

Evaluation of a Workshop for Agricultural Entrepreneurs

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Abstract

The purpose of this study was to assess the impact of a series of short-term, small business workshops delivered at the Oklahoma Food and Agricultural Products Center by investigating the knowledge and attitudes of workshop participants. The objectives developed to accomplish the stated purpose were to: 1) Identify selected personal and professional characteristics of workshop participants; 2) Assess change in knowledge as a result of participation in the workshop; 3) Assess change in attitude as a result of participation in the workshop; 4) Determine what relationships, if any exist between the characteristics of workshop participants and their change in knowledge and/or attitude related to topics presented in the workshop.

A census of the 35 workshop participants was taken. A pre-test, post-test design was used to gather the data. On the pre-test, information was gathered about the participants and their business interests. A test composed of items relating to the objectives of each workshop session was developed and given to the participants at the beginning and then again at the end of the workshop. A semantic differential used to assess the participants' attitudes related to starting a small business was also included on the pre-test and post-test instruments. Data from these two instruments were compared to determine the impact of the workshop on the participants' knowledge and attitudes related to the topics presented.

From the findings, the researchers concluded that the typical individual attending the workshop was middle aged, male, and well educated. It was also concluded that the short-term small business training workshops did significantly increase the knowledge of individuals attending the workshop, however, it did not alter the overall attitude of an individual toward starting a small business.

Introduction

In 1996, the Food and Agricultural Products Center (FAPC) was dedicated with the following mission: "To generate and disseminate, through educational programs and technical and business assistance, information that will stimulate and support value-added food and agricultural products processing in Oklahoma," (Hunt, 1998). Today, the institute serves as a means to reduce the gap between academia and the private sector, creating a channel in which business people from across the state can gain valuable business and technical knowledge from the staff of the Center. One of the primary objectives of the Center is the continuing education of individuals involved in the food industry.

It is through continuing education activities that the FAPC has been able to work more closely with the private sector, therefore creating opportunities for the food and agricultural products processing industry in the state to expand and grow. The staff has developed and

conducted many programs aimed at meeting the needs of individuals and groups in the food industry. One of the primary methods used to deliver these educational programs has been the short-term workshop.

Typically, these workshops have been one to two days in length. Most often, the faculty and staff who present the program developed them. Workshop focuses have ranged from “Overcoming Fears of HACCP for Meat Plants” to the training of sensory testers. The workshop that was the subject of this research was entitled “Basic Training.” The workshop was intended for persons interested in starting a small business related to food product development and processing.

The focus of the small business workshops was not to develop the business for the participants, but to provide these individuals with the correct tools to develop their own business. The “Basic Training” workshop featured a variety of speakers ranging from university faculty and representatives of government agencies to industry personnel from around the state.

To evaluate a program such as “Basic Training,” principles of adult education must be considered. According to Sork (1997), there are several concepts that are relevant in the planning and implementing of any adult education program. These include:

1. Honoring the learner’s experience, perspective, and expectations.
2. Involving stakeholders in planning.
3. Basing programs on the needs of learners.
4. Clarifying the aims or goals of the workshop.
5. Incorporating workshop processes that actively involve learners.
6. Assessing program outcomes in addition to learner satisfaction.

It is this sixth point stated by Sork that is the foundation for this research. In the past, program developers thought that as long as workshop objectives were being met, the program could be deemed a success (Bush, Mullis, & Mullis, 1995). They went on to state that for years it had become a custom to perform an evaluation at the completion of a workshop to determine if the objectives of the workshops were met. Little, if any, thought was invested in program improvement. The same type of evaluation had been conducted with several FAPC workshops (Oklahoma Food and Agricultural Products Research and Technology Center, 2000)

According to Bush, Mullis, & Mullis (1995), questions left unanswered by merely evaluating the objectives were: What factors led to the success of the workshop? Why was the workshop a failure? Rossi, Freeman, & Lipsey (1999) agreed with this idea when they suggested that evaluation might be useful in providing information for program improvement. Ayers (1989) noted that evaluation could help change the format of the workshop by helping presenters decide whether a certain portion of the workshop needed to be changed or eliminated from the program, therefore allowing the workshop to reflect the needs of the audience and not those of the program developers.

