

Open and Distance Learning (ODL) For Improving Social Competence of Agricultural Extension Workers

Huda, Nurul, Dr. Ir. MA.

Universitas Terbuka (Indonesian Open Learning University)

(email : nurul@ut.ac.id)

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ABSTRACT

One essential competence that agricultural extension workers must possess is social competence which is directly related to their duties to interact with farmers. This research was intended to : (1) analyze the extent to which ODL can improve the social competence and its aspects; (2) analyze the dominant factors affecting social competence of extension workers; and (3) formulate a strategy for the development of social competence of extension workers at UT. Designed as an explanatory research, the entire population of agricultural extension workers who were graduated from UT in four different locations were used as respondents. A survey technique was implemented among them. Information from stakeholders were also collected to elaborate the findings. Data was analyzed by using descriptive and regression analysis. The findings indicated that : (1) agricultural extension workers who were graduated from UT had a moderate level in their social competence. Their knowledge on social concept was relatively good but still having problems in implementing it; (2) learning facilities, training, and subject matter coverage were factors significantly affecting social competence. The most dominant factor was held by subject matter coverage;; and (4) strategies that can be formulated to improve social competence were improving their level of knowledge and skills in terms of social matters. These can be focused on improving the learning quality at UT, mainly on subject matter development. From the findings, it can be concluded that ODL as an educational institution can be addressed by agricultural extension workers to improve their social competence. By studying on ODL institution, they can improve their competence without leaving their duties on extension activities.

(Keywords: ODL, social competence, agricultural extension workers)

The presence of challenges on extension activities nowadays, such as the developments of science and technology, and the globalization, lead the extension workers to perform their duties properly in accordance with the demands of farmers. There are now Law on the System of Agricultural Extension, Livestock, Fisheries and Forestry, which supports the achievement of specific competencies for the extension workers. The presence of these laws is expected to provide strategic meaning as a legal umbrella for extension worker to increase their competence social

Several research findings indicated that the level of competence of extension workers is still relatively low. It was supported by a research of Suryaman (2001), which indicated that the level of competence and performance of extension workers in the province of West Nusa Tenggara, East Nusa Tenggara, East Java and West Java is still low. Puspadi (2002) also revealed that the level of competence of agricultural extension workers in the three provinces of Lampung, East Java and West Nusa Tenggara, is moderate. Results of other studies conducted by Marius (2007) in East Nusa Tenggara and Gatut (2008) in West Java also indicated that the competence of extension workers is still considered low. Other research findings (Huda, 2010; Huda, 2011a; 2011b; Huda and Setijorini, Huda et al, 2010) also indicated that their low competence is also related to the fact that the efforts to increase their competence, particularly through education and training, the intensities are still inadequate (Agricultural Departement, 2002). These conditions indicate the need for efforts to increase the competence of extension workers.

One important competence that need to be possessed by extension workers is social competence. By definition, social competence is an ability to communicate and cooperation. This definition is in line with Sumardjo (2010) who stated that social competence involves the ability to interact/relate socially, collaboration and synergy. From this point of view, it can be said that social competence is very important for agricultural extension workers.

The one who have such competence are expected to produce good performance in accordance with the demands of his job as an extension workers. This is because the competence is a fundamental characteristic that determines the performance of their work (Spencer and Spencer, 1985). Therefore, information or research on the competence of extension workers is important.

The competence of extension workers can be increased through learning process, one of which is through the Indonesian Open University (UT). With the characteristics of UT as an open and distance education (ODL) as stated in UT catalogue (2010), extension workers who study at UT, will be able to follow a quality education without leaving their duties and obligations as an extension workers. They can improve their competence through the courses that support the expected competence.

Now the problem is no comprehensive information is available on the level of social competence of extension workers after completing his education at Universitas Terbuka (UT); to what extend UT as an Open and Distance Learning (ODL) can improve the social competence of extension workers; how is the level of competence aspects such as knowledge, affective, and psychomotor aspects; and what factors influence the social competence of extension workers.

