Factors Affecting the Increasing of Agricultural Extension Professionalism in Batubara Regency, Indonesia

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Keywords: Factors, Professionalism, Extension, Agricultural, Batubara

Abstract: This research was conducted in Batu Bara Regency on March 10 to May 16 2015 purposively with an area of paddy fields reaching ± 19 thousand Ha, productivity of 5.2 tons / Ha. The collected data research will done using by distributing questionnaires, tests, structured interviews. The result calculated of agricultural extension workers with a Bachelor of Education background of 15 people (48%) and SPP/ SMK 14 people (45%), while the Diploma is 2 people (7%). Then the age distribution of extension respondents was dominated by extension workers aged between 36-40 years (35%) and 30-35 years old (32%), then each age between 41-45 years (13%), aged between 46 -50 and aged between 51-55 years each of 3 people (10%). The most dominant tenure tenure is 45% with tenure ranging from 6-10 years, then each extension period between 1-5 years is 11 people (36%), tenure between 16- 20 years as many as 2 people (6%), the service period between 21-25 years is 3 people (10%) and the service period between 26-30 years is one person (3%). The most dominant respondent income level is 2-3 million as many as 19 people (61%), then each level of income between 1-2 million instructors is 5 people (16%), the income level of the instructor between 3- 4 million as many as 2 people (7%) and income levels of instructors between 4-5 million as many as 5 people (16%). The income earned by an instructor will influence in meeting the needs of his life and his family. It is expected that reliable extension workers supported by technical competence, ethics and moral commitment as well as deep responsibility for their work can be realized in the future.

1 INTRODUCTION

The development of agricultural extension is currently dominated by Field Agricultural Extension Officers from the Government and Private Agricultural Extension which are aggressively distributed by the producer of production facilities. Although there are nuances of business in carrying out their duties, these private extension agents contribute greatly to the application of technology to farmers. This Private Agricultural Extension is considered to be more professional in carrying out its duties because it is burdened with measurable and clear targets and if it cannot perform its duties properly it will be automatically displaced by other instructors who are considered more professional. The private extension work mechanism has not been implemented by extension officers who are civil servants (PNS) or THL-TBPP extension officers.

Agricultural extension agents currently available, related to the internal conditions of extension workers still do not have sufficient knowledge, attitudes and skills, where there are still limited skills and skills possessed by extension workers. Imagine that most of the extension workers are graduates of SPMA or equivalent education and they are now working for decades and most of the age of instructors are willing to enter retirement which will have an impact on the number of extension workers, while technology continues to grow along with the increasing needs and quality of life.

There is still a lack of adequate facilities in supporting his career duties, especially in field mobilization and obtaining opportunities in capturing information quickly, the low linkage of counseling with aspects of assessment, so that extension workers cannot freely develop themselves towards professionalism as qualified instructors.

Haharap, N., Siregar, A. and Kennedy, .
Factors Affecting the Increasing of Agricultural Extension Professionalism in Batubara Regency, Indonesia.
DOI: 10.5220/0009495303550361
In *Proceedings of the 1st Unimed International Conference on Economics Education and Social Science (UNICEES 2018)*, pages 355-361
ISBN: 978-989-758-432-9

Associated with extension agents as agents of change in carrying out their duties in the field often collide with the attitude of the community towards the innovations delivered. Some communities welcome a change by actively knowing and learning innovation and up to the stage of adoption of innovations delivered, but there are also those who oppose changes made by extension agents.

Based on Programme BKP3 in Batu Bara Regency The condition of agricultural extension workers in Batu Bara District at this time the number of agricultural extension workers was 103 people, consisting of 49 PNS extension workers and THL-TBPP extension workers 54 people with 151 villages/states assisted extension agents. with the village/states, the WKPP extension workers have built up to two villages. Since the enactment of the certification of extensionists in 2010 to make extension workers as professionals who have Indonesian national work competency standards (SKKNI) extension workers in Batu Bara District until now only two people have followed. Furthermore, since 2012 as many as 12 people have attended the official education of the Ministry of Agriculture's Medan STPP to make extension workers who have qualified technicians and analysts, equivalent to level 6 in the Indonesian National Qualification Framework (KKNI). Based on the information obtained by extension workers who have participated in skilled basic training as much as ± 8 people and basic expert training ± 2 people. While for education and training programs, it was felt that the programs of BKP3 Batu Bara Regency were still lacking and from other parties, resulting in weak levels of competency and capacity of extension agents related to their level of professionalism.

