

Participant Motivation in Off-Campus Agricultural Credit Programs

Bruce E. Miller, Assistant Professor
Utah State University

There are many things that indicate agriculture has changed rapidly in the last ten years. Change occurs so fast that agriculture could overnight become something different from what it is today (Downey, 1986). Of the many changes agriculture experienced in the 1980s, some changes have been detrimental while others have been quite positive. One positive change is the greater opportunity for adults to obtain education in rural locations. This is mostly a result of the advancement of delivery system technology.

The College of Agriculture at Iowa State University has designed two degree programs to serve the higher education needs of rural adults: the Master of Agriculture and the Bachelor of Science in Agriculture programs. Both programs use some of the technologies common to "distance education" as well as "face-to-face" educational activities. Uplink satellite broadcasts, video-taped classes, audio-taped classes, and teleconferencing have been used in the off-campus programs. Both programs rely heavily upon personal interactions between students and professors. This multi-mode integration of delivery systems technology is somewhat unique within continuing education programs.

Off-campus credit programs in the College of Agriculture at Iowa State University were developed in response to the expressed needs of agriculturalists who were unable to come to the campus. These adults desired credit programs at the undergraduate and graduate levels. The Master of Agriculture and the Bachelor of Science programs were initiated in 1978 and 1987, respectively; however, the success and continuation of these programs is dependent upon participation. Hone (1984) found that the common denominator for success of rural post-secondary education programs was to directly address the needs and expectations of program participants. Christmas (1990) pointed out a need for identification of factors that motivate adults to participate in agricultural education programs. Birkenholz, Harbstreit and Law (1990) identified the following questions as a priority research question for the discipline of Agricultural Education. "What motivates adults to participate or not participate in adult agricultural education programs?"

Some of the early work on participant motivation in educational work was done by Houle (1961). Houle presented three motivational types: the "goal-oriented," "activity-oriented," and "learning-oriented."

Boshier (1971) conducted a study to test Houle's typology. The Education Participation Scale (PS) was developed using Sheffield's (1964) study and by examining Houle's (1961) *The Inquiring Mind*. Most recently, the EPS has been published as a 40-item scale cast on a four-point scale (Boshier, 1982). The scale has been factor analyzed and quantifies participant motivation.

Knowledge of the motivations of adult learners in a specific program may provide valuable insight into the kinds of learners the program attracts. This information could also assist faculty in developing appropriate experiences for adult learners as well as provide a guide for assessing the impact of educational programs in agriculture.

Purpose and Objectives

The purpose of this study was to determine the motivation for participation in off-campus programs. The specific objectives of this study were to: 1) identify the motivational orientations of participants in off-campus agricultural degree programs, and 2) compare differences in motivational orientations of participants grouped according to selected demographic factors: age, marital status, education level, occupation, previous collegiate experience, and program involvement.

Procedures

This study used applied descriptive research methodology. The population of interest for this study were all participants in the off-campus post-secondary degree programs in agriculture at Iowa State University. All persons who enrolled in courses during the academic year 1987-88 were included in the sample.

A nine-question information sheet was developed by the researcher to collect demographic and situational data. The Education Participation Scale (EPS) (Boshier, 1982) was used to determine the motivational orientations of the participants. The EPS is a 40 item scale scored on a four point response framework with 1 representing "No influence" and 4 "much influence." The items are distributed between six factors with factor reliability estimates ranging from alpha of 0.80 to alpha of 0.88. The six factors are:

Social Contact: Reflects a desire to develop or improve one's relationship with other people.

Social Stimulation: Reflects a need to find intellectual stimulation as an escape from routine or frustrating situations.

Professional Advancement: Reflects a need to improve occupational status or performance.

Community Service: Reflects a selfless concern for other people--many times reflected by a desire to participate in community affairs.

External Expectations: Reflects the presence of pressure to participate in educational activities from another person or circumstances.

Cognitive Interest: Reflects the view of learning as a way of life and the belief in the concept of learning for the sake of learning.

Appropriateness and permission to use this instrument for this study were discussed with the author. Preliminary copies of the demographic portion of the survey and the EPS were distributed to off-campus program administrators, professors in agricultural education, and graduate students for review.

