

The Off-Campus Bachelor of Science in Professional Agriculture Degree Program: A Final Alumni Evaluation

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Abstract

The purpose of this study was to conduct a final program evaluation of the Bachelor of Science in Professional Agriculture Degree Program from the perspective of recent alumni. The typical graduate of the Bachelor of Science in Professional Agriculture degree program was male (54%), 46 years old, and took 60 months to complete the program. Most (87%) graduates had completed the program within six years. Graduates' highest-ranked factor for enrolling in the program was pursuing a degree followed by career advancement. Graduates were asked what specific aspects of the program that they liked best. The most frequently (65%, $n = 15$) cited strengths had to do with flexibility and convenience. The most significant obstacle faced by graduates was the limited number of course offerings, which was also the most frequently listed weakness of the program. It is recommended that persons responsible for distance education programs continue to pursue strategies (e.g. sharing course revenue with departments and faculty, sharing courses with other universities) that will ensure sufficient numbers and variety of courses.

Introduction and Background

Distance education has become an integral component of higher education institutions (Rovai and Downey, 2010; Lewis et al., 1997). The rapid adoption of online degree programs has led to reservations about program quality and completion rates by some administrators (Chau, 2010; Rovai and Downey, 2010; Lewis et al., 1997). Smith and Mitry (2008) questioned why certain universities (Temple University and New York University) had discontinued their online programs while others such

as the University of Phoenix continued to see rising enrollments and expansion of global programs (Chau, 2010; Cronin and Bachorz, 2005).

Students' decisions to enroll in distance education are complex and diverse. Students' characteristics and motivations play a pivotal role in their program selection. One of the concerns with distance education compared to traditional on-campus programs has been a lack of consistent interactions with expert faculty and cohort members resulting from the variety of challenges and time constraints not normally encountered by traditional college students (Hezel and Dirr, 1990; Kelsey et al., 2002; Miller, 1995; Miller and Miller, 2005; Patterson and McFadden, 2009). The development of asynchronous delivery technologies has been shown to reduce the negative effects associated with obstacles related to time, cost, and convenience of distance education (Miller and Honeyman, 1993; Owen and Hotchkis, 1991).

Administrators often find that distance degree programs are more costly than anticipated (Smith and Mitry, 2008). Taube et al. (2002) conducted a comprehensive evaluation of the University of Wisconsin's Collaborative Nursing program to identify issues related to cost and access, impact of the program, availability and quality of support services, and technologies/learning modalities. The University of Wisconsin's distance program relied on combined resources of the five UW nursing programs plus additional support from the UW-Extension program (Taube et al.). Taube et al. noted that this program had been offering courses since 1996 with 184 nurses graduating from the program in 2001. Smith and Mitry (2008) argued that providing courses with lower enrollments at a distance that are of equal quality to on-campus courses

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with larger enrollments is not cost effective because the per student variable costs are lower in large classrooms. The use of reputable faculty members who are recognized as experts in their fields to provide instruction for a few students at a distance is a large expense associated with online programs (Smith and Mitry, 2008). With low student enrollment, administrators may not be able to financially justify offering degree programs at a distance.

Iowa State University began offering a Bachelor of Science Degree in Professional Agriculture to distant learners in 1991. This was done to expand on its off-campus Master of Agriculture degree program which began in 1979. Both programs were created to extend educational opportunities in agriculture to persons who could not or preferred not to study on campus (Miller, 1995). A decision was made to begin phasing out the BS program in the fall of 2003. Difficulty in offering sufficient numbers and variety of off-campus courses at the undergraduate level was a major factor in the decision to discontinue this program. No students were admitted after summer 2003 and students who were already in the program had until the summer of 2009 to finish. Since program inception in 1991, 60 persons had graduated with a Bachelor of Science Degree in Professional Agriculture. With the closure of the BS program, a survey of recent graduates was conducted to provide a summative program evaluation focused on processes and outcomes (Fitzpatrick et al., 2004). Faculty and administrators associated with current or potential distance learning programs may be able to use this evaluation study to aid them in determining priorities for program design and/or improvement.