In addition to the problems of planning, institutions, manpower, programs, management and financing that are constraints for field instructors and the demands to provide quality services that are only obtained from the prime performance process as a symbol of instructor professionalism, the internal factors of agricultural extension agents also have a very direct influence on professionalism of instructors which is manifested by personality and ability in dizziness increase in competence, included of availabilty of instructor. Therefore it is necessary to examine the influence of the internal factors of agricultural extension agents to increase the professionalism of extension agents in the Batu Bara Regency of North Sumatra Province.

Benefit of research such as:

1. Taking into account the various problems that exist, the main purpose of this study is to determine the influence of the instructor's internal factors on improving the professionalism of the Agriculture Extension and specifically the objectives of this study are:
2. To find out the influence of the education level of instructors on improving the professionalism of extension workers?
3. To find out the influence of the age, level of income, the number of extension workers of the instructor on improving the professionalism of the instructor?

Hypothesis

Based on the formulation of the problem there is a hypothesis that is:

H0: There is no influence of the internal factors of instructors (education (X1), age (X2), experience (X3), income (X4) and the number of dependents (X5)} on the improvement of professionalism of the instructor (Y).

H1: There is an influence of the internal factors of the instructor (education (X1), age (X2), experience (X3), income (X4) and the number of dependents (X5)} on the improvement of professionalism of the instructor (Y).

2 METHODS

Location and Time of Research

The assessment was carried out in Batu Bara Regency on March 10 to May 16, 2015. Batu Bara Regency was a potential area for increasing food production, especially rice with an area of paddy fields reaching ± 19 thousand Ha with a productivity of 5,2 tons/ha, so that reliable extension workers are needed which are supported by technical competence, ethics and moral commitment as well as deep responsibility for their work.

Type of Assessment

This type of assessment is quantitative assessment with survey methods, where the type of problem formulation is causal associative. According to (Sugiyono, 2008) explains that quantitative survey assessment is a method used to obtain data from locations that have been determined (not artificial) but researchers do treatment in data collection by distributing questionnaires, tests, structured interviews. Clause associative is a causal relationship, namely the independent variable (X) affects the dependent variable (Y).

Operational Limitation

Education (X1) is that the education achieved by extension agents in formal education institutions based on the latest diploma possessed and the effect

on professional work productivity is measured using an ordinal scale on four scales with criteria strongly agree, agree, disagree and strongly disagree.

Age (X2), that is the age of the instructor at the time the assessment is stated in years and the effect on professional work productivity is measured using an ordinal scale on four scales with the critics strongly agree, agree, disagree and strongly disagree.

Experience (X3), that is the length of the instructor working up to the present, expressed in years and the effect on professional work productivity is measured using an ordinal scale on four scales with the critics strongly agree, agree, disagree and strongly disagree.

Revenue (X4), namely compensation received for one month and its effect on professional work productivity is measured using an ordinal scale on four scales with criteria strongly agree, agree, disagree and strongly disagree.

The number of dependents (X5), namely the number of family members who are the responsibility of the instructor at this time and their influence on the productivity of professional work, are measured using an ordinal scale on four scales with very agree, agree, disagree and strongly disagree.

Professionalism as an individual who works in accordance with moral and ethical standards that are determined by employment as an agricultural extension agent. Requirements that must be possessed by a professional instructor, include:

Variable measurement is arranged to facilitate assessment to compile questionnaire instruments from each study variable. Measurement of variables, indicators, criteria and scores is presented in Table 1.