Data were collected using two techniques. Data were collected from 130 participants at an on-campus event yielding 122 usable responses. Participants were asked to complete the surveys. They were informed of the voluntary nature and confidentiality of their responses.

A cover letter, survey instrument, and a self-addressed stamped envelope were sent to the 75 participants who did not attend the on-campus event. Fifty-five completed surveys (73%) were returned from the mailed data collection technique.

A total of 177 usable responses were gathered representing an 86% (177 of 205) response rate. Data were compared by collection method using a t-test yielding no differences ($p > .05$).

Results

Participant Characteristics

Over 60% of the individuals came from towns with populations of less than 2500. Most participants were male (91.0%) with the age category mode being 30-34. Most of the participants (69%) were married and had children at home. Production agriculturalists made up the largest occupational group of respondents, representing over one-half (51%) of the sample. Nearly two-thirds (64%) of the participants had a Bachelor's degree. Over one-half of the participants were interested in the Master of Agriculture degree (54%) and about one-third (32%) indicated interest in the Bachelor of Science in Agriculture degree. Forty-five percent of the participants were enrolled in a college credit course within the last year. Details of these characteristics may be reviewed in Table 1.

Table 1. Participant Characteristics

Characteristic	Frequency
Age (n=175)	
19-24	7
25-29	29
30-34	45
35-39	44
40-44	20
45-49	15
50-54	8
≥ 55	7
Marital status (n=176)	
Married (no children)	20
Married (children)	122
Single (no children)	32
Single (children)	2
Occupation (n=177)	
Production agriculture	91
Business	43
Government Service	32
Teaching	8
Other	3
Education level (n=177)	
< 2 years	8
> 2 , no degree	51
B.S.	114
Advanced Degree	4
Degree program interest (n=177)	
B.S.	57
Master of Agriculture	96
Not interested in degree	24

Motivational Orientations

This subsection addresses the research question: What are the motivational orientations of persons involved in the Iowa State University off-campus credit programs in agriculture?

Table 2. Means and Standard Deviations of Motivation Indicators by Factors (n=177)

Participation motivation indicator	Mean ^a .	SD
Social Contact Factor	1.73	.516
To share a common interest with my spouse or friend	1.77	.787
To be accepted by others	1.53	.709
To fulfill a need for personal associations and friendships	1.92	.811
To participate in group activity	1.79	.809
To gain insight into my personal problems	1.53	.739
To become acquainted with congenial people	1.94	.864
To improve my social relationships	1.63	.705
To maintain or improve my social position	1.71	.799
To make new friends	1.76	.791
Social Stimulation Factor	1.73	.529
To get relief from boredom	1.64	.802
To overcome the frustration of day to day living	1.56	.722
To stop myself from becoming a "vegetable"	1.78	.874
To escape the intellectual narrowness of my occupation	2.21	.969
To escape television	1.48	.709
To have a few hours away from responsibilities	1.42	.636
To provide a contrast to the rest of my life	1.89	.852
To get a break in the routine of home or work	1.71	.800
To provide a contrast to my previous education	1.92	.938
Professional Advancement Factor	2.58	.526
To secure professional advancement	2.96	.990
To give me higher status in my job	2.29	1.073
To supplement a narrow previous education	2.12	.981
To acquire knowledge to help with other educational courses	2.23	.908
To keep up with competition	2.40	.945
To increase my job competence	3.32	.726
To help me earn a degree, diploma, or certificate	3.12	.911
To meet formal requirements	2.12	1.094
Community Service Factor	1.94	.616
To become a more effective as a citizen	2.41	.787
To prepare for community service	1.70	.824
To gain insight into human relations	1.65	.747
To improve my ability to serve humankind	2.18	.878
To improve my ability to participate in community work	1.75	.801
External Expectations Factor	1.57	.501
To carry out the recommendation of some authority	1.51	.873
To keep up with others	2.16	.891
To escape an unhappy relationship	1.20	.544
To comply with the suggestions of someone else	1.56	.934
To comply with instructions from someone else	1.42	.720
Cognitive Interest Factor	2.88	.683
To seek knowledge for its own sake	3.28	.744
To satisfy an enquiring mind	3.09	.775
To learn just for the joy of learning	2.53	.966
To learn just for the sake of learning	2.64	.984