Purpose

The purpose of this study was to conduct a final program evaluation of the Bachelor of Science in Professional Agriculture Degree Program from the perspective of recent alumni. The objectives of this study included the following:

1. Describe demographic characteristics of individuals who graduated between summer 2001 and spring 2009 from the off-campus Bachelor of Science in Professional Agriculture degree program.
2. Describe program-related experiences of individuals who graduated between summer 2001 and spring 2009 from the off-campus Bachelor of Science in Professional Agriculture degree program.
3. Describe the perceptions of obstacles to off-campus study held by individuals who graduated between summer 2001 and spring 2009 from the off-campus Bachelor of Science in Professional Agriculture degree program.

Methods

Participants

This study was deemed exempt by the Iowa State University Institutional Review Board. The population for this study included 33 persons who earned a Bachelor of Science in Professional Agriculture degree from Iowa State University between summer 2001 and summer 2009. Names and contact information for these graduates were obtained through the Iowa State University Alumni Association. Lists were cross-checked for accuracy with graduation lists maintained by the Iowa State University Registrar's Office.

Instrumentation

The questionnaire used to collect data contained demographic questions, questions related to experiences with the degree program and a scale to measure perceptions of obstacles faced by off-campus students (Miller, 1995). Cronbach's alpha was calculated to estimate the internal consistency of the scale and resulted in a coefficient of .75 for data collected in 2009. A panel of faculty and graduate students in agricultural education judged the questionnaire to be content and face valid. Data were collected by mailed questionnaire.

Data Collection and Analysis

During the 2009 summer semester, all (N=33) individuals who earned a Bachelor of Science in Professional Agriculture degree at Iowa State University between summer 2001 and summer 2009 received a brief prenotice postcard individually signed by the co-principal investigators informing them of the study. A detailed information letter, questionnaire and return envelope were sent 3 days after the prenotice postcard. A brief reminder letter with a copy of the questionnaire and a return envelope were sent to nonrespondents 10 days after the detailed information letter. Ten days later, a second reminder letter was sent to the remaining nonrespondents. A final follow-up was conducted by telephone 14 days after the second reminder letter. The response rate was 72% (n=24). The researchers followed Lindner et al., (2001) recommendations for handling nonresponse. The protocol for comparing early and late respondents was used. No statistically significant differences were found. It was concluded that the results were generalizable to the target population. Data were analyzed with SPSS v.17 software. Descriptive statistics including frequencies, percentages, means, modes, medians, ranges and standard deviations were used to summarize the quantitative data.

Results and Discussion

The majority (54%) of the graduates from the off-campus Bachelor of Science in Professional Agriculture degree program were male. Graduates ranged in age from 29 to 60 years old. Their mean age was 46 years old (SD =9.63). The time to complete the off-campus degree program ranged from 12 to 240 months (see Table 1). Slightly more than half (56.5%) of the individuals responding took up to 48 months to complete the program. A component of evaluating the success of the off-campus program was determining if students are able to graduate in a timely fashion. As seen in Table 1, 57% of the graduates indicated graduating in four years after enrolling into the program. After 5 years, 79% of the graduates surveyed had completed the program and by 6 years 87% of the graduates surveyed had completed the program. Low enrollments coupled with extensive effort to advance students through the program influenced the decision to discontinue the off-campus Bachelor of Science in Professional Agriculture degree program.

Table 1. Time in Months Taken by Graduates to Complete the Off-Campus Program

Number of Months ^z	n	%	Cum. %
<25	5	21.7	21.7
25-36	3	13.1	34.8
37-48	5	21.7	56.5
49-60	5	21.8	78.3
61-72	2	8.6	87.0
73-84	0	0.0	87.0
85-96	0	0.0	87.0
97-108	0	0.0	87.0
109-120	0	0.0	87.0
>120	3	12.9	100.0

^zM = 60.17, SD = 50.09.

