

DO OFF-CAMPUS COURSES POSSESS A LEVEL OF QUALITY COMPARABLE TO THAT OF ON-CAMPUS COURSES?

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Abstract

The purpose of this study was to describe and compare perceptions of the quality of on-campus and off-campus courses held by students enrolled in courses offered through the College of Agriculture Off-Campus Professional Agriculture Degree Programs ($N=173$) and faculty members with teaching responsibilities or with teaching experience in the same college of agriculture ($N=262$). Faculty and students provided a positive assessment of the overall quality of both on- and off-campus courses. They also provided a positive assessment of both on- and off-campus courses on the manufacturing-based user-based value-based and transcendent-based quality factors. Even so, both students and faculty perceived off-campus courses to be of lower quality than on-campus courses with the greatest difference on the transcendent quality factor. It was recommended that the focus for improving the quality of off-campus courses be on the manufacturing-based factor. When the production and delivery processes are handled correctly and aligned to achieve outcomes based on student needs, off-campus courses will be recognized for innate excellence (transcendent quality). If quality off-campus courses in agriculture are to be offered, special attention must be given to improving the production, quality control, and distribution systems for courses and course materials,

Introduction

Increasing competition, costs, and accountability are driving forces behind an intensifying emphasis on quality in education (Seymour, 1993). This focus on quality is also intensifying in the distance education realm. In fact, Olcott (1991) emphasized that the quality of off-campus courses is a universal concern among the stakeholders in education. Although quality in education has been identified as a primary concern, it has not been well defined. The traditional indicators of quality that academic institutions identify include: entrance standards, famous graduates, reputation rankings, and/or the presence of distinguished faculty (Seymour, 1993; Verduin & Thomas, 1991). However, these indicators measure the quality of academic institutions, not the quality of the educational experience at the course level.

Quality of education is a relative abstraction that reflects individual values, perceptions, and experiences between the student and the professor (Schwartz & Peterson, 1993; Seymour, 1993). Recognizing its relative nature, Garvin (1984) provided a measurable framework for defining quality. He identified five indicators of quality including: manufacturing-based, user-based, value-based, transcendent, and product-based. Manufacturing-based definitions emphasize the supply side and are mainly concerned with “conforming to requirements” (p. 28). These requirements are often the result of consumer preferences. User-based definitions focus on consumer preferences. In the user-based approach, products that satisfy consumer requirements are of highest quality. The value-based approach describes quality as performance at an acceptable cost. Transcendent quality is “innate excellence” (p. 25). In the transcendent

approach, quality is difficult to define because it is recognized only through experience. Product-based definitions identify quality as an inherent and measurable attribute.

Garvin's (1984) framework has been applied to studies (Gilbert, Keck, & Simpson, 1993; Schwartz & Peterson, 1993; Seymour, 1993) of quality in education. More recently, Miller and Shih (1998) used Garvin's framework to describe faculty members' perceptions of the quality of on- and off-campus agriculture courses. Miller et al. focused on faculty perceptions because Dillon and Walsh (1992) cited faculty resistance as a major obstacle to the success of distance education programs. Results of their study indicate that faculty perceived off-campus courses to be of lower quality than on-campus courses. Although Miller et al. examined faculty perceptions, it is important to also consider the perceptions of students. According to Schwartz and Peterson (1993), a focus on quality from the students' perspective is imperative for understanding the educational process.

Total quality management (TQM) in education advocates a focus on students' perspectives. In TQM, the customers' needs are paramount; the customers are the students. In fact, Sallis (1993) claims "the customers are the final arbitrators of quality and without them the institution does not exist" (p. 24). According to this TQM perspective, quality occurs when the students' needs are addressed. Students' needs are becoming the focus of quality as TQM increasingly is being implemented in education (Sallis, 1993). Who should determine quality? If quality reflects the individual values, perceptions, and experiences between the student and professor, then understanding the perceptions of both faculty members and students may provide insight into the quality of specific educational experiences. This insight may be particularly useful to educational decision makers who are interested in enhancing the quality of off-campus

courses.

Purpose and Objectives

The purpose of this study was to describe and compare perceptions of the quality of on-campus and off-campus courses held by off-campus students and college of agriculture teaching faculty. The objectives of the study were as follows:

1. Compare off-campus agriculture students' perceptions of the quality of on- and off-campus courses.
2. Compare and contrast off-campus agriculture students' perceptions of the quality of on- and off-campus courses with those of college of agriculture teaching faculty members.
3. Compare and contrast off-campus agriculture students' perceptions of selected off-campus student and course characteristics with those of college of agriculture teaching faculty.