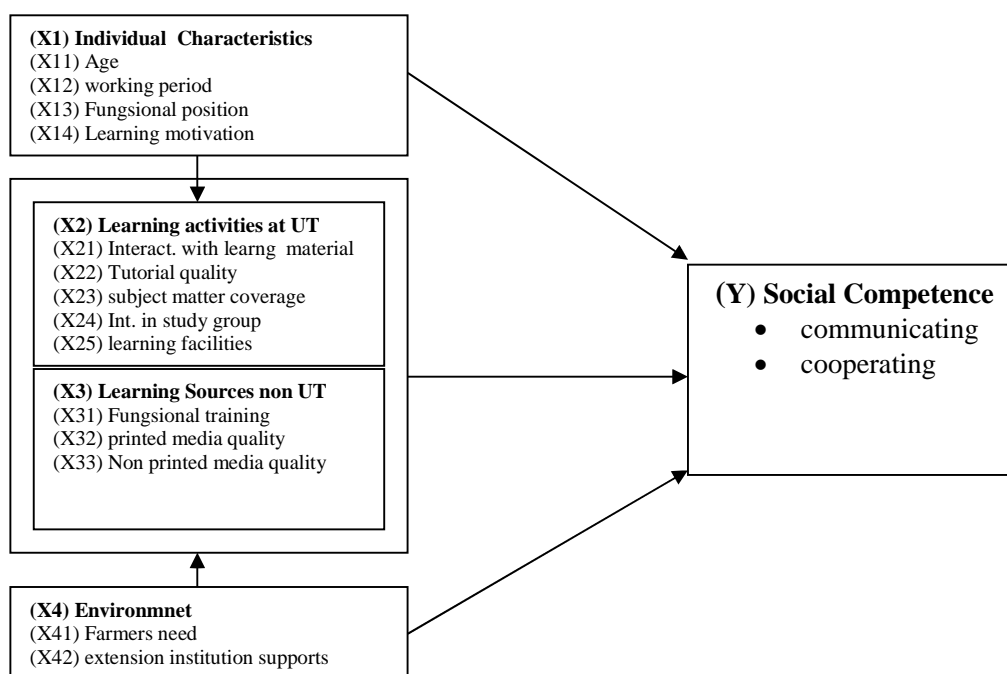
Related to these problems, this paper has focused to gather information about the following:

- (1) to analyze the extend to which ODL can improve the social competence and its Aspects.
- (2) to analyze the dominant factors affecting social competence of extension workers.
- (3) to formulate a strategy for the development of social competence of extension workers at UT.

Framework

Competence is the ability to think and act that underlies and reflects a form of behavior and performance of a person in activities in the field of work (Spencer and Spencer, 1983; Mangkuprawira, 2004). The competence level of extension workers that includes the level of knowledge, attitude, and skill is the result of the learning process (Bandura, 1986), which is influenced by individual characteristics and their environment. In this paper, social competence refers to the ability of agricultural extension workers in conducting extension activities, those are cooperating and communicating extension activities. Figure 1 shows the flow of thought in formulating the strategy for developing social competence of agricultural extension workers at UT.

Figure 1. The flow of thought in formulating the strategy for developing social competence of agricultural extension workers at UT.



Method

The design of this research is explanatory research that attempts to explain the phenomenon of social competence of extension workers graduated from UT. The population in this study were all extension workers graduated from UT in the area of Serang, Karawang, Cirebon, and Tanggamus. Respondents drawn from the entire 111 population using the census method.

Data collected through a survey using questionnaires which was developed based on the indicators of social competence for extension workers in communicating and cooperating activities. The reliability of the questionnaire ranged from 0.6 to 0.9. The questionnaire consisted of closed and open questions. Quantitative data were analyzed using descriptive statistics, while qualitative information was used to complete the existing quantitative data. The data were processed using SPSS version 15.0, and analyzed in accordance with the purpose of this research, such as descriptive statistics and regression analysis.

RESULTS AND DISCUSSION

The discussion in this paper is sorted in accordance with the purposes of this study, those are ODL and the social competence of extension workers, the dominant factors affecting social competence, and strategies for developing the social competence at UT.

ODL and the Social Competence of Extension Workers

The social competence of extension workers graduated from UT include their capabilities in communicating and cooperating extension activities. The level of competence of extension workers and its competence aspects (knowledge, affective, and psychomotor) were presented in Table 1, whereas the average score of their competence were presented in Table 2.

The level of social competence of extension workers graduated from UT was moderate (figure 2), due to the ability of extension workers in communicating and cooperating extension activities still has not been optimal. This condition indicates that there should be efforts to increase the social competence of extension workers graduated from UT which are focused on improving the ability of extension workers in communicating and cooperating extension activities.