McCormick (1994) stated that education is the process of changing behavior. He further said that these changes in behavior are to be classified into three categories: knowing behavior, doing behavior, and feeling behavior. Thus, if the purpose of a workshop is “education,” it stands to reason that these changes in behavior should be evaluated. McKenney and Terry (1995) conducted research to measure the effectiveness of workshops in changing audience perception, attitude, and knowledge of xeriscaping as a result of participating in a workshop. They found that the knowledge and perceptions of the workshop participants did increase significantly and concluded that the educational program was a success.

Prior to this study, there had been no effort to determine if these educational programs led to a change in the knowledge and/or attitude of participants. Such research was needed to determine the impact and usefulness of these workshops in helping to meet the mission of the Oklahoma Food and Agricultural Products Center.

Purpose and Objectives

The purpose of this study was to assess the impact of a series of short-term, small business workshops delivered at the FAPC by investigating the knowledge and attitudes of workshop participants. The following objectives were developed to accomplish the stated purpose:

1. Identify selected personal and professional characteristics of workshop participants.
2. Assess change in knowledge as a result of participation in the workshop.
3. Assess change in attitude as a result of participation in the workshop.
4. Determine what relationships, if any exist between the characteristics of workshop participants and their change in knowledge and/or attitude related to topics presented in the workshop.

Methods

The population consisted of all of the 35 individuals who attended the Basic Training workshops offered by the Oklahoma Food and Agricultural Products Center during the months of August, September, October, and November of 1999. Since the participant group was of a manageable number and easy to access, a census approach was utilized in this study.

The small business workshops lasted approximately four hours beginning at noon with a sack lunch and adjourning by 4:30 p.m. Five "Basic Training" workshops were held, each during the third week of every month from July through November. The agenda for the workshops included presentations on business planning and plan components, product evaluation and marketing, patents and trademarks, health regulations, processing and co-packing, labeling requirements, legalities and liabilities, and assistance available to entrepreneurs. Slight modifications in the order of the agenda were made from one workshop to another due to presentation conflicts; however, each of the topics listed were covered at each workshop.

The instrument used in the study was a researcher-designed questionnaire. The researcher attended the July workshop to observe the sessions and gather information to develop items for the instrument. From the July session, the researcher was able to gather materials distributed to participants and take notes during presentations by experts. A videotape was also recorded during this session to assist in the development of the instrument. The researcher's committee was consulted to assist with the design and clarity of the instrument. Workshop presenters reviewed the items on the instrument to ensure they were appropriate and accurate.

The instrument used to collect the data for this study consisted of three sections. Section one was designed to assess the participants' knowledge about the topics taught in the workshop. It consisted of 19 multiple-choice questions with "I don't know" being one of the possible responses.

The second section of the instrument contained a 14 item semantic-differential scale. According to Oppenheim (1966) Charles E. Osgood developed the semantic-differential with the help of his colleagues while working with the quantitative study of meaning. The semantic-differential consists of several bipolar adjectives and a seven-point rating scale. Each scale is weighted and defined by two extreme adjectives. Examples used in this study included: fast/slow, happy/sad, pleasant/unpleasant, and clear/hazy. Respondents were responsible for rating each of the word pairs on the scale. The semantic-differential scale used in this study attempted to measure changes in participant attitudes toward starting their own business. The third section included six demographic items that were included only on the pre-test questionnaire.

In the development and use of criterion-referenced tests, the issue of *content* validity is of primary importance. Test items were developed as described in instrumentation in accordance with test specifications; therefore, responses of participants would provide valid estimates.

The data gathering procedure was a pre-test/post-test design. Questionnaires were distributed at the beginning of the first session of the workshop and again at the end of the final session of the workshop.

In order to further establish reliability, pre- and post-questionnaires were pilot tested at the August workshop to determine if refinements were needed. Cronbach's alpha was used to determine internal consistency. The calculated Cronbach alpha for the instrument used in this study was .70. This alpha is considered acceptable therefore no structural modifications were made to the survey upon completion of the pilot test. Since no changes were made in the instrument, individuals participating in the pilot test were also included in the data analysis.

To report the data, descriptive statistics, measures of variability, and inferential statistics were used. Included in the study as a measure of variability/dispersion were standard deviations of mean scores. In addition, analysis of variance was performed on mean scores of both the pretest and posttest.