Procedures

The populations for this study included students enrolled in courses offered through the College of Agriculture Off-Campus Professional Agriculture Degree Program during spring and fall semesters of 1997 and faculty members with teaching responsibilities or with teaching experience in the same college of agriculture during spring semester 1997. The coordinator of the Off-Campus Professional Agriculture Degree Program provided the list of students. Individual class lists were used to confirm that each student had truly taken their course(s) off-campus. The Dean's office provided the list of teaching faculty members, and departmental secretaries checked the list for accuracy. The target populations were composed of 173 students and 262 faculty

members. A census of both populations was conducted.

One might reasonably question whether these students and faculty had an appropriate frame of reference for assessing the quality of both on- and off-campus courses. In other words, had the off-campus students ever taken an on-campus course and were faculty perceptions influenced by whether they had any experience teaching off-campus? It was assumed that all off-campus students had taken on-campus college level courses. Considering requirements for entry into the Off-Campus Professional Agriculture Degree Program, it would be very unlikely that any of the off-campus students surveyed would not have completed an on-campus college-level course. To do so, students would have completed all freshman and sophomore level general education requirements through distance education. Doing so is not currently possible at this university. With regard to faculty perceptions, point biserial correlation analyses revealed that faculty perceptions of the quality of on- and off-campus courses had only negligible (Davis, 1971) associations with participation in faculty development programs related to distance education and experience with distance teaching.

The questionnaire, designed by Miller et al. (1998), included two Likert-type scales, 11 closed-ended questions, and 1 open-ended question. Four of Garvin's (1984) approaches (manufacturing-based, user-based, value-based, and transcendent) to defining quality provided the framework for developing the course quality statements included on the Likert-type scales. The scales had response options ranging from (1) strongly disagree to (5) strongly agree. One of Garvin's approaches was not believed to be applicable to this study. Product-based definitions of quality rely on the ability to objectively and precisely measure the extent to which a product possesses certain desirable characteristics. This approach assumes that a quality ranking of

products is possible based on the extent to which these desirable characteristics are present. This is especially problematical for college courses because it is also assumed that the characteristics are universally desirable. Students and teaching faculty were also asked to compare on-campus courses with those delivered through distance education technologies on five characteristics and to compare on-campus and off-campus students on six characteristics. A closed-ended question format was used for these comparisons. Students and faculty were also asked the following open-ended question. In your opinion, what are the most significant differences between on-campus and off-campus courses?

Off-campus courses in agriculture are offered through a variety of delivery modes at this university. Most involve a communications medium such as the World Wide Web, videotape, and/or the ICN (a state-wide fiber optics telecommunications system that connects students and teachers who are separated by distance and allows them to share in real-time video, data, and voice instruction). A much less common arrangement involves teaching off-campus courses in a more traditional setting at a site far removed from the university campus. For this study, neither faculty nor students were instructed to focus their thoughts about off-campus courses on a specific delivery mode.

Miller et al. (1998) established content and face validity for the questionnaire. They reported Cronbach's alpha reliability coefficients of .90 and .84 for the on-campus and off-campus course quality scales, respectively. They also performed test-retest reliability analyses for the 11 closed-ended questions. The percentage agreement for the five items used to compare on-campus courses with those delivered by distance education technologies was 75, and the percentage agreement for the six items used to compare on-campus and off-campus students was 95. Miller et al. developed the questionnaire and established

validity and reliability specifically for the teaching faculty population described in this study. The researchers concluded that the questionnaire was also suitable for use with the off-campus student population.

Data were collected from off-campus students in November 1997 and from faculty in February 1997. The questionnaire and a cover letter describing the purpose of the study were sent by U.S. mail to off-campus students and by campus mail to teaching faculty. Two complete follow-ups of nonrespondents were conducted. A postcard was sent to nonrespondents 10 days after the initial mailing encouraging them to respond, and a second mailing that included the questionnaire and a new cover letter was sent after 11 more days had past. Fifteen days after the last mailing to students and ten days after the last mailing to faculty, all subjects who had not completed and returned the questionnaire were considered nonrespondents.

