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Learner Satisfaction with Pomegranate Production Extension-Education Courses in Yazd Province, Iran

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ABSTARCT

Nowadays, more attention is being paid to customers' satisfaction as funding decisions are made. Extension organization, which plays an important role in educating farmers, must know how far the learners are satisfied with its educational program. Accordingly, this study was conducted in Yazd Province (Iran) with the main objective of investigating the pomegranate growers' satisfaction with their extension-education courses. A survey method was adopted for the study and 150 people were selected as sample out of 478 learners participating in the courses from 2003-2004 throughout the province. A questionnaire was developed as the tool of study. The questionnaire was found to be valid and reliable (Cronbachs' alpha was 0.93). The results showed that the courses did not achieve many of their teaching objectives and were assessed as achieving their goals to a moderate extent. The contents of the courses were assessed as being comprehensive, applied, and new to a high, moderate, and low extent, respectively. The respondents are very satisfied with teachers' characteristics and with the locality and facilities of courses, but were satisfied with teaching methods to a low extent. They generally had a positive and favorable attitude towards the pomegranate extension-education courses. According to the study there were significant relationships between learners' satisfaction with courses and their annual income, pomegranate yield, pomegranate production, times of participation in courses, and attitude toward the courses. Stepwise regression analysis indicated that three variables, attitude toward the courses, pomegranate yield and pomegranate production totally accounted for 77.8 percent of variations in learners' satisfaction with the pomegranate extension-education courses.

Keywords: Attitude, Extension-Education courses, Individual characteristics, Learners, Satisfaction.

INTRODUCTION

Balancing reactive and issue-based programs continues to be a challenge to Extension faculty. It's a significant educational function because when adults seek information, they learn best. With the availability of electronic information transmission and a growing number of Master Gardeners, program assistants, and volunteers working in all aspects of Extension programs, answering client questions continues to consume a considerable amount of the time and energy of available staff (Warnock, 1992). As one county agent wrote, "the agent who gives good service stands out because he/she helped the customer solve a problem and left him or her with positive feelings (Williams, 1988).

Satisfaction assessment enables institutions to indicate strategically and tactically target areas most in need of immediate improvement. It facilitates the development of planning and intervention priorities specific to adult learners and it helps institutions examine student transactions with all major

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aspects of their experience, including academic, registration, and customer service (Anonymous, 2005).

In order to provide better learning experiences for adults in the future, agricultural teachers must understand to what extent adult learners are satisfied with their previous educational experiences. By collecting satisfaction data from adult learners on a regular basis, extension agents are able to determine where they are best serving these students and where there are areas for improvement.

An extension agent needs to identify all of the issues that are relevant to learners. These include their interaction with teachers, as well as the services they receive from staff and administrators; the resources provided to students; policies that are in place; and students' overall feelings about the value of the experience.

Satisfaction assessment can be further refined by capturing the learners' level of importance (or expectation). Importance ratings provide agents with valuable data on the areas that matter most to learners. With this in view, the agents can celebrate their strengths-those areas that have high satisfaction and high importance. Extension agents can also focus their improvement efforts on areas where satisfaction is low and importance is high, and not be distracted by low satisfaction areas that may not matter to adult learners (Anonymous, 2005). Furthermore, learners' satisfaction has been considered by many authors (Abdolmalaki, *et al.*, 2007; Parto Azam, 2004; Hosseini and Rivera, 2001; Hedaiati, 1999) as one of the main indicators of educational programs' effectiveness. The results of the study conducted to examine customer satisfaction in the Kentucky Cooperative Extension Service showed that participants were highly satisfied with the programs and services of the Kentucky Cooperative Extension Service indicating the effectiveness of extension servieces (Rennekamp *et al.*, 2001).

The main purpose of this study was to assess pomegranate growers' level of satisfaction with the extension-education courses. The more specific objectives of the study were to:

1. Describe the individual characteristics of the pomegranate growers;
2. Determine the pomegranate growers' attitudes towards the pomegranate extension-education courses;
3. Determine the relationship between learner satisfaction and the growers' individual characteristics; and to
4. Identify how much of the variance in learner satisfaction could be explained by independent variables in the study.