Responses from the semantic differential were assigned numerical values for the purpose of calculating a mean response. A response recorded on the positive side of the bipolar adjective scale received a value of seven (7), while responses found on the negative side received a one (1) with values six (6) through two (2) completing the other possible responses. Mean scores were then calculated for each pair of adjectives. An overall mean score was also calculated for the groups.

Data were analyzed to determine if there existed any correlation among test scores and demographic characteristics. Conventions used by Davis (1971) to describe the magnitude of correlations were used in this study. Therefore, a correlation of .70 or more indicated a strong correlation, .50 - .69 substantial, .30 - .49 moderate, .10 - .29 low, and anything less than .10 as negligible correlation.

Data were analyzed using SAS for Windows Release 6.12.

Findings

Characteristics of Workshop Participants

The respondent group included all 35 participants who attended the Basic Training workshop. The age of participants ranged from 29 to 74 years with 49.64 being the mean. Table 1 shows data relating to the age of participants.

Table 1.

Distribution of Workshop Participants by Age

Age	Frequency (N=33)	Percentage (%)
20 years of age or less	-	-
21-30	1	3.0
31-40	8	24.2
41-50	8	24.2
51-60	11	33.3
61-70	3	9.0
71 years or more	2	6.0
Missing data	2	6.0
Total	33	100.0

*Mean age = 49.64 years

Of the 35 respondents, 18 (54.5%) were male and 15 (45.5%) were female. Slightly more than 69% (24) of the participants were Caucasian/White, 13% (4) were Hispanic and 9% (3) were Native-American. Figure 1 shows the percentages of the six ethnic groups represented among the participants.

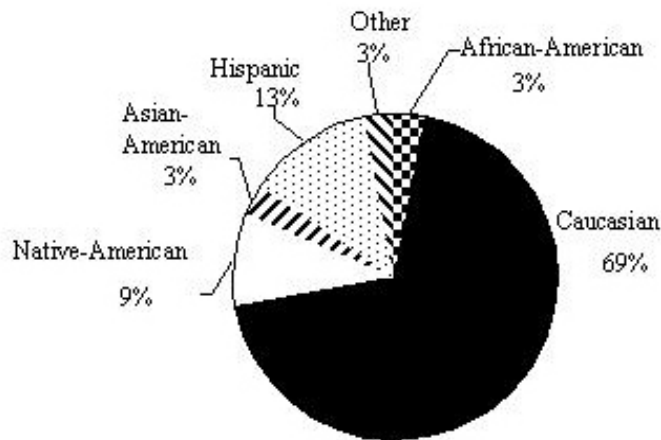


Figure 1. Distribution of workshop participants by ethnicity.

Eleven (35%) individuals who attended the workshop had received a bachelor's degree, while eight (26%) individuals had only completed one or more college classes yet had not received a degree. More than half of the workshop participants held a baccalaureate degree or higher. Data addressing the participants' level of formal education are illustrated in Figure 2.

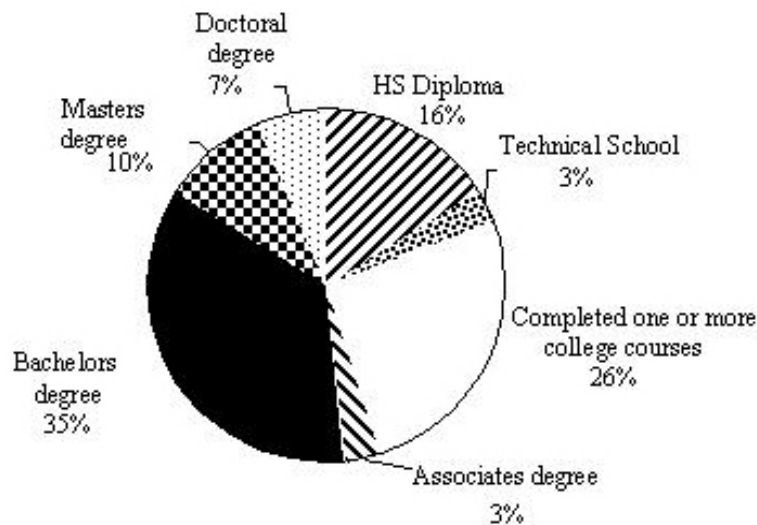


Figure 2. Highest level of formal education completed by workshop participants.