Nonresponse error was controlled by randomly sampling 10% of the nonrespondents from each population and gathering data from them. Telephone interviews were used to gather data from the sample of nonrespondent off-campus students. Telephone contacts followed by fact-to-face interviews were used to gather data from the sample of nonrespondent teaching faculty. The chi-square statistic was used to compare respondent and nonrespondent data for the off-campus student population on six randomly selected items taken from the course quality scales. A t-test was used to determine if respondents and nonrespondents from the teaching faculty population differed significantly in their overall perception of the quality of on-campus and off-campus courses. No significant ($p < .05$) differences were found between respondent and nonrespondent course quality data in either the off-campus student or faculty populations. The chi-square statistic was used to determine whether respondents and nonrespondents provided

different results on the 11 closed-ended questions. No significant differences were found between the respondents and nonrespondents on the four randomly selected student and course characteristic comparisons for the off-campus student population. Significant differences were found on three of the five course characteristic comparisons for the teaching faculty population. These differences included relevance to students, amount of teacher-student interaction, and amount of student-student interaction. No significant differences were found on the six student characteristic comparisons for the teaching faculty population. Results were deemed generalizable to the respective populations, with one caveat. The reader is cautioned that findings for three of the five course characteristic comparisons may not accurately represent the perceptions of the faculty population. In total, 111 questionnaires were completed and returned by off-campus students for a response rate of 64.2%, and 142 questionnaires were completed and returned by faculty for a response rate of 54.2%.

All data were analyzed using SPSS for Windows personal computer program. Appropriate statistics for description were used including frequencies, percentages, means, and standard deviations. Since data were gathered from the population instead of a sample, inferential statistics were not used for comparisons. Student and faculty responses to the open-ended question were analyzed for common themes related to quality.

Results

Participating off-campus students and teaching faculty members were predominately male (71.6% and 93.6%, respectively). Off-campus students were on average 38 years of age, while faculty members were on average 50 years of age. Student respondents listed their primary occupations as: 28.2% in agribusiness, 24.5% in farming, 9.1% in agricultural education, 3.6% in

agricultural extension, 3.6% as full-time students, and 26.4% as other. Most (67.6%) of the students were master's candidates. A majority (60.3%) of faculty members were professors. In terms of off-campus course exposure, students had taken an average of 3.5 courses off-campus during the last 3 years, while faculty members taught an average of 0.6 course sections off-campus in the last 3 years.

Table 1 shows that off-campus students provided a slightly higher mean on the course quality scale for on-campus courses. Students perceived the greatest quality advantage for on-campus courses to be on the transcendent factor. In other words, when compared to off-campus courses, students agreed more strongly that on-campus courses project a positive image of the institution, have a reputation of quality, and are acceptable to the public. On-campus courses were rated higher than off-campus courses on the manufacturing-based factor and on 8 of the 12 items for that subscale. Regarding the manufacturing-based quality factor, students agreed that a variety of assessment procedures were used in on-campus courses but were undecided about off-campus courses. In addition, students strongly agreed that students assume responsibility for their learning in off-campus courses but only agreed with the statement when applied to on-campus courses. The item with the greatest mean difference on this subscale concerned instructor availability. Students more strongly agreed that instructors were available to students on campus. Students rated off-campus courses higher on the user-based quality factor and on four of five items from that subscale. Regarding the user-based factor, students agreed that off-campus courses were adjusted to meet student needs but were undecided about on-campus courses. Students perceived on- and off-campus courses to be almost equal on the value-based factor. They agreed that on-campus courses

provided quality instruction at an acceptable cost yet were undecided for off-campus courses.

Overall, faculty provided a slightly higher mean score on the course quality scale for on-campus courses than did students. The magnitude of the differences between student and faculty perceptions was small, however. Faculty provided a higher mean score than students on the value-based quality factor and each of the three items on this subscale. Faculty also provided a higher mean score on the user-based quality factor. Regarding user-based quality, faculty agreed that on-campus courses were adjusted to meet student needs while students were undecided. Students provided a higher mean score than faculty on the transcendent quality factor and each of the items on this subscale. Overall, students and faculty provided the same mean score for the manufacturing-based quality factor. Interestingly, students agreed that departments support courses while faculty were undecided (Table 1).

Students provided a higher overall mean score for the quality of off-campus courses than did faculty. They also provided higher means on 16 of 23 items from the course quality scale. The most notable differences in student and faculty perceptions were on the manufacturing-based factor. Students agreed that instructors were available to students, the learning environment was of high quality, students used instructor support, and departments supported courses, while faculty were undecided about each of these items. Faculty, on the other hand, agreed that a variety of assessment procedures were used in off-campus courses but students were undecided. Students provided higher mean scores on the user-based and transcendent-based factors for off-campus courses than did faculty. Faculty provided a higher mean on the value-based factor and agreed that students receive quality instruction at an acceptable cost in off-campus courses while students were undecided (Table 1).