MATERIALS AND METHODS

The design of the study was descriptive-correlation which was carried out by a survey method. The population of this study consisted of all 478 pomegranate growers who participated in extension-education courses during 2003-2004 in Yazd Province which is located in the center of Iran. Through a proportional stratified sampling technique, 150 learners of the population were selected form the cities of Yazd Province as a sample for the study (Sarmad *et al.*, 2000). A questionnaire consisting of three parts was designed to collect the data needed for the study. In designing a suitable questionnaire for the study, the authors were aided by the Minnesota University Questionnaire (Berry, 1998). The first part of the questionnaire was related to information on the characteristics of learners, including their age, experience, education, land, annual income, production, number of participation in the pomegranate courses.

The second part of the questionnaire was oriented towards gathering data on learners' attitudes towards the courses. A set of 18 questions was designed to measure the learners' attitude. An overall attitude score for each respondent was assessed by computing and adding up all responses to 18 questions (based on a Likert's scale ranging form 1 to 5). The third part of the questionnaire was designed to measure the learners' satisfaction with the pomegranate courses. A

Table 1. Learners' general attitude towards the pomegranate courses.

Variable	Mean	Std. Dev.	C. V.	Rank
Teaching Objectives				
1. Learning correct method of storage	1.93	1.12	0.58	14
2. Learning to control pomegranate pests and diseases	2.32	1.24	0.53	12
3. Learning to prune correctly	1.97	1.48	0.75	18
4. Learning about fertilizers and fertilizing	2.95	1.69	0.57	13
5. Learning to propagate by slips	2.18	1.44	0.66	16
6. Learning about advantages of surface ploughing in summer	2.06	1.46	0.71	17
Teaching Content				
7. Clear and comprehensible content	4.06	1.20	0.29	7
8. Applied content	3.24	1.40	0.43	9
9. New content	2.86	1.29	0.45	10
Teachers' Characteristics				
10. Able to express (explain) content	4.16	1.09	0.26	6
11. Involving learners in discussion	4.12	1.05	0.25	4
12. Having a good behavior towards learners	4.30	1.08	0.25	3
Teaching Methods				
13. Using various methods	2.70	1.39	0.51	11
14. Applying proper method to present content	3.57	1.19	0.33	8
15. Using operational method	2.15	1.30	0.60	15
Courses' facilities, locality and time				
16. Facilities	4.06	1.04	0.26	5
17. Locality of courses	4.17	0.77	0.18	1
18. Time of courses	4.26	0.82	0.19	2
Collective attitude towards courses	3.23	0.71		

n=150; Scale: Very low= 1; Low= 2; Moderate= 3; High= 4, Very high= 5.

Table 2. Distribution of learners' satisfaction with courses.

Learners' satisfaction	Frequency	Percent	Cumulative percent
Dissatisfied	20	13.3	13.3
Somewhat satisfied	62	41.3	54.7
Satisfied	42	28.0	82.7
Very satisfied	26	17.3	100.0
Total	150	100.0	

set of seven questions was prepared for this purpose. Learners' reactions to the seven statements that ranged from 1 to 5 were re-coded and summed to determine the learners' satisfaction score. In order to characterize the learners' satisfaction, the following formula: [*Dissatisfied= A: Minimum score≤ A< Mean score-Std.dev; Relatively Satisfied= B: Mean score- Std.dev. ≤ B.< Mean score; Satisfied= C: Mean score≤ C< Mean score+Std.dev; Very satisfied= D: Mean score+Std.dev.≤ D< Maximum score*] was applied and the four categories shown in Table 2 were established.

A panel of experts comprising faculty members at Tarbiat Modares University and the extension organization proved content and face validity. A pilot test was conducted with 30 learners participating in pomegranate extension-education courses in Saveh Township. Questionnaire reliability was determined using Cronbachs' alpha (0.93).

RESULTS AND DISCUSSION

The findings of the study are presented and discussed below in order of research objectives.

Table 3. Correlations of independent variables with learners' satisfaction.