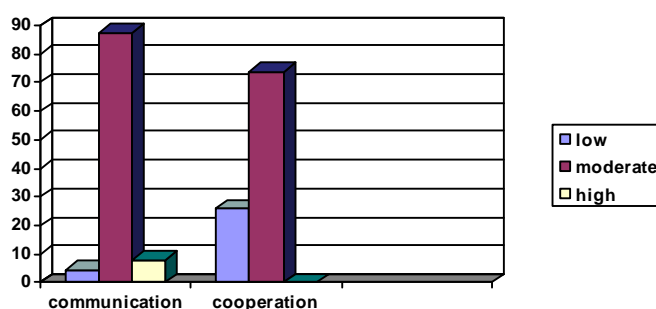


Figure 2. The level of social competence of extension workers

The level of social competence of extension workers graduated from UT has been classified as moderate with the average score was 69, shown by their psychomotor aspect. Their affective aspect was considered as high but their knowledge is low. This indicated that extension workers graduated from UT were less understanding about the concepts of social activities especially with

regard to its duties in communicating and cooperating extension activities. However, the extension workers have beliefs and actions related to the social task as an extension workers well enough.

Table 1. Distribution of social competence level and its aspects (n = 111)

sub competence	category	competence aspect						total	
		knowledge		affective		psychomotor			
		n	%	n	%	n	%	n	%
communication	low	100	90.1	4	3.6	41	36.9	13	11.7
	moderate	3	2.7	52	46.8	49	44.1	81	73.0
	high	8	7.2	55	49.5	21	18.9	17	15.3
cooperation	low	101	91.0	4	3.6	43	38.7	17	15.3
	moderate	3	2.7	57	51.4	54	48.6	80	72.1
	high	7	6.3	50	45.0	14	12.6	14	12.6
Social	low	99	89.2	2	1.8	37	33.3	11	9.9
	moderate	6	5.4	55	49.5	62	55.9	89	80.2
	high	6	5.4	54	48.6	12	10.8	11	9.9

Note : low (score 0-50), moderate (score 51-75), high (score 76-100)

Given the level of knowledge of extension workers is still relatively low, then the efforts to increase their social competence can be focused on increasing knowledge of communicating and cooperating extension activities. Similarly, their affective levels which were still relatively moderate, need to be increased in order to increase their competence as a whole.

Table 2. Distribution of the average score of social competence

competence	sub competence	Competence aspects						total competence aspects	
		knowledge		affective		psychomotor			
		mean	sd	mean	sd	mean	sd	mean	sd
Social	communication	53	14	80	17	62	20	70	17
	cooperation	51	13	78	16	59	19	68	16
	Total Social	52	13	79	15	60	18	69	15

Competence in communicating Extension Activities

The competence level of extension workers in communicating extension activities was classified as moderate (Table 1), which is still not optimal on the ability of extension workers in mastering the concepts and ways of communication. This condition indicates that there should be efforts to increase the competence of extension workers in communicating extension activities which focused on improving the communication ability.

This is in line with the opinion Sumardjo (1999) which states that in addition to understanding the material to suit the needs of farmers (content area), the extension workers need to have the ability to communicate interactively/dialogue with farmers. Therefore, they need to master the ways of effective communication and delivery methods appropriate extension messages to farmers (process area). Similar opinion was expressed by Rogers (1995) which states that the quality of information provided depends on the extension as an agent of change, namely: (1) the amount of extension work done in communicating with farmers, (2) extension of credibility in the eyes of farmers, such as emotional closeness and favor of the farmers and to accept feedback, and (3) extension of the level of understanding

of farmers' needs. Thus, the extension is not enough just to have that information, but must also have the ability to convey that information, and be able to give confidence to farmers on such information.

Their level of knowledge is low, but have faith and action is being considered. This suggests that the extension alumni of UT still has less understanding of communication, especially about the concepts and ways of communication. However, the agent has a UT alumnus quite positive attitude towards the ways of communicating in extension activities and can apply it pretty well as action. Therefore, the efforts to increase the competence of agricultural extension workers in communication can be focused on improving knowledge and skills in communication. Given one extension task is to influence or persuade the target extension to accept and implement the information delivered happily, then increased knowledge and communication skills need to be directed to the purpose of communicating a persuasive (coax).

Competence in cooperating extension activities

The level of competence in the work is classified as moderate, which is not optimal due to their ability to master the concepts and ways of working. This condition indicates that efforts are needed to increase competence in a UT alumnus extension work is focused on improving his ability in mastering the concepts and ways of working.

UT alumnus knowledge level in extension work is low, however, they have the confidence and cooperation actions were classified as moderate. This suggests that the UT alumnus still lack of understanding of the concepts and ways of working. However, UT alumnus has quite positive attitude towards the ways of working in extension activities and reasonably well implemented as action. Therefore, efforts to increase the competence can focus on improving their knowledge and skills. Given one of extension tasks is to build farmers' groups, therefore it is needed to increase their knowledge and skills to foster collaboration farmer groups.