Participants were asked to indicate the food product in which their business would focus. Nine of the 28 people who responded to this item indicated they were interested in businesses dealing with meat products. Nearly half (17) were interested in products classified as "other

foods.” These included items such as salsa, health drinks and baked goods.

Persons attending this workshop were asked if they participated in any other small business training workshops. The vast majority (93.3%) said “no.”

Knowledge Change of Workshop Participants

There were 19 items on the knowledge assessment section of the instrument. For scoring, each correct answer was given a value of “1,” so a perfect score on the knowledge assessment would be 19.

The knowledge assessment score for all workshop sessions on the pretest was 9.34 (49.15%) correct responses with a posttest score of 14.46 (76.11%) correct responses. The resulting P-value for the combined group was 0.001 (see Table 2). Therefore, there was a statistically significant difference in pretest and posttest scores of workshop participants.

The data were analyzed to determine if differences existed among the four workshop sessions. Analysis of pretest scores did not reveal a statistically significant difference (P-value .6379) among the four groups. In addition, after analyzing the posttest no statistically significant difference in those scores was found (P-value .1337). Therefore, the scores from the four workshops were combined for all further analysis.

Table 2.

Analysis of Variance Comparison of Mean Test Scores

Group	f	Pre Score ^a	Test % Correct	Post Score ^a	Test % Correct	F value	P value < F value
August	7	8.14 (3.63) ^b	42.8	12.00 (3.16)	63.2	4.50	0.0554
September	8	9.25 (2.12)	48.7	14.50 (1.93)	76.3	26.84	0.0001*
October	13	9.38 (2.36)	49.4	15.46 (2.30)	81.4	44.21	0.0001*
November	7	10.57 (3.31)	55.6	15.00 (2.52)	78.9	7.94	0.0155
Combined	35	9.34 (2.79)	49.2	14.46 (2.68)	76.1	61.20	0.0001*

^a Score is out of a possible 19.

^b standard deviation.

* Significant at the alpha .05 level.

An item analysis of the data pertaining to the knowledge questions was also performed. Here, the items were grouped by the topic for which they were developed to test. The workshop topic with the greatest improvement in score from the pretest to the posttest was session dealing with “Assistance Available to Entrepreneurs.” The average score of the participants increased 40% for this topic. Three other topics had an average post-test score more than 35% higher than the pre-test score. Workshop participants scored highest on the topic area of “Business Plan and

Components” on the pre-test as well as the post-test. The least change in post-test score from pre-test score was for the sessions on “Legalities and Liabilities.” Data pertaining to the comparison of scores for individuals based on workshop topics are summarized in Table 3.

Attitude Change of Workshop Participants

Change in attitude was measured using a 14-item semantic-differential instrument. A response recorded on the end of the positive side of the bipolar adjective scale received a value of seven (7), while responses marked on the end of the negative side received a one (1). The response choices in between were valued at six (6) through two (2).

Data reported in Table 4 show a F-value of .32 and P-value of .5922, indicating there was not a statistically significant change in workshop participants’ attitude as a result of attending the workshop.

Table 3.

Comparison of Combined Scores by Workshop Topic

<u>Workshop Topic</u>	<u>% Correct- Pre</u>	<u>% Correct- Post</u>	<u>Difference Pre to Post</u>	<u>F value</u>	<u>P value < F</u>
Assistance Available to Entrepreneurs	38.6	78.6	40.0	23.26	.0001*
Product Evaluation and Marketing	20.0	57.1	37.1	11.58	.0011*
Processing and Co-Packing	40.3	76.2	35.9	24.08	.0001*
Patents and Trademarks	47.1	82.9	35.8	38.5	.0001*
Health Regulations	31.4	64.3	32.9	18.81	.0001*
Labeling Requirements	34.3	57.1	22.8	3.78	.0561
Business Plan and Components	72.9	87.9	15.0	11.43	.0012*
Legalities and Liabilities	62.9	75.0	12.1	6.57	.0126*

*Significant at the alpha .05 level.

Table 4.

Comparisons of Mean Attitude Scores of Workshop Participants

	Pre	Post	F value	P value < F
Mean*	4.37	4.49	0.32	0.5922

* Scale range = 1-7 from most negative to most positive.