Table 1. Means and standard deviations for perceptions of course quality

	Students				Faculty			
	On-Campus		Off-Campus		On-Campus		Off-Campus	
Factors and abbreviated items	Mean ^a	SD	Mean ^a	SD	Mean ^a	SD	Mean ^a	SD
Manufacturing-Based	3.96	.40	3.87	.56	3.96	.55	3.69	.55
Instructors know the subject matter well	4.36	.57	4.36	.60	4.40	.56	4.33	.64
Instructors are available to help students	4.06	.55	3.54	1.09	4.23	.65	3.19	1.02
Courses represent instructors' best efforts	3.98	.80	3.89	.97	4.12	.78	3.94	.92
Instructors effectively present information	3.98	.64	3.84	.81	4.07	.74	3.93	.81
Current information is presented	4.11	.59	4.19	.72	4.08	.75	4.08	.70
The learning environment is of high quality	4.02	.56	3.65	.89	3.99	.77	3.35	.88
Students assume responsibility for their learning	4.00	.65	4.52	.62	3.97	.83	4.17	.83
A variety of teaching methods is used	3.90	.69	3.81	.92	3.94	.78	3.62	.89
High-quality teaching materials are used	4.03	.61	3.96	.82	3.92	.76	3.89	.77
A variety of assessment procedures is used	3.69	.81	3.47	.93	3.80	.96	3.50	.97
Students use instructor support	3.53	.84	3.58	.89	3.49	.98	3.15	.86
Departments support courses	3.89	.76	3.60	.99	3.48	1.07	3.07	1.13
User-Based	3.83	.50	3.96	.55	3.92	.57	3.89	.62
Students are better off having taken the course	4.12	.63	4.22	.56	4.26	.67	4.21	.75
Courses are helpful to students' careers	4.07	.68	4.16	.60	4.21	.63	4.19	.73
Student needs are fulfilled	3.97	.51	3.72	.90	3.89	.70	3.70	.76
Courses are adjusted to meet student needs	3.47	.91	3.93	.86	3.74	.92	3.82	.92
Courses are adjusted to student interests	3.52	.86	3.77	1.01	3.50	.94	3.54	.92
Value-Based	3.86	.55	3.85	.66	4.09	.56	4.00	.62
Courses are valuable to students	4.07	.56	4.12	.62	4.17	.59	4.05	.66
Students receive quality instruction at an acceptable cost	3.71	.85	3.42	1.05	4.10	.73	3.88	.86
What is learned will have long-term usefulness	3.79	.76	4.01	.71	4.01	.81	4.06	.85

(table continues)

Factors and abbreviated items	Mean ^a	<u>SD</u>	Mean ^a	<u>SD</u>	Mean ^a	<u>SD</u>	Mean ^a	<u>SD</u>
Transcendent	4.14	.49	3.91	.62	4.08	.55	3.77	.67
Courses project a positive image of the institution	4.17	.54	4.00	.83	4.12	.70	4.04	.78
Courses have a reputation of high quality	4.16	.56	3.91	.76	4.10	.62	3.65	.86
Level of course quality is acceptable to the public	4.09	.62	3.83	.66	4.02	.74	3.65	.85
Overall Mean	3.94	.39	3.89	.50	3.99	.52	3.78	.54

^a1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree

Students and faculty responded to five closed-ended statements comparing distance education courses with on-campus courses. Table 2 shows that a majority of faculty and students perceived on- and off-campus courses to be equally relevant to students and they agreed that the amount of teacher-student and student-student interaction was less in off-campus courses. Faculty were more likely than students to indicate that less material was covered in off-campus courses, and were more likely to indicate that off-campus courses were more organized. The reader is reminded that significant differences were found between respondents and nonrespondents for the teaching faculty population on three of the five course characteristic comparisons. These differences included relevance to students, amount of teacher-student interaction, and amount of student-student interaction.

Students and faculty responded to six closed-ended statements comparing off-campus students with on-campus students. Table 3 shows that faculty were more likely than students to rate off-campus students lower on academic ability, background in prerequisite courses, the likelihood of completing the course on time, the likelihood of submitting assignments on time, and the likelihood of using library resources. Students and faculty provided similar ratings for on- and off-campus students on the level of relevant work experience.

Students provided a number of comments

that shed light on the issue of quality in off-campus courses. They were generally positive in the assessment of off-campus courses, but many comments indicate that there are areas in need of substantial improvement, particularly on the manufacturing-based quality factor. A selection of student comments follows:

These options are much better than no contact or furthering of one's education. . . . Many students of off-campus/distance learning would not ever receive a class after B.S. graduation were it not for these off-campus opportunities.