Table 1: Variable Measurement, Indicators, Criteria and Scores

Variabel	**Indicator**	**Criteria**	**Score**
Education (X1)	Formal education based on the last diploma	S2 S1 DIII SLTA	4 3 2 1
Age (X2)	The age of the instructor at the time of the assessment	30 – 35 year old 36 – 41 year old 42 – 47 year old 48 – 52 year old	4 3 2 1
Experiences (X3)	The duration of the extension agent is functional	22 – 27 year old 15 – 21year old 8 – 14 year old 1 – 7 year old	4 3 2 1
Salary (X4)	Compensation received by the instructor for 1 month	>4 juta million 3 juta – 4 million 2 juta- 3 million <2 million	4 3 2 1
The number of dependents (X5)	The burden of the number of family dependents	Total 0-1 Total 2 Total 3 Total >4	4 3 2 1
a. Institutional understanding of counseling	Function	Very understanding Understand Don't inderstand Very not understood	4 3 2 1
b. Technology Apserpsion	Technical suitability Economic suitability Social-cultural suitability	Very suitable Corresponding It is not in accordance Very inppropriate	4 3 2 1
c. Ability to explain program objectives	Benefits of program objectives How to achieve program goals Relationship of program objectives Skills to convey program objectives	Very capable Able Unable Very unable	4 3 2 1
d. Ability to organized	Organization function Organization principal Organization techniquen Integration with programme	Always Often Rarely Never	4 3 2 1
e. Skills linking counseling principles	Do Consequences Asossiation	Always Often Rarely Never	4 3 2 1
f. Research skills	Identification of problems Determine the main activities Detailing alternative solutions Choose alternative problem solving Evaluate.	Always Often Rarely Never	4 3 2 1

Source: Data Analysis (2015)

Data Collection

The data used in this study are primary data and secondary data collected using: Interview, which is a method of collecting data about the identity of respondents, by asking questions directly to respondents using a prepared questionnaire. Recording, which is a method of collecting data about the respondent's identity and supporting data by citing and recording sources of information from respondents, libraries, as well as from the relevant agencies that are related to the assessment, such as: Agriculture Service; Food Security Agency and Counseling Implementation (BKP3); and the Central Statistics Agency (BPS) .

(Prasetyo and Jannah, 2005) states that there are various ways that can be done to obtain data with questionnaires, namely: (1) telephone interviews; (2) the questionnaire system posted; (3) the questionnaire is completed by the respondent; and (4) through direct interviews. Furthermore, Sekaran (1992) in (Prasetyo and Jannah, 2005) defines questionnaires as a list of questions that measure variables, relationships between existing variables, or also the experience or opinions of respondents.

Before being used for assessment data, first a trial was conducted on the questionnaire to obtain valid and reliable instruments using validity and reliability tests. This validity and reliability test will be carried out to 15 respondents outside the study sample but still within the study population.

Data Analysis Technique

To determine the influence of the instructor's internal factors on improving the professionalism of the instructor used regression analysis with the help of SPSS 18 for Windows. According to Levin and Rubin (1998) in (Sarwono, 2012), regression is used to determine the properties and strength of the relationship between two variables and predict the value of a variable that is not yet known based on past observations of these variables and other variables. This linear regression analysis is widely used to test the effect of the independent variable (X) on the dependent variable (Y).

Multiple linear regression equations, namely:

$Y=\alpha+\beta_1 X_1+\beta_2 X_2+\beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + u_i$

Information:

Y = Variables Professionalism
X_1 = Education Variables
X_2 = Age Variable
x_3 = Experience Variable
x_4 = Revenue Variable
x_5 = Variable Amount of Dependent
α = Constants
β = Regression Coefficient
u_i = Error or error

R2 values range from 0-1 and if the results obtained are close to 1, the model is said to be good. The coefficient of determination is formulated as follows:

R2 = or (5)

Information:

Y '= The results of estimating the value of the dependent variable
Y = Average value of the dependent variable
Yi = value of observation
R2 = Coefficient of Determination

F test is used to determine the level of influence of all independent variables together on the dependent variable or to find out whether the independent variable (X) has an effect on independent variables (Y).

