

Effectiveness of Extension Program Delivery Methods as Perceived by the Central Vietnamese Extension Workers

Hung Gia Hoang*

Faculty of Extension and Rural Development, Hue University of Agriculture and Forestry-Hue University,
102 Phung Hung Street, Hue City, VIETNAM

*Corresponding author: hoanggiahung@huaf.edu.vn

Abstract Success of extension programs depends upon appropriateness of extension delivery methods used. It can be argued that if we know what extension methods are appropriate to specific farmers, then it is possible to deliver extension programs which meet farmers' needs and help bring about changes - knowledge, skills, attitudes, and practices of farmers. A cross-sectional survey research was conducted to investigate the effectiveness of extension delivery methods used in the Central region of Vietnam. A five-point Likert scale which ranged from 1= *very ineffective* to 5= *very effective* was used to measure the effectiveness of extension delivery methods. Descriptive statistical analysis methods were used to analyze collected data. Findings show extension methods including: training, farmer-to-farmer extension, farmers' group meetings, and farm/home visits were most effective. In contrast, extension methods including the use of radio programs, posters, and booklets were not effective.

Keywords: *effectiveness, extension program delivery methods, extension workers*

Cite This Article: Hung Gia Hoang, "Effectiveness of Extension Program Delivery Methods as Perceived by the Central Vietnamese Extension Workers." *American Journal of Rural Development*, vol. 6, no. 2 (2018): 45-48. doi: 10.12691/ajrd-6-2-3.

1. Introduction

Agricultural extension has contributed to the improvement of Vietnamese farmers' incomes over the last decades [1,2]. Vietnamese farmers have adopted a number of technical advances developed by scientists through their participation in agricultural extension programs [1]. Agricultural extension programs such as the agricultural production diversification program and the beef cattle production program have been delivered to farmers by using a variety of extension methods¹ in the Central region of Vietnam [3]. In this region, a wide range of extension methods such as on-farm demonstrations, farmer-to-farmer extension, lectures, workshops, and farm/home visits have been used [3, 4]. Diversifying the use of extension methods aims at transmitting information to farmers and helps working with them more effectively [5]. The success of extension programs depends upon the appropriateness of the extension delivery methods used [6]. It can be argued that if we know what extension methods are appropriate to specific farmers, such as the Central Vietnamese farmers, then it is possible to deliver extension programs which meet farmers' needs and also help bring about changes - knowledge, skills, attitudes, and practices of farmers. The

effectiveness of extension methods as perceived by extension workers in the Vietnamese context is, however, not clearly understood [8]. Investigating the effectiveness of extension methods used, provides useful insights into selecting the suitability of extension methods. Such insights will help to identify the most appropriate extension methods for delivering extension programs in the Central region of Vietnam as well as help to develop a national strategy for delivering extension programs in Vietnam.

The overall purpose of this study was to determine the effectiveness of extension program delivery methods as perceived by extension workers in the Central region of Vietnam. The specific objectives of the study were to: (1) describe the demographic profile of extension workers; (2) identify extension methods used by extension workers in the Central region; and to (3) determine the effectiveness of extension methods as perceived by extension workers.

2. Methodology

This study used a cross-sectional survey research design. The subject of this study comprised all agricultural extension workers who participated in the agricultural diversification program conducted in the Central region of Vietnam. A questionnaire was developed to collect data. Extension program delivery methods were measured on a five-point Likert scale which ranged from: 1= very

¹ : An extension method is defined as a specific procedure used by extension workers to accomplish changes of farmers' knowledge, skills, attitudes and behaviors [7].

ineffective, 2= ineffective, 3= somewhat effective, 4= effective, and 5= very effective. The questionnaire was reviewed by a panel of experts for face and content validity. The questionnaires were self-administered. A total of 87 participants completed the questionnaires (73% of the total). Data were analyzed using descriptive tests [9].