The classes are very high quality. It is the enrollment process and getting course planning advice that needs help.

The professor of our class doesn't seem to care too much about the off-campus students. We've taken two exams and it's about time for our third and we still haven't gotten our first one back. It's hard to stay motivated without feedback. I think if professors are willing to consider us as real students then the courses have the potential to be just as useful as on-campus courses.

Table 2. Comparing courses delivered by distance education technologies to courses taught on-campus

Factor	Less		Equal		Greater	
	S	F	S	F	S	F
Relevance to students	7.5	8.7 ^a	65.4	65.3 ^a	27.1	26.0 ^a
Amount of material covered	11.2	42.9	80.4	50.8	8.4	6.3
Level of organization	25.2	7.9	51.4	47.2	23.4	44.9
Amount of teacher-student interaction	70.1	87.0 ^a	22.4	9.2 ^a	7.5	3.8 ^a
Amount of student-student interaction	86.8	87.0 ^a	9.4	9.9 ^a	3.8	3.1 ^a

Note. Values presented are percentages. S = students. F = faculty.

^aData may not accurately represent perceptions held by the faculty population.

Table 3. Comparing students who enroll in off-campus courses with those who study on-campus

Factor	Less		Equal		Greater	
	S	F	S	F	S	F
Level of academic ability	3.7	30.5	72.0	62.5	23.4	6.9
Level of relevant work experience	2.8	4.6	17.8	16.8	79.4	78.6
Level of background in prerequisite courses	16.2	66.4	72.4	30.5	11.4	3.1
Likelihood of completing the course on time	15.1	39.2	64.2	56.9	20.8	3.8
Likelihood of submitting assignments on time	25.5	38.0	59.4	56.6	15.1	5.4
Likelihood of using library resources	80.2	87.0	8.5	11.5	11.5	1.5

Note. Values presented are percentages. S = students. F = faculty.

Courses taught on videotape are not monitored for quality prior to shipping to students ... In a recent lecture the camera slowly moved upward until the ceiling was the only thing that could be seen.

The biggest drawback I have seen is the inability of instructors to adapt instruction to the distance setting.

I wrote the professor e-mails asking questions and for clarification and never got an answer. The video class was poorly organized, the tapes were very poorly videoed, the printed materials came six weeks after the start of class and videos came three weeks after the start of class.

The off-campus class I am taking is very unorganized as far as syllabus content, test dates, and receiving our materials back. Instructor assumes we have Internet access, but we don't! The taped lectures we watch have poor sound quality and the camera isn't always focused. They are extremely boring to watch!

Conclusions and Recommendations

Faculty and students provided a positive assessment of the overall quality of both on- and off-campus courses. They also provided a positive assessment of both on- and off-campus courses on the manufacturing-based, user-based, value-based, and transcendent-based quality factors. Even so, both students and faculty perceived off-campus courses to be of lower quality than on-campus

courses with the greatest difference on the transcendent quality factor. Overall, results of this study strongly support the conclusions and recommendations made by Miller et al. (1998), while adding some additional insight.

Students indicated that off-campus courses were superior to on-campus courses on the user-based quality factor and equal to on-campus courses on the value-based factor. Faculty also rated these factors relatively high for off-campus courses. It was concluded that off-campus courses are fulfilling important educational needs. Faculty and administrators should maintain their commitment to providing courses that are adapted to the needs and interests of off-campus learners. Courses that are student-centered will more likely have long-term usefulness to the characteristically practical off-campus learner.

Students rated on-campus courses higher than off-campus courses on the manufacturing-based quality factor as did faculty. Relative to faculty, students were more positive about off-campus course quality. Clearly the focus for improving the quality of off-campus courses must be on the manufacturing-based factor. When the production and delivery processes are handled correctly and aligned to achieve outcomes based on student needs, off-campus courses will be recognized for innate excellence (transcendent quality). Based on faculty data, Miller et al. (1998) emphasized the need for faculty development and support to enhance quality. Their recommendation is supported by this study, but student data suggest that many needed improvements are beyond faculty control. If quality off-campus courses in agriculture are to be offered, attention must be given to improving the production, quality control, and distribution systems for courses and course materials. In addition, efforts are needed to enhance course enrollment policies and procedures. As the production and delivery of off-campus courses

improves, a reputation of quality will develop and enrollment will likely grow.

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Journal Paper No. J-18842 of the Iowa Agriculture and Home Economics Experiment Station, Ames, Iowa. Project No. 3265, and supported by Hatch Act and State of Iowa funds.