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# **Student Preferences for Academic Structure and Content in a Distance Education Setting**

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## **Abstract**

The University of Florida's Indian River Research and Education Center (IRREC) has been offering on-site and distance education courses in the areas of agribusiness management, horticultural sciences, and agricultural education and communication since 1998. A mail survey of current and potential students at IRREC was recently conducted. The survey focused on preferences for academic content and structure for agricultural programs, as well as explored respondents' interest in distance education. This research describes the preferences for course content and course structure in addition to the demographic characteristics of those respondents who indicated an interest in distance education. Several significant differences between those who prefer distance education and those who prefer live lecture are discussed. This information will guide IRREC as it strives to better meet student needs. Our findings could assist those in institutions considering expansion of, or the initiation of, distance education activities.

## **Introduction**

Higher education in America has always been characterized by frequent change. In its early years, the system was made up of small, private colleges for the well-to-do (Telg & Cheek, 1998). Over time, public-supported universities arose to provide education to all economic groups. The need for higher education continues to grow with the expanding population of the United States, and change in structure is inherent with this growth (Telg & Cheek, 1998).

Distance education, a developing educational delivery system, is an alternative to traditional classroom teaching. Telg and Cheek (1998) defined distance education as "two-way communication between teacher and student(s) who are separated by a geographical distance and/or time, where the communication is mediated by technology to support the educational process." Distance education is intended primarily to meet the educational needs of students prevented by work or family obligations from attending classes at traditional campus locations or class times. Miller (1997) indicated that distance education in agriculture continues to gain in popularity. However, minimal information exists about the characteristics of the students who enroll in these programs. Miller also suggested that distance students prefer to control the pace of their learning and prefer independent study. They also have less need for structured learning experiences and interaction with the professor or other students.

A number of studies have been conducted addressing the challenges that arise from distance delivery. Teaching courses at a distance requires considerable adjustments be made by both the instructor and the distance students (Hamilton, 1999). Some distance educators will be required to develop new skills in course planning and delivery (Jackson, 1995). Teaching styles must be adjusted to fit the requirements of distance delivery, while technology adds new challenges that require adaptations by both the instructor and the students (Batte, Forster, & Larson, 2001). This technology requires instructors to be aware of an audience that is not physically present (Diebel, McInnis, & Edge, 1998). Instructors need to ensure that these students, while not physically present, still remain fully integrated members of the classroom (Fenwick, Brick, Delaney, & Hicks, 1998). Although many instructors are initially reluctant to teach at a distance, a study by Murphrey and Dooley (2000) suggests that adequate administrative support together with proper training and incentives will encourage instructors to enter the realm of distance education.

The University of Florida College of Agriculture and Life Sciences offers distance education courses from its main campus, as well as from a number of branch research and education centers. One of these centers, the Indian River Research and Education Center (IRREC), located in Fort Pierce, Florida conducted a study of its current and potential students. The distance education courses available at IRREC are delivered by one of the following three methods or by a combination of these methods: interactive videoconferencing, videotape, and the World Wide Web (IFAS Communications, 2002).

The University of Florida supports continued evaluation and improvement of the programs it offers in order to ensure its ability to provide a high quality education to its students. Continued evaluation of its educational programs allows the institution to remain competitive (Osmond & Hoover, 1995). To that end, the purpose of this study was to collect information regarding student preferences for academic content and structure for agricultural programs and to explore respondents' interest in distance education. Data were also collected on participants' demographics, educational background, and employment history. The results of this evaluation will enable IRREC to tailor its distance programs to the needs and preferences of potential students.

## Methods

Evaluation of the distance education program at IRREC was conducted via a mail survey administered in April, 2001. The survey consisted of five sections, addressing participants' demographics (e.g., age, marital status), employment (e.g., employment status, type of business), education (e.g., previous education level, currently enrolled in courses), academic content (e.g., preferences for subject areas), and academic structure (e.g., preferences for day of the week, time of day). In addition, there was space provided for written comments by the respondent. The mailing list for the survey included students from the local community college, University of Florida students with hometowns in the local area, as well as local Chamber of Commerce members. These three groups were targeted since each would contribute valuable and varied information to the results of the survey. The University of Florida students have been exposed to upper level education at a major university. They know what they like and dislike about their experience and can provide insight into the structure of programs at IRREC. The local community college students have fresh expectations for their upper level college experience. Sharing these expectations will help IRREC tailor its programs to better fulfill these students' expectations. The local agricultural business owners employ a number of potential students of the Center and anticipate hiring IRREC graduates. These business owners know precisely what skills and knowledge they expect from their employees.