3. Key Results

3.1. Demographic Profile of Extension Workers

3.1.1. Gender

Figure 1 shows the characteristics of the extension workers' gender. It is clear that the majority of extension workers working at the Central region were male. In particular, approximately 70% of extension workers were men. Only about 30% of extension workers were women.

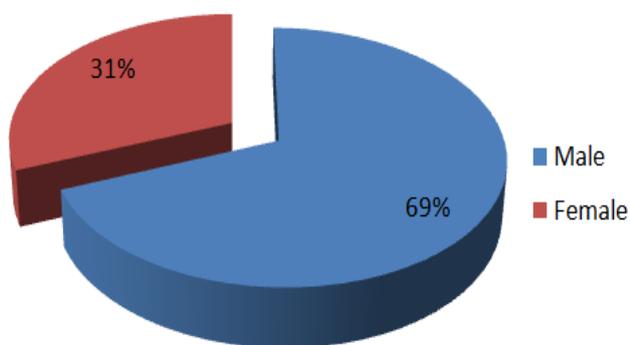


Figure 1. Characteristics of extension workers' gender

3.1.2. Age

Figure 2 indicates the characteristics of extension workers' age. Overall, age of extension workers working at the Central region ranged from 18 to 54 years old. In particular, more than 98% of extension workers were 18- 54 years old. Only some 2% of extension workers were 55-65 years old.

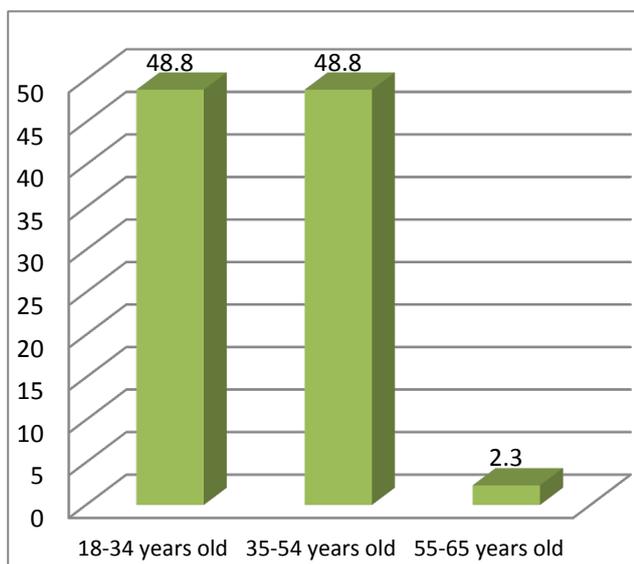


Figure 2. Characteristics of extension workers' age

3.1.3. Education

Table 1 describes the characteristics of extension workers' education level. In general, most extension workers held a university degree. In particular, the majority of extension workers reported completing university (76.7%), followed by certificate/diploma (12.8%), high school (3.5%), and senior high school (3.5%). However, only some 3.5% of extension workers held a postgraduate degree.

Table 1. Characteristics of extension workers' education level

Education level	N	Percent (%)
High school	3	3.5
Senior high school	3	3.5
Certificate/diploma	11	12.8
Bachelors degree	66	76.7
Postgraduate degree	3	3.5
Total	86	100

Source: Survey 2016.

3.1.4. Qualification

Table 2 describes the qualifications of extension workers. In general, the qualifications of extension workers are diverse. There were 21% of extension workers specialized in crop science; followed by agronomy (17.3%); aquaculture (14.8%); and animal science (13.6%). Only about 10% of extension workers held the qualification of agricultural extension.

Table 2. Characteristics of extension workers' qualification

Qualification	N	Percent (%)
Agronomy	14	17.3
Crop sciences	17	21.0
Animal sciences	11	13.6
Land management	4	4.9
Horticulture	1	1.2
Aquaculture	12	14.8
Agricultural extension	8	9.9
Others	14	17.3
Total	81	100

Source: Survey 2016.

