



## **EFFECTIVENESS OF EDUCATION AND BASIC TRAINING EXPERT AGRICULTURE 2014 IN SECRETARIAT OF EXTENSION COORDINATION BENGKULU PROVINCE**

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### **How to Cite :**

Novianti., S P Utama, S Widiono, 2016. Effectiveness of Education and Basic Training Expert Agriculture 2014 in Secretariat of Extension Coordination Bengkulu Province. *Journal of Agri Socio-Economics and Business*. 3 (1).DOI:<https://doi.org/10.31186/jaseb.3.1: 13-20>

### **ARTICLE HISTORY**

*Received [14 July 2020]*

*Revised [07 Sept 2020]*

*Accepted [19 Nov 2020]*

### **KEYWORDS**

*Agricultural Extension,  
Characteristics,  
effectiveness of training,*

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### **ABSTRACT**

*The objectives of this research to measure the effectiveness and analyze the factors that influence the effectiveness of basic training agricultural extension experts organized by the Secretariat Bakorluh Bengkulu Province. This research was conducted in March through June 2015 and used slovin methods. The study population was defined as many as 36 people of 40 people from the extension of existing civil servants. Data analysis was done by using tobit models. The results showed that : 1) some characteristics of extension that is age and work experience significantly influence the effectiveness of training 2) several factors including the method of training, facilities and trainers significantly influence the effectiveness of training. 3) The level of effectiveness basic education and training of agricultural extension experts by secretariat of Bakorluh Bengkulu province in middle category or sufficiently effective;.*

## **INTRODUCTION**

Agricultural counseling begins with the need to increase agricultural output. The need to increase agricultural production will be met if the advanced technology found by experts can be practiced by farmers as primary producers (Adam and Puttieihalat, 2012). The three main goals in counseling are better farming, better business and better living (BPSDM, 2010).

In order to achieve the main goal of the extension, agricultural instructors are required to be able to adjust their competence to follow any changes in the

environment, work atmosphere and profile of the audience served, because over time there is a development of farmers' conditions marked by increasing insight, knowledge, skills and critical attitude towards agricultural development ( Kurniawan and Amri, 2005; Nuryanto, 2008).

Law No. 16/2006 mandates that the Institutional Extension Program at the provincial level is the Counseling Coordination Agency (Bakorluh). Based on Perda No. 9/2009 concerning Organization and Work Procedure of Other Institutions, the Regional Secretariat was formed in the Bakorluh Province of Bengkulu. One of Bakorluh's functions is to provide education and training for agricultural extension workers in Bengkulu Province.

Regulation of the Minister of State for Empowerment of State Apparatus Number PER / 02 / MENPAN / 2/2008 concerning Functional Position of Agricultural Extension Workers, regulates the functional position of agricultural instructors consisting of Skilled Agricultural Extension Workers and Expert Agricultural Extension Workers. In this PERMENPAN it is stipulated that Civil Servants (PNS) who will or have been appointed as agricultural extension agents must follow the Basic Agricultural Extension Training. To occupy the position of Expert Agricultural Extension, one must follow the Basic Agricultural Extension Expert Training.

Referring to the results of Marius's research (2007), that both before regional autonomy and after regional autonomy, the results of the implementation of extension training had a negative effect on the competency of extension workers in carrying out their duties in East Nusa Tenggara. Hamzah (2011) states that training has tended to be less able to provide a curriculum that truly contains the competencies needed by instructors. So that when returning to the field extension agents are forced to find other sources of information to solve the problems they face. Whereas Nuryanto (2008) found that one of the determinant factors that influenced the low competency of undergraduate instructors was the low effectiveness of instructor training.

Based on the description above, the author is interested in conducting research on the level of effectiveness and the factors that influence it on the Basic Agricultural Extension Specialist Training conducted by the Bengkulu Province Counseling Counseling Agency.

## **RESEARCH METHODS**

### **Method of Collecting Data**

This research was designed in the form of a survey with explanations (explanatory research), which explains the influence and relationship between research variables. Determination of the location of the study was chosen deliberately "purpose sampling". The study was conducted from March to June 2015. The population of this study was the full-time civil servant agriculture instructor agricultural Basic Education Extension Expert Training organized by the Bakorluh Secretariat in 2014. Determination of the sample used the slovin formula with a critical value of 5% so that a total sample of 36 people was obtained. Determination of the sample using simple random sampling.