Of the 814 surveys mailed, 250 were returned, providing an overall response rate of 31 percent. Studies show this to be an acceptable rate of response (Kanuk and Berenson 1975, Alreck and Settle 1985, Harvey 1987, Weisberg et al. 1996). Data were analyzed with descriptive statistics, frequency analysis, and one-sided and two-sided chi-square analyses using SPSS, a statistical analysis software package (Norusis, 2000). Statistical significance was tested at the 95 percent confidence level.

## **Results and Discussion**

Results are reported for valid responses only. Twenty-one percent of the respondents (39 of 187) expressed a preference for distance education over the traditional live lecture method of course delivery. The first section of these results describes the demographic characteristics, employment, and educational history of the respondents who prefer distance education, as well as their preferences for academic content and structure. The second portion of the discussion identifies several significant differences between those respondents who prefer distance education and those who prefer live lecture.

### **Respondents Who Prefer Distance Education**

Fifty-six percent of the respondents who prefer distance education were male. Fifty-six percent were married, and 44 percent were single. A large majority (90%) were white. Most (64%) were between the ages of 26 and 50. These findings indicate that individuals interested in distance education were older than the typical college student. Respondents' annual household income did not affect the preference for distance education, as each of the three income choices (\$0-\$40,000, \$40,000-\$80,000, and \$80,000+) was equally represented. Interestingly, 56 percent of these respondents lived within 20 miles of IRREC. Hence, it appears that distance from IRREC was not a principal factor in their preference for distance education. Half of the participants (49%) lived in a city, while the remainder lived in the outskirts of a town or in a farming area.

A number of questions in the survey addressed the employment status of the participants. Almost all of the respondents (97%) reported that they were currently employed. Most respondents (60%) were employed in a non-agricultural business, and 38 percent categorized their position as professional/technical. Sixty-one percent of the survey respondents who prefer distance education indicated that the company they work for employed more than 50 people. This may reflect the fact that large companies frequently offer employees incentives for professional development. Almost half (49%) of the respondents have been employed by their company for fewer than five years.

The educational status of the participants was addressed by a number of questions in the survey. Most of the respondents (60%) stated that they have attended some college or have received an Associates degree. However, 63 percent of the respondents were not currently taking any courses. This implies that a large pool of potential applicants for IRREC may exist in the local area.

Responses to questions related to academic content provided insight into student preferences. When asked about their interest in internship opportunities, respondents were split between "interested" (36%), "not interested" (36%), and "do not know" (28%). Of the three subject areas offered at IRREC (agribusiness management, horticultural science, and agricultural education and communication), 41 percent of the participants preferred agricultural education and communication; while 38 percent said they preferred agribusiness management. Within the field of horticultural sciences, 39 percent of the respondents preferred citrus production and 35 percent chose environmental horticulture. The remainder were scattered over other horticultural science

fields. Of the subject areas not currently offered at IRREC, 18 percent of the respondents preferred landscape architecture. Other preferences included fisheries and aquatic sciences (14%), food science and human nutrition (14%), and wildlife ecology (14%).

Participants preferred coursework at the graduate level (42%) to coursework at the undergraduate level or a certification program. This is consistent with the results reported previously that it is the mature, working professional that has expressed an interest in distance education. Many respondents (43%) did not report a preference for course length. Of those that did have a preference, 67 percent preferred a course that was eight weeks or less, much shorter than the standard 16 week semester. No clear preference was indicated for season (time of year) or day of the week. There was a strong preference (59%) for evening courses, while 21 percent of the respondents preferred to take courses in the morning. When asked about their preferred method of interacting with their professor, 57 percent of the respondents preferred to use email, while 30 percent preferred face-to-face interaction. Sixty-nine percent preferred take-home tests to proctored exams. This preference for email and take-home tests is consistent with the nature of distance education. Numerous participants (43%) anticipated self-funding their education, while 24 percent anticipated receiving outside funding and 32 percent anticipated a combination of the two.

### **Differences Between Respondents Who Prefer Distance Education and Those Who Prefer Live Lecture**

Distance education caters to the non-traditional student and is not intended for every student. The fact that it is not appropriate for every student is widely accepted. Therefore, it is especially important to note the ways in which individuals who prefer distance education differ from those who prefer live lecture. Twenty-seven variables were tested to identify statistically significant differences between respondents who preferred distance education and those who preferred live lecture. Chi-square analyses at the 95 percent confidence level indicated significant differences between these two groups for the five variables described below (Table 1).