3.1.5. Income

Table 3 reports the annual income from salary of extension workers. In general, the majority of extension workers earned from 31 to 45 million Vietnam dong (VND) per year. In particular, approximately 51% of extension workers earned about 31-45 million VND, followed by 1-30 million VND (34%) and 46 - 60 million VND (11.8%). In contrast, few extension workers (3.5%) had an annual income ranged within the 61 - 75 million VND.

Table 3. Extension workers' income

Income (million/year)	N	Percent (%)
1- 30 millions	29	34.1
31 - 45 millions	43	50.6
46 - 60 millions	10	11.8
61 - 75 millions	3	3.5
Total	85	100

Source: Survey 2016.

3.2. Extension Methods Used

An extension method is defined as a specific procedure used by extension workers to accomplish changes of farmers' knowledge, skills, attitudes and behaviors. Table 4 provides a breakdown of extension methods used. It is clear that the most common extension methods included farmers' group meetings; farm/home visits; training; and farmer-to-farmer extension, accounted for 93.1%; 92%; 86.2%; and 80.5% respectively. Other extension methods included result demonstrations; farmer field school; field workshops; and telephone use were relatively commonly used, represented 63.2%; 63.2%; 60.9%; and 59.8% respectively. In contrast, extension methods included using mass media such as radio programs; booklets; and posters were limited in their use, comprising 18.4%; 29.9% and 31% respectively.

Table 4. Extension methods used

Agricultural extension method	Percent of use (%)	Rank
Farmers' group meetings	93.1	1
Farm/home visits	92.0	2
Training	86.2	3
Farmer-to-farmer extension	80.5	4
Result demonstrations	63.2	5
Farmer field school	63.2	5
Field workshops	60.9	6
Telephone use	59.8	7
Service provision	57.5	8
Method demonstrations	51.7	9
Leaflets	48.3	10
Lectures	47.1	11
TV use	37.9	12
Posters	31.0	13
Booklet	29.9	14
Radio use	18.4	15

Source: Survey 2016.

Table 5. Effectiveness of extension methods

Extension method	N	Mean	Std. Deviation	Rank
Training	87	4.33	0.77	1
Farmer-to-farmer extension	87	4.30	0.82	2
Farmers' group meetings	87	4.24	0.66	3
Farm/home visits	86	4.10	0.66	4
Farmer field school	86	3.97	0.84	5
Field workshops	85	3.96	0.80	6
Result demonstrations	87	3.90	0.82	7
Method demonstrations	86	3.78	0.84	8
Service provision	86	3.67	0.60	9
Leaflet	86	3.48	0.68	10
Lectures	86	3.41	0.69	11
Telephone use	85	3.34	0.94	12
TV use	86	3.30	0.73	13
Booklet	82	3.21	0.71	14
Poster	84	3.11	0.67	15
Radio use	85	3.06	0.60	16

Source: Survey 2016.

3.3. Effectiveness of Extension Methods

Table 5 shows a breakdown of the effectiveness of the extension method used. It is clear that extension delivery methods including: training (mean=4.33); farmer-to-farmer extension (mean=4.30); farmers' group meetings (mean=4.24);

and farm/home visits (mean=4.10) were the most effective. Other extension methods including: farmer field school; field workshops; results demonstration; methods demonstration; and service provision were relatively effective. In contrast, extension methods using mass media including the use of radio programs (mean=0.60), posters (mean=0.67), and booklets (mean=0.71) were not effective.

4. Discussion, Conclusions and Implications

Participants indicated that there were 16 extension methods used. These include: (1) training; (2) farmer-to-farmer extension; (3) farmers' group meetings; (4) farm/home visits; (5) farmer field school; (6) field workshops; (7) result demonstrations; (8) method demonstrations; (9) service provision; (10) leaflet; (11) lectures; (12) telephone use; (13) TV use; (14) booklet; (15) posters; and (16) radio use. The results identified that the farmers' group meeting method was the most commonly used, while the radio had limited use. In the mainstream agricultural extension literature [6,7,10,11] little is written about the common and limited use of extension methods as perceived by extension officers.

