Effectiveness of Extension Strategies on Information Dissemination on Mushroom Production

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Abstract

The dissemination of information is necessary in every project to make the prospect clientele aware of the goal and significance of the project. This study determines effective strategies on informing the community about the mushroom production carried by the College of Agriculture in Mindanao State University Marawi Campus. A descriptive correlational study was used with the use of survey questionnaire. Respondents of the study were the participants of the trainings and seminars conducted by the College of Agriculture in the university. Findings revealed that location, religion, and occupation are correlated with the lack of materials. Age, civil status, and family income are also correlated with the lack of the extension agent in helping to transfer learning experiences from training to the job situation. The respondents agreed that educational training, information drive and development program help educate the community.

Keywords: extension strategies, information dissemination, mushroom production

I. Introduction

Now-a-days, information drive is easy due to the emergence and rapid development of information technology. Globalization and global competition is the major concerns among educators particularly in product development in agriculture. According to Yongling (2004) information technology is the major tool in promoting products, information dissemination and marketing all over the world. Commercialization of products is easy and fast through information technology and networking.

Survey and assessments of the quality of products produce in any product developers can be also enhance by using technologies. Gathering of feedbacks from the product is very important in improving the quality of products being produced. Whitaker, et.al, (1994) said that in product development, it is very important to gather information from the consumers particularly in determining their willingness to accept, identification of the target audience, consumers or buyers.

Communication techniques are also important in the dissemination of information. Using various techniques to target audiences or clientele will translate clear ideas and avoid misconceptions. According to the idea of Center for Clinical Decisions and Communications (Eisenberg, nd) effective communication includes tailoring the message, targeting the message to audience, use of narratives, and framing messages. Since mushroom production in the Meranaw community specifically in Marawi City and Lanaodel Sur province is not common thus, information drive about the concept of mushroom production is necessary. Study conducted by Yadav (2008) about technological gap on mushroom production technology among farmers revealed that technological gap has significant relationship on the production aspect of mushrooms. Profile of the farmers such as age, education, caste, social participation, annual income and contact or linkages to extension service providers has contribution to technological gap. Moreover, farmers' knowledge and adoption on mushroom production also showed significant contribution towards technological gap and mushroom production.

Study of Shahi, Kumar, Singh and Kumari (2018) pointed out that vocational training on mushroom production greatly influence mushroom entrepreneur development. They further said that exposure to training increased the farmers knowledge particularly on the different techniques in mushroom productions. As results, farmers tend to cultivate mushroom as their source of livelihood after the training. Today, many countries practice mushroom production. In the Philippines, mushroom farming is not so highly technological as compared to more advance countries in the world despite that mushroom contains high nutritional value. Obaa and Nshemereirwe

(2004) concluded in their study that mushroom growing is a potential source of livelihood particularly it is easy to market with minimal labor requirements.

Other factors to consider on the extension programs like mushroom production are the socio-cultural upbringing of the community, language barrier and educational attainment. Yadav (2008) mentioned that technological gap and information are hindered by various factors. Some factors include technical know-how, facilities, training exposures, misconceptions about mushrooms and the availability of its market. He said that one way of overcoming the factors are information drive, extension services and farmers' trainings and exposure to the actual mushroom production laboratory. Yadav (2008) concluded that extension service providers should exert extensive efforts to educate the farmers and minimize the technological gap.

Mabuza, Ortmann and Wale (2012) conducted a study on commercial mushroom production by evaluating the role of social capital in the management of farmers groups. Their findings revealed that communication, trust, and teamwork essentials among farmers group engaging mushroom production. Findings of the study conducted by Tanni, Hasan, Hoque, Shamsuzzaman and Moonmoon (2012) showed that mushroom farming experience and product advertisement like media exposure is very important in mushroom cultivation. Furthermore, standard of living and income of mushroom growers significantly improve every year.

Despite of the positive contribution of mushroom cultivation to the livelihood of the cultivators, only few in the Philippines engage mushroom cultivation. According to the study of Kimole (2012), knowledge gap hindered the farmers to grow mushrooms specially the technical skills in handling mushroom cultivation. He also added that group dynamics was not properly addressed particularly between and among stakeholders (e.g. farmers, input suppliers, financial institutions and market outlets) during planning and project implementation.

As such, this study explored effectiveness of extension strategies on information dissemination on mushroom production in the College of Agriculture in Mindanao State University, Marawi Campus, Philippines by having survey among the participants of the different trainings conducted by the college.