## Data Analysis Method

To determine the effect of the training factors on the effectiveness of the training, a statistical test with tobit model was conducted. The analysis model in this study can be written in the following equation:

$$EPT = \beta_0 + \beta_1 Umr + \beta_2 Pglmn + \beta_3 Mtv + \beta_4 Mtri + \beta_5 MtdPI + \beta_6 Fslt + \beta_7 WktPI + \beta_8 Wdys + \beta_9 Evls + \varepsilon_i$$

Keterangan:

<i>EPT</i>	: Training Effectiveness Index (Range 0 - 1)	
<i>Umr</i>	: Age	<i>Pglmn</i> : Work Experience
<i>Mtv</i>	: Motivation	<i>Mtri</i> : Quality Training Material
<i>MtdPI</i>	: Training Method	<i>Fslt</i> : Training Facility
<i>WktPI</i>	: Training time	<i>Wdys</i> : Instructure
<i>Evls</i>	: Training Evaluation	$\beta_0$ : Interception
$\beta_0 - \beta_9$	: Regression coefficient	$\varepsilon_i$ : Error

Hypothesis testing uses the significance value presented in the Tobit model regression calculation process. The significance level used is  $\alpha$  of 5%. All data were analyzed using the Eviews 8 and Stata SE 12 programs.

## RESULTS AND DISCUSSION

### Characteristics of Respondents

The results of research on the distribution of instructors based on characteristics are shown in the following Table 1. Most respondents are young between 25-36 years old. In general, the retirement of basic education and training of expert agricultural instructors carried out by Bakorluh Bengkulu Province is at a productive age and has work experience as a relatively new instructor. 80.56 percent of them have sufficient learning motivation. The average level of motivation of respondents following the training was in the medium category.

Table 1. Distribution of Characteristics of Respondents

Variable	Category	Number (peoples)	Average	Percentage (%)
Age	Young (25-36 years)	23	34,89	63,89
	Medium (37-48 years)	13		36,11
	Old (49-60 years)	-		-
Work Experience	Low (1-5 years)	17	5,58	47,22
	Medium (6-10 years )	19		52,78
	High (11-15 years)	-		-
Motivation	Low (score 7-16)	2	21,94	5,56
	Medium (score 17-26)	29		80,56
	High (score 27-36)	5		13,89

Source: Primary data processed (2016)

### Assessment of Factors Affecting Education Effectiveness

Factors influencing the effectiveness of the training that were examined in this study were (1) Quality of the material, (2) Training methods, (3) Training facilities, (4) Time of training, (5) Widyaishwara, and (6) Evaluation. The distribution of respondents' answers is presented in Table 2

Table 2. Distribution of Respondents on Factors Affecting Education Effectiveness

Variable	Category	Number (peoples)	Average	Percentage (%)
Quality Training Material (Mtri)	Low (score 7-16)	2	22,58	5,56
	Medium (score 17-26)	28		77,78
	High (score 27-36)	6		16,67
Training Method (Mtdpl)	Low (score 6-14)	1	21,33	2,78
	Medium (score 15-23)	26		72,22
	High (score 24-31)	9		25,00
Training Facility (Fslt)	Low (score 6-14)	4	19,00	11,11
	Medium (score 15-23)	30		83,33
	High (score 24-31)	2		5,56
Training time (Wktpl)	Low (score 5-11)	-	17,28	-
	Medium (score 12-18)	23		63,89
	High (score 19-25)	13		36,11
Instructure (Wdys)	Low (score 7-16)	4	23,06	11,11
	Medium (score 17-26)	24		66,67
	High (score 27-36)	8		22,22
Evaluation (Evls)	Low (score 6-14)	-	21,69	-
	Medium (score 15-23)	24		66,67
	High (score 24-31)	12		33,33

Source: Primary data processed (2016)

The suitability of the material to the needs of the participants was largely in line, but in the material for making media outreach, the material provided was felt to be inappropriate for the level of needs of an expert counselor, because the material provided was making outcrop maps which were outreach activities for the level of skilled extension workers. The material for preparing the impact evaluation, evaluating the implementation of counseling and writing scientific papers, felt that respondents were incomplete and lacked the substance of the learning objectives.