Graduates were asked to identify their occupation at the time they enrolled in their degree program and at the time they participated in this study (see Table 2). At the time of enrolling in the program, the occupation most frequently held by graduates was “farmer” (30.4%). At the time of the survey, the percentage of graduates holding the occupation of “farmer” remained steady at 29.2%. At the time of the survey, there were two graduates (8%) indicating an occupation in each of the following areas: “agribusiness,” “soil conservation” and “consulting.” There was a slight reduction in the number of graduates holding “agribusiness” occupations from the time of enrollment until the time of the survey. The percentage of graduates who reported an occupation in “other” areas increased from the time of enrollment until the time of the survey by 6.5%. Selected examples of “other” occupations indicated by graduates included Dairy Market Analyst for USDA, Insurance Agent, Mortgage Loan Processor and Sales Engineer.

Table 2. Occupation of Graduates at the Time of Enrollment and at the Time of the Survey

Occupation	At Time of Enrollment (n = 23)		At Time of the Survey (n =24)	
	n	%	n	%
Farming	7	30.4	7	29.2
Agricultural Extension	0	0.0	1	4.2
Agribusiness	3	13.0	2	8.3
Agricultural Education Teacher	0	0.0	0	0.0
Soil Conservation	2	8.7	2	8.3
Agronomist	0	0.0	1	4.243
Researcher	2	8.787	0	0.0
Consultant	0	0.0	2	8.3
Sales Representative	1	4.343	0	0.0
Rancher	1	4.343	0	0.0
Other	10	43.5	12	50.0

Note. The numbers represent the percentage of respondents who indicated employment in each occupation. Some respondents indicated more than one occupation.

Graduates were asked if occupational changes were influenced by earning the off-campus degree. The percentage of graduates who credited their degree with occupational changes was 58%. The number and diversity of “other” occupations being held by graduates may indicate that the off-campus Bachelor of Science in Professional Agriculture degree opened various career opportunities.

Graduates of the off-campus Bachelor of Science in Professional Agriculture degree program were asked to rank four motivating factors for enrolling in the program (Table 3). The highest ranked factor for enrolling in the program was to pursue a degree followed by career advancement, acquiring current technical knowledge and the enjoyment of learning. These motivation factors provided insight into the complex and diverse reasons that graduates enroll in distance education.

Table 3. Mean Rankings and Standard Deviations for Factors that Motivated Graduates to Enroll in the Off Campus Program

Motive	n	M	SD
Pursuing a degree	23	1.35	0.57
Career advancement	22	2.41	1.26
Acquiring current technical knowledge	22	3.09	0.92
For the enjoyment of learning new information	22	3.50	1.30

Results in Table 4 indicate that there was not a great need for graduates of the off-campus Bachelor of Science in Professional Agriculture degree to travel to campus. Most (83%) of the graduates came to campus ten or fewer times during the course of their program. Asynchronous methods such as videotape and later web-based courses have become very popular delivery tools which could have lessened the need for students to attend classes at specific places and times.

Table 4. Number of Times Bachelor Graduates Traveled to Campus for Reasons Related to the Off-Campus Program (n = 24)

Number of Times	n	%	Cum. %
0 to 10	20	83.3	83.3
11 to 20	1	4.2	87.5
21 to 30	0	0.0	87.5
31 to 40	2	8.3	95.8
41 to 50	0	0.0	95.8
51 to 60	1	4.2	100.0
> 60	0	0.0	100.0

Table 5. Graduates' Perceived Significance of 13 Obstacles to Off-Campus Study (n = 23)

Perceived Significance ^z	n	%	Cum. %
Insignificant	1	4.3	4.3
Moderately insignificant	3	13.0	17.3
Slightly insignificant	13	56.5	73.8
Slightly significant	6	26.1	100.0
Moderately significant	0	0.0	100.0

Note. Scale: 1=insignificant, 2=moderately insignificant, 3=slightly insignificant, 4=slightly significant; 5=moderately significant; 6=significant.

^z M = 3.01, SD = 0.73

Graduates of the off-campus Bachelor of Science in Professional Agriculture degree program were asked to rate the significance of 13 obstacles to off-campus study using a 6-point Likert-type scale with response options ranging from insignificant to significant. When examining the 13 obstacles together, there were only six graduates (26%) who perceived them to be slightly significant. The overall mean rating for all 13 obstacles was 3.01 (SD = 0.73). A more detailed account of graduates' perceptions of each of the 13 obstacles to off-campus study is provided in Table 6. The obstacle with the highest percentage of graduates indicating slightly significant or higher was "limited course offerings" (87%) followed by the obstacle "difficulty in balancing school, personal and work responsibilities" (65%). Just over half (52%) of the graduates indicated that "program cost" was a significant obstacle along with the obstacle "lack of scholarships" (52%). "Dealing with a number of different departments" (0%), and "faculty that did not understand student needs" (13%) had the fewest number of graduates indicating that they were significant obstacles.