II. Method

Research Design

The variable of interest in this study was evaluate the effectiveness of information dissemination on mushroom production carried out by the College of Agriculture, and the stratification factor as by the respondents. Descriptive survey and correlational design was used in determining the relationships of variables investigated.

Respondents

The respondents of this study were the participants of the trainings and seminars conducted at the College of Agriculture, Mindanao State University, Marawi City. One of the functions of a university is extension services, other than instruction and research. The College of Agriculture has been performing the said function through information dissemination of the new technologies obtained from the results of different researches and studies. It has conducted trainings and seminars including on mushroom production.

Participants were determined through the lists that were obtained from the previous seminars and trainings that have conducted by the College of Agriculture, Mindanao State University, Marawi City on Mushroom Production. Thus, twenty five of the respondents were randomly selected from the participant who came from the province of Lanao del Sur and the other twenty five respondents were participants coming from the province of Lanao del Norte.

Research Instruments and Data Gathering

This study employed a close-ended questionnaire, for it offers easy comparability of responses. Respondents were allowed to give answers from multiple choices of answers or they will be given answers from which to choose. The questionnaire was composed of four (4) parts. The first part of the questionnaire determined the respondent's personal profile. The second part is on the socio-economic profile of the respondents specifically on the problems that may have been encountered why there is a lack of effectiveness on information dissemination on mushroom production. The third part is on the agricultural extension methods that can be used

in disseminating information. The respondents indicated: its application on the learning exposure that they have attended and their agreement on its application considering the factor such as time and cost. The fourth and final part is the survey of their professional skills and tasks as extension personnel in conducting trainings or seminar workshops.

Questionnaires were prepared to bring forth information required from the respondents involved in this study. Before the distributions of the questionnaires to the respondents, letter requesting for consent to conduct the research were sent to the authorities concerned. After the approval of the request, the questionnaires were distributed to the respondents with the cover letter, seeking their cooperation and ingenuous answers. The questionnaires were immediately collected after being accomplished. Data were appropriately categorized, tabulated, interpreted, and analyzed using appropriate statistical tools.

Statistical Tools

The data that gathered were statistically analyzed and interpreted. Statistical computation was done through the use of Statistical Package for Social Sciences (SPSS).

III. Results and Discussions

Statistical Results

Table 1. Respondents' Profile

Indicator		Frequency (f) N=50	Percentage (%)
Location	Lanao del Sur	25	50
	Lanao del Norte	25	50
Age (in years)	Below 30	22	44
	30 to 45	12	24
	45 to 60	13	26
	60 and Above	3	6
Sex	Male	21	42
	Female	29	58
Civil Status	Single	18	36
	Married	27	54
	Separated	1	2
	Widowed	4	8
Religion	Roman Catholic	31	62
	Islam	18	36
	None	1	2
Educational Attainment	Non formal education	1	2
	Elementary	1	2
	Secondary	13	26
	Tertiary	28	56
	Arabic Education	7	14
Occupation	Student	14	28
	Government employee	9	18
	Non-government employee	9	18
	Business	18	36
Family Monthly Income	Below ₱ 5,000.00	25	50
	₱ 5,000.00 to ₱ 10,000.00	14	28
	₱ 10,000.00 to ₱ 20,000.00	6	12

	□20,000.00 and Above	5	10
Family Size	Small (1 to 3 members)	19	38
	Average (4 to 6 members)	18	36
	Large (more than 6 members)	13	26

Table 2. Effectiveness of Extension Teaching Methods as Perceived by the Respondents

Extension Teaching Method	Mean	Adjectival Meaning	Verbal Interpretation
Seminar	3.72	Agree	Effective
Lecture	3.66	Agree	Effective
Method demonstration	3.64	Agree	Effective
Group discussion	3.58	Agree	Effective
Meeting	3.58	Agree	Effective
Conference	3.50	Undecided	Neutral
Achievement days	3.48	Undecided	Neutral
Farmers field school	3.48	Undecided	Neutral
Exhibits	3.46	Undecided	Neutral
Farm and home visits	3.46	Undecided	Neutral
Television	3.44	Undecided	Neutral
Field trip	3.44	Undecided	Neutral
Booklet	3.30	Undecided	Neutral
Handouts	3.30	Undecided	Neutral
Newspaper	3.26	Undecided	Neutral
Brochures	3.26	Undecided	Neutral
Radio	3.22	Undecided	Neutral
Newsletter	3.22	Undecided	Neutral
Result demonstration	3.18	Undecided	Neutral
Fact sheet	3.14	Undecided	Neutral
Photo novel	3.12	Undecided	Neutral
Primer	3.12	Undecided	Neutral
Role playing	3.12	Undecided	Neutral
Bulletin	3.12	Undecided	Neutral
Slides and Film Strips	3.04	Undecided	Neutral
Leaflets	3.02	Undecided	Neutral
Posters	2.94	Undecided	Neutral
Wall newspaper	2.92	Undecided	Neutral
Telephone calls	2.92	Undecided	Neutral
Motion pictures	2.88	Undecided	Neutral
Letters	2.76	Undecided	Neutral
Office calls	2.72	Undecided	Neutral
Flyers	2.70	Undecided	Neutral