The training method applied is in the form of developing patterns and learning strategies with a combination approach including: simulation, work practices, and role playing, with the setting of conditions that approach real situations, which are also filled with lectures, discussions and questions and answers on each interlude / pause between each material provided.

Learning material facilities in the form of modules, teaching materials and teaching aids are considered adequate so that it helps understanding the material presented. However, the hostel facilities were felt by respondents as inadequate. The availability of clean water for personal needs and the cleanliness of the hostel is felt to be lacking so as to make the comfort of living in a dormitory less good. The consumption provided during training, especially at lunch time, is felt inadequate.

The problems faced in the matter of training time are the schedule of learning activities that are often not on time, and changes in material from the set schedule. This condition results in the material received is no longer structured and sequential. There are additional activities that are not listed in the training schedule in the form of evening apples that were complained of by some respondents. This activity is considered to disturb the respondent's rest time at night after being tired of attending a full-day lesson.

Respondents are of the opinion that widyaiswara both from BPP Lampung, Bakorluh and Bengkulu University have good capacity in teaching. However widyaiswara from structural officials of the provincial and functional government of Bakorluh was considered not to have adequate capacity as a teacher.

Respondents of 66.67 percent stated that the evaluation carried out in the sufficient category with an average score of 21.69. The results of the evaluation of learning in the basic training of agricultural extension experts can be known from the pre-test and post-test scores obtained by the participants as presented in Figure 1.

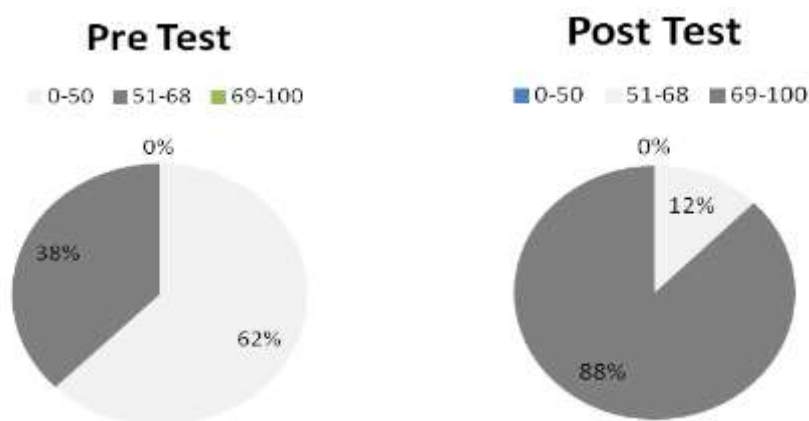


Figure 1.  
Graph of Acquire Pre Test and Post Test Value of Participants  
Basic Agricultural Extension Education Expert Training

Table. 3 Test of Pre-Test and Post-Test Basic Training Participants Expert Agricultural Extension

	T	Df	Prob	Beda rata-rata
Pre test	32.579	39	.000	46.08750
Post test	51.031	39	.000	82.95000

Source: Primary data processed (2016)

Table 3 shows the t-test results of the pre-test and post-test values significantly, there are significant differences between the pre-test and post-test scores. From this information it can be concluded that the participants experienced an increase in knowledge in the training program.

## Effectiveness of Education and Training

Table 4. Distribution of Respondents' Answers to the Training Effectiveness Index

Variable	Category	Number (peoples)	Average	Percentage (%)
Effectiveness of training (EPT)	Low (score 0,0-0,33)	4	0,63	11,11
	Medium (score 0,34-0,67)	17		47,22
	High (score 0,68-1,00)	15		41,67

Source: Primary data processed (2016)

17 respondents (47.22%) stated that the effectiveness of education and training index was in the moderate category, 15 people (41.67%) were high and 4 people (11.11%) stated low. The minimum value is 0.0 and the maximum value is 0.87 with an average score of 0.63. From these data it can be concluded that the basic education and training activities of expert agricultural instructors carried out by Bakorluh are quite effective.