Table 6. Percentage of Respondents Who Selected Slightly Significant, Moderately Significant, or Significant for Each Obstacle (n = 23)

Obstacle	n	%
Limited number of courses offered.	20	86.9
Difficulty in balancing school, personal, and work responsibilities.	15	5.1
Lack of scholarships.	12	52.2
Cost of the program.	12	52.2
Attending sessions held on campus.	10	43.5
Lack of access to library facilities.	10	43.5
Lack of access to instructors.	9	39.1
Course offerings did not fit needs.	8	34.7
Lack of access to other students.	8	34.7
Accessing financial aid at the University.	7	30.4
Prerequisites required for classes.	7	30.4
Faculty did not understand student needs.	3	13.0
Dealing with many different departments on campus	0	0.0

Graduates were asked to indicate how satisfied they were with the program on a scale ranging from "very dissatisfied" to "very satisfied." Half (50%) were very satisfied, 46% were satisfied, and 4% were somewhat dissatisfied. Graduates were asked what specific aspects of the program that they liked best. Responses came from 23 different graduates. The most frequently cited strengths had to do with flexibility and convenience (n=15). One graduate commented that "I could do my class work when my time permitted" while another wrote that "it allowed me to complete a degree program without being in Ames." Quality instruction and advising were mentioned as positive program aspects seven times. One student wrote "*the teachers/professors were excellent to understand and learn under. Some of my professors I still read about in the local ag newspapers, farm magazines, etc.*" Twenty one graduates commented on aspects of the program that were liked least. The lack of courses clearly stood out as a weakness and was mentioned seven times. One student wrote "the ability to choose different classes for the requirements" and another stated "*the lack of different courses. Often it seemed the courses were geared towards crop science and not towards animal science.*" Less frequently cited weaknesses included slow response to questions by some instructors (n=3) and technical problems (n=3).

Summary and Recommendations

The reader is encouraged to exercise caution in generalizing the results to other settings. The off-campus Bachelor of Science in Professional Agriculture degree program was successful in extending educational opportunities in agriculture to distant learners. The program served a diverse clientele of adults with an almost equal number of males and females graduating between 2001 and 2009. Graduates overall were satisfied with the program and gave it credit for positive occupational changes. Regarding process, the program offered convenience and flexibility that was much appreciated by graduates. Faculty and advisors did a good job of working with students in the program. The most significant obstacle faced by graduates was the limited course offerings which was also the most frequently listed weakness of the program. Difficulty in offering sufficient numbers and a variety of off-campus courses at the undergraduate level was a major factor in the decision to discontinue this program. The College of Agriculture and Life Sciences at Iowa State University no longer offers the off-campus Bachelor of Science in Professional Agriculture degree program, but it has expanded the emphasis on distance learning at the master's degree

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level to include programs in Community Development, Agriculture, Agricultural Education, Agronomy, Seed Technology and Business. Rovai and Downey (2010) described that distance education programs are facing increased pressure from globalization of higher education resulting in competition for students that has led to added pressures for controlling costs and rising tuition. They noted that to reduce the likelihood of economic failure online programs must be able to successfully adapt to this environment. Rovai and Downey (2010) noted seven factors to help determine the success of online higher education programs which include planning, marketing and recruitment, financial management, student retention, faculty development, online course design and pedagogy. We recommend that persons responsible for these graduate programs continue to pursue strategies (e.g. sharing course revenue with departments and faculty, sharing courses with other universities) that will ensure sufficient student numbers and variety of courses. Additionally, we recommend that future program administrators focus on ensuring students are able to complete an off-campus program in a timely fashion to allow for enrollment of new cohort groups. This will ultimately determine program sustainability.

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