Legend

4.51-5.00	Strongly Agree	Highly Effective
3.51-4.50	Agree	Effective
2.51-3.50	Undecided	Neutral
1.51-2.50	Disagree	Ineffective
1.00-1.50	Strongly Disagree	Highly Ineffective

Table 3. Relationship between the Respondents' Profile and the Effectiveness of Technology Transfer

		Pearson Square Test	Correlation	
			at 0.05	at 0.01
Lack of interest	Location	0.619	ns	ns
	Age	8.762	ns	ns
	Sex	4.013	ns	ns
	Civil Status	6.649	ns	ns
	Religion	10.077	ns	ns
	Education	12.127	ns	ns
	Occupation	11.605	ns	ns
	Family Monthly Income	17.210	ns	ns
	Family Size	14.476	ns	ns
Lack of understanding of the problems and needs	Location	10.448	s	s
	Age	25.938	s	s
	Sex	5.043	ns	ns
	Civil Status	11.282	ns	ns
	Religion	18.937	s	ns
	Education	7.331	ns	ns
	Occupation	16.066	ns	ns
	Family Monthly Income	12.779	ns	ns
	Family Size	11.511	ns	ns
Lack of information	Location	14.160	s	ns
	Age	24.832	s	ns
	Sex	2.135	ns	ns
	Civil Status	7.858	ns	ns
	Religion	11.939	ns	ns
	Education	11.971	ns	ns
	Occupation	13.312	ns	ns
	Family Monthly Income	19.520	ns	ns
	Family Size	13.159	ns	ns
Lack of training	Location	12.051	s	ns
	Age	22.470	s	ns
	Sex	2.787	ns	ns
	Civil Status	9.826	ns	ns
	Religion	12.460	ns	ns
	Education	22.259	ns	ns
	Occupation	25.828	ns	ns
	Family Monthly Income	17.506	ns	ns
	Family Size	13.575	ns	ns
Lack of practical training on improved technology	Location	12.852	s	ns
	Age	27.138	ns	ns
	Sex	2.284	ns	ns
	Civil Status	9.784	ns	ns
	Religion	12.040	ns	ns
	Education	8.999	ns	ns
	Occupation	17.252	ns	ns
	Family Monthly Income	16.195	ns	ns
	Family Size	8.066	ns	ns
Lack of adequate transportation to reach other informative events	Location	11.000	s	ns
	Age	25.539	s	ns
	Sex	3.720	ns	ns
	Civil Status	9.457	ns	ns
	Religion	24.276	s	s
	Education	19.801	ns	ns
	Occupation	38.314	s	s