Participants of this research perceived that the most effective extension methods for delivering information and acquiring knowledge and skills were: (1) the training, (2) farmer-to-farmer extension, (3) farmers' group meetings and (4) farm/home visits. In contrast, somewhat ineffective extension methods were radio use, followed by posters, booklet and TV use. These findings have not been reported in previous studies [7,12], exploring agricultural extension methods used in Vietnam. However, the result from this research partially supports [11]' findings who report that South African farmers perceived training to be a highly effective extension method for delivering information, acquiring knowledge and skills.

The findings from this research should be shared with agricultural extension workers, and extension workers in other regions to identify the most appropriate extension methods for delivering extension programs in the Central region of Vietnam and nationwide. More research should be conducted to understand why some extension program delivery methods are not effective so that appropriate delivery methods can be used to improve the effectiveness of extension programs. This study should be replicated in other regions of Vietnam to better understand the appropriateness of delivery methods used. Such knowledge will help us to develop a national strategy for delivering extension programs in Vietnam.

References

- [1] Sattaka, P., Pattaratuma, S., & Attawipakpaison, G., "Agricultural extension services to foster production sustainability for food and cultural security of glutinous rice farmers in Vietnam". *Kasetsart Journal of Social Sciences* 38(1), 74-80. 2017.
- [2] World Bank Vietnam: *Sustainable Farming Increases Productivity and Improves the Environment*. 2016. Retrieved from <http://www.worldbank.org/en/results/2016/04/15/vietnam-sustainable-farming-increases-productivity-and-improves-the-environment>.

- [3] Le, Đ. T., *Policy on agriculture and rural development*. Hanoi, Vietnam: The National Political Publisher. 2000.
- [4] Nguyen, T. H. M., *Determinants of agricultural technology transfers for CoTu ethnic groups in Thua Thien Hue province, Vietnam*. Thua Thien Hue province, Vietnam. 2003.
- [5] Van de Ban, A. W., & Hawkins, H. S., *Agricultural extension*. London; Cambridge, Mass.: Blackwell Science, 1996.
- [6] Chandra, K. V. S., & Martin, R. A., "Teaching methods and tools used in food safety extension education programs in the North Central Region of the United States". *International Journal of Agricultural Management and Development* 1(3), 157-167. 2011.
- [7] Hoang, G. H., & Radhakrishna, R., "Effectiveness of extension program delivery methods as perceived by central Vietnamese farmers". *Journal of International Agricultural and Extension Education* 20(2), 130-132. 2013.
- [8] Truong, T. N. C., Rundquist, F.-M., Duong, V. C., & Jirstrom, M., "Case Study on Successful, Limited Successful and Unsuccessful Farmers in Agricultural Diversification in O Mon District, Can Tho Province, Mekong Delta". *Omonrice* 17(2010), 179-189. 2010.
- [9] De Vaus, D., *Surveys in social research (6 ed.)*. Australia: Allen & Unwin Academic Publisher. 2014
- [10] Kassem, H. S., "Effectiveness of different agricultural extension methods in providing knowledge and skills in disease prevention: A case of Smallholder Poultry Production Systems in Dakhalia Governorate of Egypt". *Asian J. Agr. Ext. Eco & Sociol.* 3(2), 91-107. 2014.
- [11] Maoba, S., "Farmers' perception of agricultural extension service delivery in Germiston Region, Gauteng Province, South Africa". *South African Journal of Agricultural Extension* 44(2), 167-173. 2016.
- [12] Minh, T. T., Larsen, C. E. S., & Neef, A., "Challenges to Institutionalizing Participatory Extension: The Case of Farmer Livestock Schools in Vietnam". *The Journal of Agricultural Education and Extension* 16(2), 179-194. 2010.