Ftable = (k-1), (n-k): α (6)

Information

R2 = coefficient of determination
k = Number of regression coefficients
n = Number of samples
α = Critical value

3 RESULTS AND DISCUSSION

Characteristics of Respondents

Characteristics of agricultural extension agents in Batu Bara District who are respondents in this study, including the level of education, age, experience, income and the number of dependents of agricultural extension agents, can be described in detail as follows:

Education

The level of education of agricultural extension workers which is used as a variable in the assessment of the influence of the instructor's internal factors on improving the professionalism of extension workers (Anoraga, 1998) and (Anoraga, 1998), especially in Batu Bara Regency is presented in Table 2.

Table 2: Distribution of Respondents by Education Level in Batu Bara Regency

Number	Education level	Total Respondents (individual)	Percentages (%)
1	SPP/SMK	14	45
2	Diploma	2	7
3	Strata 1	15	8

Total	**31**	**100**

Sources: Analysis of Primer Data(2015

Based on Table 2, the distribution of formal education level of agricultural extension is dominated by agricultural extension workers with a Bachelor of Education background of 15 people (48%) and SPP/ SMK 14 people (45%), while the Diploma is 2 people (7%). The level of formal education will show different levels of knowledge in carrying out tasks, so that a high level of education is able to think more advanced and have a broader view and adapt more quickly to all the changes in technology that are developing. This is in line with the opinion of that the higher the level of education of a person, there is a tendency for higher knowledge, attitudes and skills, efficient work and more and more know ways and techniques to work better and more profitable. According to (Mardikanto, 2009) the level of education of instructors will greatly affect the ability or mastery of the material provided, the skills to choose counseling methods and effective communication techniques with (the community). Likewise what Pauline (2006) said in Rosni and Suprijanto (2010) that a person's formal education has a positive influence on its performance.

Age

The age of agricultural extension workers in Batu Bara Regency varied between 31 years to 52 years, the more complete the distribution of respondents according to the age of field agricultural extension officers in Batu Bara District is presented in Table 3.

Table 3: Distribution of Respondents by Age in Batu Bara Regency

Number	Education level	Total Respondents (individual)	Percentages (%)
1	30-35	10	32
2	36-40	11	35
3	41-45	14	13
4	46-50	3	10
5	51-55	3	10
Total		**31**	**100**

Sources: Analysis of Primer Data (2015)

Based on Table 3, the age distribution of extension respondents was dominated by extension workers aged between 36-40 years (35%) and 30-35 years old (32%), then each age between 41-45 years (13%), aged between 46 -50 and aged between 51-55 years each of 3 people (10%). When viewed from the age level of the respondents, it can be said that 90% are of productive age, who still have physical strength and high enthusiasm to carry out the tasks for which they are responsible. At a young age, it is usually more enthusiasm to attend education and training (diklat) to increase competence as an instructor who is proud of his profession.

According to (Rivai and Sagala, 2011) there is a widespread belief that productivity has fallen along with the age of a person. Whereas in the opinion of Beth (1998) in Rosni and Suprijanto (Rivai and Sagala, 2011) and (Sugiyono, 2008) who say that older age can reduce performance, especially in work that uses cognitive abilities, perceptual and memory.

Experience

Experience is the period of service of an agricultural instructor who has been counted since he began serving as a functional extension worker. The assignment period describes the time span experienced by the instructor in situations and circumstances that are influenced by internal and external conditions of the instructor. Based on data obtained by the respondent's working period varies from 1 year to 27 years, more complete distribution of respondents according to experience in Batu Bara Regency is presented in Table 4.

Table 4: Experiences work of respondents in Batu Bara Regency

Number	Experiences of work (years old)	Total Respondents (individual)	Percentages (%)
1	1-5	11	36
2	6-10	14	45
3	11-15	0	0
4	16-20	2	6
5	21-25	3	10
6	26-30	1	3
Total		**31**	**100**

Sources: Analysis of Primer Data (2015)

Based on Table 4, it can be concluded that the most dominant tenure tenure is 45% with tenure ranging from 6-10 years, then each extension period between 1-5 years is 11 people (36%), tenure between 16- 20 years as many as 2 people (6%), the service period between 21-25 years is 3 people (10%) and the service period between 26-30 years is one person (3%). Overall, the respondent's tenure is still relatively low. A low task period indicates that the instructor does not have enough experience in mastering the field of work as an instructor. Experienced extension workers will be more flexible

and easy to carry out counseling activities with key actors and are better able to solve problems often encountered in their work. According to Rosni & Suprijanto (2010) and Harahap (2013), the longer the tenure of the instructor will be to master the work area that is his responsibility, so that the more mature and more productive workers and together with the ability to work determine their performance. In line with this according to (Sarwono, 2012) and (Abdi, 2008), someone who has been in a job for a long time will have better abilities than those with lower levels of seniority.