	Family Monthly Income	29.037	s	s
	Family Size	14.962	ns	ns
Lack of essential teaching and communication	Location	9.129	ns	ns
	Age	18.178	ns	ns
	Sex	2.582	ns	ns
	Civil Status	9.149	ns	ns
	Religion	11.682	ns	ns
	Education	26.094	ns	ns
	Occupation	16.169	ns	ns
	Family Monthly Income	14.130	ns	ns
	Family Size	10.826	ns	ns
Lack of access to resources	Location	11.110	s	ns
	Age	22.815	s	ns
	Sex	2.112	ns	ns
	Civil Status	11.045	ns	ns
	Religion	15.872	s	ns
	Education	19.070	ns	ns
	Occupation	30.480	s	s
	Family Monthly Income	19.118	ns	ns
	Family Size	21.823	s	s
Materials are misappropriated	Location	5.309	ns	ns
	Age	32.508	s	s
	Sex	5.729	ns	ns
	Civil Status	11.794	ns	ns
	Religion	7.726	ns	ns
	Education	17.602	ns	ns
	Occupation	25.195	s	ns
	Family Monthly Income	5.471	ns	ns
	Family Size	14.110	ns	ns
Lack of materials	Location	10.440	s	ns
	Age	16.047	ns	ns
	Sex	3.057	ns	ns
	Civil Status	8.188	ns	ns
	Religion	18.498	s	ns
	Education	14.940	ns	ns
	Occupation	26.476	s	s
	Family Monthly Income	14.323	ns	ns
	Family Size	14.348	ns	ns
Lack of encouragement from the extension agents assigned	Location	4.393	ns	ns
	Age	10.305	ns	ns
	Sex	0.897	ns	ns
	Civil Status	8.488	ns	ns
	Religion	10.842	ns	ns
	Education	18.060	ns	ns
	Occupation	17.335	ns	ns
	Family Monthly Income	15.236	ns	ns
	Family Size	14.724	ns	ns
Insufficient extension agent that link learning through training to the community	Location	6.517	ns	ns
	Age	22.438	s	ns
	Sex	0.840	ns	ns
	Civil Status	23.700	s	s
	Religion	9.890	ns	ns
	Education	13.158	ns	ns
	Occupation	15.540	ns	ns
	Family Monthly Income	23.861	s	ns
	Family Size	10.897	ns	ns

Lack of capital	Location	7.971	ns	ns
	Age	19.916	ns	ns
	Sex	2.801	ns	ns
	Civil Status	12.451	ns	ns
	Religion	7.971	ns	ns
	Education	12.234	ns	ns
	Occupation	20.199	ns	ns
	Family Monthly Income	12.322	ns	ns
	Family Size	12.685	ns	ns
Financial resources are wasted	Location	6.988	ns	ns
	Age	14.596	ns	ns
	Sex	2.027	ns	ns
	Civil Status	10.809	ns	ns
	Religion	8.371	ns	ns
	Education	20.812	ns	ns
	Occupation	18.369	ns	ns
	Family Monthly Income	21.508	s	ns
	Family Size	13.287	ns	ns
Financial resources are misappropriated	Location	6.113	ns	ns
	Age	15.965	ns	ns
	Sex	3.267	ns	ns
	Civil Status	6.649	ns	ns
	Religion	11.792	ns	ns
	Education	20.804	ns	ns
	Occupation	15.709	ns	ns
	Family Monthly Income	16.831	ns	ns
	Family Size	12.340	ns	ns

Table 3 is the result of Pearson Correlation and Chi-square analysis. This was done to determine the relationship between independent and dependent variables and also to determine probability. Note that there is no correlation between variable X and variable Y. (Null hypothesis) or we say that they are not related, or we say variable X does not affect Y, and there is a correlation between variable X and variable Y.

Table 4. Importance of the Skills or Tasks that are perceived by the Respondents

Skills or Tasks	Mean	Adjectival Meaning	Verbal Interpretation
Producing educational or teaching materials	4.38	Agree	Important
Developing program budgets	4.26	Agree	Important
Introduce a variety of useful methods and materials	4.22	Agree	Important
Help learners learn from each other during learning activities	4.20	Agree	Important
Show concern about learners as human beings	4.20	Agree	Important
Appreciate local knowledge of learners and made use of it	4.18	Agree	Important
Encourage the use of examples to illustrate concepts or practice	4.16	Agree	Important
Determining information needed for evaluations	4.16	Agree	Important
Assessing community needs	4.16	Agree	Important
Encourage silent learners to participate	4.16	Agree	Important
Uses understandable vocabulary	4.14	Agree	Important
Help learners reflect critically on how they learn	4.14	Agree	Important
Appreciate learning handicaps and disabilities	4.14	Agree	Important
Promote discussion and learner interaction	4.12	Agree	Important
Respect racial ethnic and gender differences and their unique contribution	4.10	Agree	Important
Negotiate expectations and objectives	4.10	Agree	Important

Establishing rapport	4.02	Agree	Important
Relate theory to practice	4.02	Agree	Important
Give step by step instructions	3.98	Agree	Important
Summarize the material presented	3.86	Agree	Important

Legend

4.51-5.00	Strongly Agree	Highly Important
3.51-4.50	Agree	Important
2.51-3.50	Undecided	Neutral
1.51-2.50	Disagree	Unimportant
1.00-1.50	Strongly Disagree	Highly Unimportant

Discussion

The result shows that the participants on the information dissemination on mushroom production are from the Province of Lanao del Sur and Lanao del Norte. Less than one half (44%) of them are below 30 years old. More than one half (58%) of them are female. More than one half (54%) of them are married. Less than two thirds (62%) of them are practicing Roman Catholic as a religion. More than one half (56%) of them are in college level. More than one third (36%) of them are into business. One half (50%) of them have an income below ₱5,000.00. More than one third (38%) of them have 1 to 3 family household family members. The respondents agree that seminar, lecture, method demonstration, group discussion, and meeting are effective extension teaching methods for information dissemination on mushroom production.