Respondents thought the training was able to provide an interesting learning experience and the material provided was quite memorable. After participating in the training, there was an increase in the respondent's competence towards two of the four main tasks of agricultural extension, namely preparation for counseling, and implementation of counseling, while in evaluating counseling and developing counseling, respondents said they had not mastered it well.

## Factors Affecting the Effectiveness of Education and Training

The estimation of the tobit model shows that of the nine independent variables studied, only five variables had a significant influence on the effectiveness of the training, namely; age of participants, experience, training methods, lecturers and training facilities. While motivation, training time, material quality and evaluation did not have a significant effect on the effectiveness of the training.

Table 5 Estimating the Factors Affecting the Effectiveness of Education and Training

Variable	Coefficient	Standard Error	t-ratio	Marginal Effect
Constant	-8.123278	4.933737	-1.646476	-
UMR	-0.213932	0.083323	-2.567498**	-0.0121
PGLMN	0.287659	0.164777	1.745752*	0.0162
MTV	0.120660	0.118456	1.018605	0.0068
MTDPL	0.209947	0.102387	2.050522*	0.0119
WDYS	0.372073	0.149788	2.483991**	0.0210
FSLT	0.396316	0.121104	3.272542**	0.0224
WKTPL	-0.030760	0.104451	-0.294495	-0.0017
EVLS	0.175721	0.132744	1.323759	0.0099
MTRI	-0.139475	0.117003	-1.192067	-0.0079
Log likelihood			-66.01569	
N			36	

Note: \*\*) Significant at  $\alpha = 0.01$  (t table 1% = 2,438)

\*) Significant at  $\alpha = 0.05$  (t table 5% = 1.690)

Source: Primary data processed (2016)

A positive sign shows that with one year's increase in work experience, participants will increase the probability of a training effectiveness level of 1.62 percent. Likewise, with the right training methods, competent lecturers and good training

facilities will have a large probability to increase the effectiveness of the training. An increase in one unit of appropriate training methods, and one quality unit of lecturers and a good unit of training facilities will increase the probability of achieving an effective training by 1.19 percent 2.10 percent and 2.24 percent respectively.

Extension instructors who are longer on duty will more easily absorb and practice the material provided during training. The material provided is no longer new and has been carried out during the assignment. This condition causes the more experienced instructors not to start learning from scratch, but only to compare and correct the work they have done so far with the correct and trusted sources.

The training objectives will be achieved if the trainer has good knowledge, experience, confidence and has the ability to motivate participants. Next the trainer must use the training method that is most appropriate to the content of the training, by involving participants in the learning process. And whatever method is applied must consider the facilities and infrastructure factors available so that the training participants have a quality learning experience. (Punia and Saurabh, 2013; Madyunin, 2012; Nugraha, 2014)

The coefficient of age gives a negative sign on the effectiveness of this condition training means that each addition of one year of training participants will reduce the probability of achieving an effective training by 1.21 percent. This situation means that the younger the participant's age, the easier it will be to receive the material given during the training. Conversely the older the participant's age, the more difficult it will be to understand and adopt the knowledge given during the training. This condition is in line with the findings of Madyunin (2012) which states the older the training participants are, the more ineffective they are in training.

## **CONCLUSIONS AND POLICY IMPLICATIONS**

### **Conclusions**

Based on the results of research and discussion conclusions can be put as follows:

1. The level of effectiveness of the implementation of basic education and training for expert agricultural instructors by Bakorluh is in the moderate or quite effective category;
2. Factors that influence the effectiveness of Basic Agricultural Extension Education Expert Training in Bakorluh are the age of the participants, experience, training methods, training facilities, and lecturers.

### **Recommendation**

1. Improvement of adequate education and training facilities in Bakorluh is needed in order to create participant comfort while participating, so that they can participate in and get optimal training results.
2. It is necessary to improve the management time of the training. Bakorluh parties should evaluate not only through level 1 Kirk Patrick, but also evaluate from level 2, 3, and 4 because the process is believed to be more helpful in achieving training effectiveness

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