Relationship Among Demographics and Change in Knowledge and/or Attitude

Correlation coefficients were calculated to determine if any relationships existed between variables such as respondent characteristics, score on knowledge assessments and attitude assessments. The only relationship above the “low” classification was the “moderate” relationship between posttest scores and age (-.33440).

Conclusions

Conclusions were determined based on major findings of this study.

1. The typical individual attending the Basic Training workshop was middle aged, male, and well educated.
2. The short-term small business training workshops did significantly increase the knowledge of individuals attending the workshop.
3. The small business training workshop did not alter the overall attitude of an individual toward starting a small business.
4. Personal and/or professional characteristics did not have an impact upon the overall change in knowledge and/or attitude of the workshop participants.

Recommendations

The ensuing recommendations were based on the results, inferences, and insight gained through conducting the study.

1. Because the typical respondent falls within narrow limits in terms of diversity, educational programs presented by the Oklahoma Food and Agricultural Products Center should be targeted to reach underrepresented groups.
2. To aid in reaching a more diverse audience, alternative delivery modes should be explored. Possible delivery methods could include videotapes, Internet, videostreaming, satellite, and/or individualized instruction.
3. The “Basic Training” short-term workshop is supportive of the Center’s mission to educate their clientele. Therefore, the workshops should be continued.
4. The findings point to the fact that short-term workshops do not provide sufficient time to alter or change an individual’s attitude toward establishing a small business. It should be considered that perhaps prior to workshop participation individuals have misconceptions about starting a small business and as a result of participating in the workshop come to realize the effort required in the development of a small business.

The following issues should be addressed in future research:

1. To aide in the Oklahoma Food and Agricultural Products Center's mission of continually providing quality educational programming to meet the needs of their audience, every educational program delivered by FAPC staff should be evaluated to determine its impact upon participants' knowledge, attitudes and skill development.
2. Research should be conducted to determine the effects of length of time of workshop sessions on individuals' change in attitude. Due to the fact that a short-term educational workshop was not a sufficient period to change an individual's attitude, research comparing short-term workshops to extended workshops should be conducted.
3. In addition to the six demographic questions that were included in this study, it would be worthwhile to examine other characteristics, such as: The number of business-related courses participants had taken; From where participants were traveling to attend the workshop; and, How many participants had family members who owned a small business.
4. A follow-up questionnaire should be mailed to workshop participants six months after the session to determine how much knowledge was retained and how much individual attitudes had changed overtime.
5. It would be beneficial to conduct a similar study with other workshops presented by the Oklahoma Food and Agricultural Products Center for access to a larger, more diverse group of respondents.

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Evaluation of a Workshop for Agricultural Entrepreneurs

A Critique

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Providers of adult education have long utilized short-term workshops as a means to deliver programs for adults in agriculture. The purpose of this study was to assess the impact of a series of short-term, small business workshops delivered at the Food and Agricultural Products Center by assessing the change in knowledge and attitudes of workshop participants and determining if relationships exist between the characteristics of workshop participants and their change in knowledge and/or attitude.

The authors developed an excellent introduction and theoretical framework for this study. The mission of the FAPC was to provide educational programs that support value-added food and agricultural products processing in Oklahoma. Assessment of the change in knowledge and/or attitudes of participants as a result of these educational programs is important if the FAPC is to achieve its mission.

The results indicated that there were changes in the knowledge of the participants as a result of the workshops. The authors compared pretest and posttest scores using analysis of variance procedures. One might ask why this was necessary when this was a census or population study. Would it be more appropriate to just report the differences in mean scores and let the reader draw their own conclusions?

The workshop was four and one half hours in length. Comparisons of pretest and posttest mean attitude scores revealed no significant differences. The authors correctly identify the fact that short-term workshops do not provide sufficient time to alter or change participants attitudes. Knowing this ahead of time, one might ask why some other measure such as a follow-up questionnaire mailed six months after the session (as identified by the authors in the issues to be addressed in future research) was not utilized and reported in this study?

The authors are to be commended for including issues that should be addressed in future research. They indicated that every program delivered by FAPC staff should be evaluated to determine its impact upon participants. They identified length of time as an issue to continue to be explored. The authors also identify additional demographic data that should be collected and examined to determine if relationships exist between the variables and participants knowledge and attitude assessments. This is extremely beneficial to other researchers and indicates a research focus for the authors.