There is a sufficient evidence to show that there is correlation between location, age, and religion with the lack of understanding. There is a sufficient evidence to show that there is correlation between location and age with the lack of information. There is a sufficient evidence to show that there is correlation between location and age with the lack of training. There is a sufficient evidence to show that there is correlation between location and lack of practical training on improved technology. There is a sufficient evidence to show that there is correlation between location, age, religion, occupation, and monthly income with the lack of adequate transportation to reach other informative events. There is a sufficient evidence to show that there is correlation between location, age, religion, occupation, and family size with the lack of access to resources. There is a sufficient evidence to show that there is correlation between age and occupation with the materials are misappropriated. There is a sufficient evidence to show that there is correlation between locations, religion, and occupation with the lack of materials. There is a sufficient evidence to show that there is correlation between age, civil status, and family income with the insufficient agent that could link learning experiences to community application. There is a sufficient evidence to show that there is correlation between family monthly income and financial resources are wasted.

The respondents agree that producing educational or teaching materials developing program budgets; introduce a variety of useful methods and materials; cooperative learning, camaraderie among others, show concern about learners as human beings; appreciate local knowledge of learners and made use of it; encourage the use of examples to illustrate concepts or practice; determining information needed for evaluations; assessing community needs; encourage silent learners to participate; uses understandable vocabulary; help learners reflect critically on how they learn; appreciate learning handicaps and disabilities; promote discussion and learner interaction; respect individual differences; negotiate expectations and objectives; establishing rapport; relate theory to practice; give step by step instructions; and summarize the material presented are important skills or tasks.

Corollary to the findings of the study, Mabuza, Ortmann and Wale (2012) that gender, age and religion of the mushroom growers are influence positively with their trust and confidence with each other. Findings of Obaa and Nshemereirwe (2004) also showed that mushroom growers are mostly women and further trainings among growers were recommended. Study of Kimole (2012) made mentioned that inadequate knowledge and information on mushroom farming methods limits the farmers to prefer mushroom cultivation. Furthermore, his study revealed that insufficient or delay of mushroom seeds, insufficient capital and lack of knowledge were the major factor that hampered the mushroom growers. Dharmawardhana, Abeywickrama, Aravinda and Pelpola (2016) support the findings of Kimole (2012) and this study. The findings of their study showed that difficulty of obtaining reliable seeds, quality raw materials, quality of other inputs, unavailability of advisory or extension services, problem of finance and technical know-how are the major problems encountered by mushroom

growers. Anent to this, supports from the family particularly among spouses significantly influences the activities in mushroom cultivation.

Febrianda and Tokuda (2018) pointed out in their study that partnership and continuous learning on mushroom farming through extension services and strategies will provide understanding about the process and appropriate management in mushroom cultivation. Through partnerships benefits for the farmers will be delivered successfully. They also added that production failure and market confusion among new mushroom growers will be prevented or minimize if continuous extensions services will be given by the extension service providers.

IV. Conclusion

It can be concluded that the participants of the trainings and seminars that had been conducted belonged to the age below 30 years, female, married, adhere to Roman Catholic religion, finished tertiary level as their highest educational attainment, farmers and into business as their occupation, have a family monthly income of below five thousand pesos, and have a family member of one to three members. Extension teaching methods such as seminar, lecture, method demonstration, group discussion, meeting, conference, achievement days, farmers field school, exhibits, farm and home visits, television, and field trip, are applicable in disseminating information on mushroom production. Application on disseminating information on mushroom productions such means as booklet, handouts, newspaper, brochures, radio, newsletter, result demonstration, fact sheet, photo novel, primer, role playing, bulletin, slides and film strips, leaflets, posters, wall newspaper, telephone calls, motion pictures, letters, office calls, and flyers are ineffective. There is correlation between some of the personal profiles and the effectiveness extension strategies on information dissemination on mushroom production. There are important skills or tasks in extension strategies on information dissemination on mushroom production.

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