^a1=No influence, 2=Little influence, 3=Moderate influence, 4=Much influence

Data in Table 2 details the mean ratings of the statements by participants, grouped by factors. Factor means are included. "Cognitive interest" was given the highest rating by the sample group with a mean score of 2.88 (standard deviation = 0.683). "Professional advancement" was of next greatest importance with a mean score of 2.58 (standard deviation = 0.526). These two factors were the only factors rated between the descriptors "little influence" and "moderate influence." "Social contact," "social stimulation," "community service," and "external expectations" had mean ratings of 1.73, 1.73, 1.94, and 1.57, respectively. These factors were rated between "no influence" and "little influence."

Means, standard deviations, and t-values of factor ratings of the normative and sample groups are presented in Table 3. Group A was comprised of 12,191 adults enrolled in continuing education programs and constituted the normative group of the EPS (Boshier and Collins, 1983). Group B represented the sample of participants in the off-campus programs. The respondents' mean ratings of the factors were significantly lower in five of the six factors: "social contact," "social stimulation," "community service," "external expectations," and "cognitive interest." "Professional advancement" was rated significantly higher than in the overall population.

Table 3. Factor Means, Standard Deviations, and t-values of Sample and Normative Groups

Factor		Norm group n=12,191	Sample group n=177	t-value
Social Contact	Mean	1.89	1.73	3.58*
	Standard Deviation	.78	.52	
Social Stimulation	Mean	1.93	1.73	4.96*
	Standard Deviation	.75	.53	
Professional Advancement	Mean	2.28	2.58	-7.33*
	Standard Deviation	.83	.53	
Community Service	Mean	2.18	1.94	5.17*
	Standard Deviation	.86	.62	
External Expectations	Mean	1.72	1.57	3.90*
	Standard Deviation	.78	.50	
Cognitive Interest	Mean	3.03	2.88	2.82*
	Standard Deviation	.82	.68	

*Statistically significant at $p < .05$.

One-way analysis of variance tests indicated that no significant differences existed among factor ratings when classified by age. T-tests revealed that a significant difference existed on one factor, external expectations, when grouped by education level. Examination of the mean values indicated that persons who possessed a Bachelor's degree were more motivated by "external expectations."

Groups were categorized to reflect the following occupational groups: (1) production agriculture, (2) business, and (3) government service agencies. Table 4 displays the one-way analysis of variance differences in the mean factor ratings. For the Professional Advancement, External Expectations and Cognitive Interest Factors, significant differences were observed between the government and production agriculture and government and business group means.

Production agriculturalists rated the "professional advancement" factor the lowest (2.42) and government service personnel rated this factor the highest (2.99). An analysis of variance test on the group means indicated that highly significant differences existed among the group means. A Duncan Post-hoc test revealed a difference at the .05 level in factor rating between the participants who were employed in government service agencies, and those participants in business and production agriculture.

Table 4. Factor Means, Standard Deviations, F-ratios, and F-probabilities by Occupation

Factor		Production agriculture	Business	Government service	F-ratio	F-probability
		n=91	n=46	n=32		
Social Contact	X	1.76	1.74	1.65	.508	.6026
	SD	.52	.51	.49		
Social Stimulation		1.75	1.74	1.69	.151	.8601
		.52	.53	.56		
Professional Advancement		2.43	2.54	2.99	15.917	.0000
		.44	.50	.57		
Community Service		1.93	1.88	2.00	.365	.6950
		.60	.59	.70		
External Expectations		1.47	1.49	1.96	14.222	.0000
		.42	.42	.62		
Cognitive Interest		2.99	2.92	2.61	3.832	.0236
		.62	.76	.67		

Production agriculturalists had the highest mean rating (2.99) and government service personnel had the lowest mean rating (2.61) on the "cognitive interest" factor. Analysis of variance indicated that a difference in the factor means exist. A Duncan Post-hoc test revealed differences at the .05 level in levels of rating between government service personnel, and production agriculturalists and business persons.

