and presentation are an integral part of an Extension agent's responsibility. The problem sets could have been improved and modeled more closely to real-world case studies.

Despite challenges experienced by both the instructors and agents with the long distance education technology, this course was deemed a successful experience by both groups.

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