	Learners' satisfaction	
Variables	r	ρ
Age (year)	-0.110	0.184
Experience (year)	-0.112	0.192
Education	0.076	0.361
Garden (ha)	-0.026	0.760
Pomegranate garden (ha)	-0.020	0.816
Yield (t/ha)	-0.364**	0.005
Production (t/ha)	-0.220*	0.024
Annual income (million Rials)	-0.175*	0.049
Times of participation in pomegranate courses	0.286**	0.004
Attitude toward courses	0.729**	0.000

* Significant at the 0.05 level, ** Significant at 0.01 level.

Table 4. Davis convention (1971).

The coefficient's magnitude	Characterization
±0.070	A very strong association
±0.50 to ± 0.69	A substantial association
±0.30 to ±0.49	A moderate association
±0.10 to ±0.29	A low association
±0.01 to ±0.09	A negligible association
0.000	No association

Table 5. Multivariate regression analysis ("learners' satisfaction with the courses" as a dependent variable).

	Unstandardized coefficients		Standardized coefficients		
	B	Std. Error	Beta	t	Sig
Constant	1.157	0.283		4.087	0.000
Attitude toward courses (X_1)	0.708	0.081	0.698	8.775	0.000
Yield (X_2)	-7.10E-03	0.000	-0.533	-6.452	0.000
Annual income (X_3)	-2.71E-02	0.000	-0.246	-3.025	0.005

R= 0.892; Adjusted R^2= 0.778; F= 45.375, Sig. F=0.000.

Objective One

The mean of the age of the respondents was about 61 years; the minimum and maximum age was 33 and 79 years, respectively. The average number of years of the respondents' experience was about 39 years. The level of education of two-third of respondents was elementary and illiterate. Most of the learners were considered to be subsistence growers. Garden areas were 0.14 and 2.5 hectares, respectively. The respondents had in average 0.69 hectares of garden in which they grew pomegranate. The mean of growers' pomegranate yield and production were about 11 and 8 tons per hectare, respectively. More than 50% of the growers indicated that their annual income was less than 45.0 million Rials.

Objective Two

The results showed that the courses achieved their teaching objectives to a moderate extent. The contents of courses were assessed to be comprehensive, applied, and new to a high, moderate, and low extent,

respectively. The learners were very satisfied with teachers' characteristics and with the locality and facilities of courses, but they were satisfied with teaching methods to a low extent. The results of ranking the variables of learners' attitudes to the courses showed that the learners had a most positive attitude toward the following variables respectively: course locality and time, having a good behavior with learners and learners participating in discussions. The variables of learning to prune correctly, learning about advantage of surface ploughing in summer, and learning to propagate by slips and using various method had the lowest scores of attitude, respectively. They generally had a positive and favorable attitude toward the pomegranate extension-education courses. Table 1 shows the growers' mean scores of the key statements in the attitude section of the questionnaire.

Objective Three

The mean score of learner satisfaction with extension-education courses was 2.49 (2= Somewhat satisfied; 3= Satisfied), with a standard deviation of 0.93. The findings indicated that 45.3% of the learners were "satisfied" (28%) or "very satisfied" (17.3%) with the pomegranate courses.

There was a statistically significant relationship between learners' satisfaction and their attitude towards the courses (r= 0.729), which is considered as a "very strong association" according to Davis's convention (Davis, 1971; Table 4). This supports the findings in the literature (Karpishe, 2004), which imply that learners' satisfaction enhances in tandem with their attitude towards the courses. Times of participation in pomegranate courses had a positive and statistically significant relationship with respondents' satisfaction with the courses (r= 0.286). This is considered to be a low association with satisfaction (Table 4). Pomegranate yield had a statistically significant and negative relationship with learners' satisfaction (r= -0.364), with a moderate association (Table 4). The results of a bivariate correlation test showed that learners' pomegranate production and annual income had a negative relationship with their satisfaction with courses.

Objective Four

A Multivariate Linear Regression indicated that, among the independent variables, the learners' attitude towards the courses, the amount of pomegranate yield, and learners' annual income together could explain about 77.8% of the variations in learners' satisfaction with the courses (Table 5). This implies that there are other factors that may have contributed substantially to the variations in learners' satisfaction with the courses that were not investigated in this study. The independent variables with intervention data were used in a multivariate linear regression which included the learners' age, level of education, size of garden, size of pomegranate garden, pomegranate yield, annual production, annual income, number of participants in extension-education courses and attitude towards the courses. Utilizing the stepwise method, the variables of attitude, pomegranate yield and pomegranate production remained in the regression equation and the other variables were eliminated. The regression analysis provides variables with a statistically significant level (as shown in Table 5), so the following predication equation was formulated to estimate the learners' satisfaction with extension-education courses.