Income

Respondent's income is financial compensation for a month. Distribution of respondents according to income in Batu Bara Regency is presented in Table 5.

Table 5: Distribution of Respondents by Income Level in Batu Bara Regency

Number	Experiences of work (years old)	Total Respondents (individual)	Percentages (%)
1	1,0-1.9 million	5	16
2	2.0-2.9 million	19	61
3	3.0-3.9 million	2	7
4	4.0-4.9 million	5	16
Total		**31**	**100**

Sources: Analysis of Primer Data (2015)

Based on Table 5, the most dominant respondent income level is 2-3 million as many as 19 people (61%), then each level of income between 1-2 million instructors is 5 people (16%), the income level of the instructor between 3- 4 million as many as 2 people (7%) and income levels of instructors between 4-5 million as many as 5 people (16%). The income earned by an instructor will influence in meeting the needs of his life and his family. The need to live not only includes primary needs but secondary needs. Per capita income below the standard of living would result in the opportunity for the population to achieve a high level of education and perfect health to be increasingly difficult to achieve. This condition will affect a person's performance at work, which is below standard (Mangkuprawiro, 2009; Mangkuprawiro & Sjafri (2002); Slamet, 1992). A professional instructor must be able to provide maximum service to farmers as beneficiaries of their extension activities. How an instructor can provide this if his needs are not met properly, so that the income earned is very influential to be able to work professionally who loves his profession as a field agriculture instructor

The Number of Dependents

The number of agricultural extension counseling family respondents varied between those who did not have dependents alias single until the number of dependents amounted to 5 people. Distribution of respondents according to the number of family dependents in Batu Bara Regency is presented in Table 6.

Table 6: Distribution of Respondents According to Number of Family Dependents in Batu Bara District

Number	Total individu	Total Respondents (individual)	Percentages (%)
1	0	2	6
2	1	4	13
3	2	7	23
4	3	12	39
5	4	4	13
6	5	2	6
Total		**31**	**100**

Sources: Analysis of Primer Data (2015)

Based on Table 6, respondent's family dependents were dominated by extension workers who had a total of 3 dependents as many as 12 respondents (39%). Overall respondents who have a dependency of 0-4 people are 29 respondents (94%), this indicates that the number of family dependents carried out by respondents who are the responsibility of their life is still classified as medium. According to Ilyas (1987), Hanafie (2010) and Sarwono (2013), the number of family dependents ranges from 3-4 people classified as moderate and more than 5 people classified as large. The number of dependents can affect someone to be able to work better because if the number of dependents they carry is relatively large, it will also require a large enough cost of living, of course he will try to fulfill them. If the income earned as an instructor cannot meet his needs and his family, of course, he will seek other income, this will certainly have an impact on his work which always provides the best service for institutions/institutional extension agents and farmers/groups as beneficiaries of activities counseling.

4 CONCLUSIONS

The level of formal education has a significant effect on enhancing the professionalism of extension workers, therefore for extension workers with high school education are given the widest motivation and opportunity and full support by the local government through BKP3 as the Counseling Implementing Body to continue higher education level as an effort to improve the quality of human resources extension agent. For the government to further improve the welfare of extension workers through providing direct and indirect financial compensation that is sufficient so that it raises motivation to run the profession professionally Furthermore, further research / study needs to be carried out by examining broader variables and in-depth theoretical studies in finding other variables which are thought to have a significant effect on the professionalism of extension workers. The variables are work culture, competence, motivation and facilities and infrastructure.

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