No statistically significant differences, at the .05 level, in factor ratings were observed when grouped as to the last time enrolled in a college-credit course. The groups were determined a priori, to be: (1) collegiate experience within the last two years, and (2) collegiate experience more than two years ago or no collegiate experience. The researcher included persons with no collegiate experience in the group of students with collegiate experience more than two years ago as it was assumed that their educational approach would be similar and also that the number of students with no experience would be relatively low.

When participants were grouped by program involvement (1) Master of Agriculture degree-seeking, (2) Bachelor of Science in Agriculture degree-seeking, and (3) nondegree-seeking, significant differences at the .05 level were observed in three of the six factor rating levels. Differences were observed in the factors "social contact," "social stimulation," and "professional advancement."

The analysis of variance test for differences among means revealed that the factor "social contact" had means of 1.62, 1.85, and 1.51 for persons seeking a B.S., M.Ag., and nondegree seeking persons, respectively. The Duncan procedure indicated that significant differences existed between the M.Ag. and Nondegree seekers, and the M.Ag. and B.S. degree seekers.

Significant differences were found in the "social stimulation" factor. Differences were observed between the M.Ag. and Nondegree seekers, and the M.Ag. and B.S. degree seekers. Nondegree seekers had a significantly lower mean rating of the factor "professional advancement" than did persons seeking degrees, B.S. or M.Ag. The means were 2.25, 2.59, and 2.65, respectively.

Conclusions

The following conclusions reflect the major findings of this investigation:

Participants indicated that "cognitive interest" was the highest motivator for enrollment.

When compared to the normative group, the agricultural clientele were more highly motivated by "professional advancement."

Individuals who had at least a Bachelor's degree attributed a higher level of motivation to "external expectations."

Government service agency employees, as well as agricultural educators, rated the factors "professional advancement" and "external expectations" higher than did production agriculturalists or business persons. Conversely, business persons and production agriculturalists rated "cognitive interest" higher.

Master of Agriculture students rated the motivational factors "social contact" and "social stimulation" higher than the Bachelor of Science students or the nondegree seekers. The nondegree seekers also rated "professional advancement" lower than the Master of Agriculture and Bachelor of Science degree-seeking students.

Recommendations

Specifically, government service personnel, as well as agricultural educators, indicate a higher level of motivation attributed to "professional advancement" and "external expectations." Program planning for persons in these occupations should be tailored to specific requirements and/or needs.

Participants in this study who were seeking an advanced degree were more socially motivated. Contact between participants, and between participants and instructors should be encouraged, especially in graduate level courses.

"Cognitive interest" as a motivational factor can not be ignored. Courses must be offered which have general appeal to agriculturalists.

A review of the literature and research revealed few studies dealing with the unique respondent group selected in this study. The data reported in this study should therefore serve as a basis from which to compare similar respondents in future studies.

References

- Birkenholz, R., Harbstreit, S., & Law, D. (1990). Research priorities for adult education in agriculture in the North Central Region. Journal of Agricultural Education, 31(4), 32-38.
- Boshier, R. (1971). Motivation orientations of adult education participants: A factor analytic exploration of Houle's typology. Adult Education, 21(2), 3-26.
- Boshier, R. (1982). Education Participation Scale. Vancouver: Learningpress
- Boshier, R. & Collins, J. (1983). Education participation scale factor structure and socio-demographic correlates of 12000 learners. International Journal of Lifelong Education, 2(2), 163-177.

- Christmas, O. (1990, February). Institutional factors associated with the level of participation in adult agricultural education programs. Proceedings of Central Region 44th annual research conference in Agricultural Education. Chicago, IL.
- Downey, D. (1987). Micro-marketing. Paper presented at the National FFA Agri-Marketing Study Meeting, Millbrea, CA.
- Hone, K. (1984). Serving the rural adult: Inventory of model programs in rural postsecondary education. Manhattan: Kansas State University. (ERIC Document Reproduction Service No. ED 256-527).
- Houle, C. (1961). The Inquiring Mind. Madison: University of Wisconsin Press.
- Sheffield, S. (1964). "The orientations of adult continuing learners." The Continuing Learner. D. Solomon (Ed). Chicago: Center for the Study of Liberal Education for Adults.