$Y= 1.157+0.708\ (X_1) -0.0071\ (X_2) - 0.0271\ (X_3)$

Where Y= Learners' satisfaction with extension-education courses.

CONCLUSION

According to the study results, respondents assessed teaching objectives of the courses as being achieved to a low to moderate extent, and this result could challenge the effectiveness of the courses which refers to the issue of goal achievement. However, re-

spondents generally had a positive and favorable attitude towards the courses. Since a very strong correlation was found between respondents' attitudes towards the courses and their satisfaction with the courses, future courses could satisfy learners as long as other affecting factors are investigated and improved. Among these factors is the effectiveness of the courses that, according to previous results, needs improvement. As these results have shown, there were significant negative correlations between pomegranate growers' income, production and garden yield with their satisfaction with the courses. This result raises the question "are the courses mostly adapted to small-scale farmers and prepared to meet their needs, neglecting large commercial farmers?" which could be investigated in other research. Although farmers stated a positive attitude towards the courses, a number of large farmers who had good income and production yield, and were investigated in this study, could be a reason for the lower satisfaction means score in this study. More than half of the respondents (54.6%) were dissatisfied or only somewhat satisfied with the courses, which again questions the effectiveness of the courses. Therefore, it is highly recommended that course managers do their best to identify and meet learners' needs, particularly commercial farmers' needs which are neglected in the courses, and conduct courses in the way which best satisfies learners and eventually improves the effectiveness of the courses.

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رضایت فراگیران از دوره‌های آموزشی- ترویجی انار در استان یزد، ایران

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چکیده

امروزه توجه بیشتری به رضایت مشتریان به عنوان مبنایی برای تصمیم‌گیری می‌شود. در این راستا، سازمان ترویج کشاورزی که نقش مهمی را در آموزش کشاورزان ایفا می‌کند باید بداند که فراگیران از برنامه‌های آموزشی چقدر رضایت دارند. در این صورت تحقیق حاضر سعی در بررسی رضایت فراگیران از دوره‌های آموزشی- ترویجی انار برگزار شده در استان یزد دارد. تحقیق حاضر به روش توصیفی- همبستگی بوده و از طریق پیمایشی انجام شده است. جامعه آماری این تحقیق، کلیه فراگیران این دوره‌ها درسالهای ۸۳-۱۳۸۲ که در مجموع ۴۲۱ نفر بودند، تشکیل داد. تعداد ۱۵۰ نفر به روش نمونه‌گیری طبقه‌ای تناسبی به عنوان نمونه آماری تعیین شدند. پرسشنامه تحقیق دارای روایی و اعتبار لازم برای انجام این مطالعه بود. نتایج نشان می‌دهد که دوره‌های آموزشی- ترویجی در سطح متوسط به اهداف آموزشی خود دست پیدا کردند. محتوای آموزشی دوره‌ها از نظر قابل فهم بودن، کاربردی بودن و جدید بودن بترتیب در سطح زیاد، متوسط و کم به‌وسیله فراگیران ارزیابی شد و به‌طور کلی فراگیران نگرش مثبت و مطلوبی به این دوره‌ها داشتند. برطبق این مطالعه همبستگی معناداری بین رضایت فراگیران از آثار دوره‌های آموزشی- ترویجی انار و نگرش آنان به این دوره‌ها، درامد سالیانه، عملکرد، تولید و دفعات شرکت آنان در دوره‌ها به‌دست آمد. نتایج حاصل از تجزیه و تحلیل رگرسیون به روش گام به گام نشان داد که سه متغیر نگرش نسبت به دوره، عملکرد و تولید درمجموع ۷۷/۸ درصد از تغییرات متغیر وابسته رضایت فراگیران از دوره‌های آموزشی - ترویجی انار را تبیین می‌کند.