**Table 1. Frequencies for Variables Indicating Statistically Significant Differences Between Respondents Preferring Distance Education and Respondents Preferring Live Lecture**

Question and Responses	Respondents Preferring Distance Education <sup>y</sup> (%)	Respondents Preferring Live Lecture <sup>x</sup> (%)
<i>Which of the following age groups best describes you? (p=0.002)</i>		
0-25 years	15.4	45.2
26-50 years	64.1	37.7
50+ years	20.5	17.1
	100.0	100.0
<i>Which of the following best describes your employment status? (p=0.013)</i>		
Employed	97.4	80.8
Unemployed	2.6	19.2

	100.0		100.0
<i>How many persons are employed by this organization? (p=0.033)</i>			
0-50 Employees	38.9		59.1
50+ Employees	61.1		40.9
	100.0		100.0
<i>What level of coursework are you most interested in? (p=0.036)</i>			
Audit or Certification	27.8		17.6
Undergraduate	11.1		35.2
Graduate	41.7		35.2
Not Interested	19.4		12.0
	100.0		100.0
<i>Which of these testing methods would you most prefer? (p=0.043)</i>			
Proctored Exam	31.2		51.1
Not Proctored Exam	68.8		48.9
	100.0		100.0

<sup>z</sup> 95 percent confidence level.

<sup>y</sup> n = 39.

<sup>x</sup> n = 148.

Sixty-four percent of the respondents who prefer distance education were 26 to 50 years old. Only 15 percent of the respondents who stated a preference for distance education were 25 years old or younger. Forty-five percent of those who preferred the traditional method of live lecture were 25 years old or younger. These findings support the idea that younger students prefer the traditional method of course delivery, while older students prefer distance education.

Only 3 percent of those respondents preferring distance education indicated they were not currently employed. The other 97 percent who were employed may prefer distance education because job obligations could prevent them from participating in traditional classes. In contrast, 19 percent of those preferring live lecture were not currently employed.

Sixty-one percent of participants desiring distance education worked at companies with more than 50 employees. Forty-one percent of respondents who preferred live lecture work at companies with more than 50 employees. The difference in percentages may be because larger companies have provided their employees with avenues for professional development and may

have previously exposed them to non-traditional methods of education.

Coursework at the graduate level was preferred by 42 percent of those desiring distance education, while only 11 percent of these respondents preferred undergraduate level coursework. Equal numbers (35%) of those preferring live lecture were interested in coursework at either the undergraduate or graduate levels. This is consistent with the image of a traditional student as an undergraduate at a main campus of a university.

Tests administered without a proctor were favored by 69 percent of the respondents preferring distance education, as compared to 49 percent of those respondents preferring live lecture. This preference is consistent with the distance education students' desire for flexibility and minimal need for interaction with their professor.

## **Conclusions**

The results of this survey enabled the researchers to draw conclusions concerning a number of student characteristics and preferences for distance education. Respondents preferring distance education were older than those preferring live lecture. The professors at IRREC should cater their distance education courses to individuals older than the typical college student. Respondents preferring the distance education method of delivery were typically active members of the work

e typical employers of the respondents preferring distance education. The faculty and staff at IRREC should focus their distance education recruitment efforts on these large companies. Respondents preferring distance education would like courses at the graduate level. IRREC should offer additional distance courses at this level. Certification programs were the second preference of these individuals. IRREC should further examine the demand for certification programs, concentrating on subject matter and structure (length of program, etc.). Respondents indicating a preference for distance education would rather take examinations that are not proctored. Distance education instructors at IRREC should incorporate this preference into their course design.

This information, together with the previous research cited, will help the faculty and staff at IRREC with issues pertaining specifically to its distance education programs. Taking student preferences into account will enable IRREC to attract greater numbers of new students and provide an improved educational experience to its current students.

While this study provided detailed information for IRREC, future studies should broaden their focus to include other branch campuses of the University of Florida, other land grant institutions, and/or other universities with distance education programs. Our findings could assist those in institutions considering expansion of, or the initiation of, distance education activities.

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*Online Journal of Distance Learning Administration, Volume VI, Number I, Spring 2003*

*State University of West Georgia, Distance Education Center*

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