The results of in-depth interviews with extension workers indicated that they do not fully know about the concept and ways of communicating and working with farmers and other parties which involved in the implementation of extension activities. Besides, in practice ways to communicate they encountered problems, for example in the use of means of communicating via the internet. This is due to the media is not affordable in their region. In addition, they are still encountering obstacles in the ways to access these communication tools.

From this description, it can be said that the knowledge of extension workers on the concept and the ways to communicate was well enough, but it is still an obstacle to implement.

The dominant factors influencing the Social Competence

Pearson correlation analysis to examine the relationship between characteristics of the individual instructor, learning activities at UT, UT non learning resources, and the environment against the extension of social competence are presented in Table 3.

Table 3. Correlation coefficient of individual characteristics, learning activities at UT, non UT learning resources, and the environment to social competence

variable	competence		total
	communication	cooperation	
<i>individual characteristics (X1)</i>			
age (X11)	-.203(**)	-.214(**)	-.156(*)
Working periode (X12)	-.218(**)	-.172(*)	-.146
Fungsional position (X13)	.006	.128	.079
Learning Motivation (X14)	.111	.057	.030
<i>Learning activities at UT (X2)</i>			
interaction with learning material (X21)	.157(*)	.059	.106
Tutorial quality (X22)	.074	.075	.057
subject matter coverage (X23)	.286(**)	.256(**)	.264(**)
interaction with colleague (X24)	.078	-.045	-.008
learning facilitiesutility (X25)	.156(*)	.143	.123
<i>learning sources from other sources (X3)</i>			
training benefit (X31)	-.052	-.113	-.121
printed media utility (X32)	.023	.020	-.006
non printed media utility (X33)	.073	-.066	.017
<i>environment (X4)</i>			
farmer need (X41)	-.085	-.042	-.059
institution support (X42)	.103	.020	.021

Note : * significant on α .05; ** significant on α .01

Age showed significant but negative relationship with social competence extension alumni of UT. It Means age did not have any impact on the achievement of social competence. This condition is caused by age extension UT alumnus who on average are elderly so sometimes encounter obstacles in learning about the ways and common uses of media. Generally extension worker was less controlled of existing information technology so that their accessibility to the communication media is relatively less.

Learning Subjects showed a real and positive impact on the social competence of UT alumni . It means the coverage of existing courses in the curriculum meet the needs of UT extension workers in conducting outreach activities. Factors that have a real relationship was analyzed using multiple regression analysis to see the impact of individual characteristics, learning activities at UT, non UT learning resources, and environmental factors on social competence. The results of regression analysis between individual characteristics , learning activities at UT, non UT learning resources, and environment on social competence are presented on Table 4.

Tabel 4. Regression coefficient between individual characteristics, learning activities at UT, leaning sources from others, and environment on social competence

Variable	competence				total	
	communication		cooperation		Koef Reg	P
	Koef Reg	P	Koef Reg	P		
Constanta	1.196	.001	1.709	.000	1.892	.060
age (X11)	-.019	.802	-.089	.263	-	-
Working periode (X12)	-.140	.060	-.075	.329	-	-
Fungsional position (X13)	-	-	-	-	-	-
Learning Motivation (X14)	-	-	-	-	-	-
interaction with learning material (X21)	.030	.595	-	-	-	-
Tutorial quality (X22)	-	-	-	-	-	-

Variable	competence				total	
	communication		cooperation			
subject matter coverage (X23)	.300	.001	.262	.003	.332**	.001
interaction with colleague (X24)	-	-	-	-	-	-
learning facilitiesutility (X25)	.134	.080	-	-	.177*	.044
training benefit (X31)	-	-	-	-	-.152*	.039
printed media utility (X32)	-	-	-	-	-	-
non printed media utility (X33)	-	-	-	-	-	-
farmer need (X41)	-	-	-	-	-	-
institution support (X42)	-	-	-	-	-	-

Note : * significant on α .05; ** significant on α .01

Based on the regression coefficient on table 4, it can be written the regression model as follow : $Y_{1.4} = 1.892 + 0.332 X_{2.3} + 0.177 X_{2.5} - 0.152 X_{3.1} + 0.187$, whereas $Y_{1.2} = \text{Social competence}$; $X_{2.3} = \text{subject matter coverage}$; $X_{2.5} = \text{learning facilities}$; and $X_{3.1} = \text{training}$.

The regression equation suggests that the social competence was affected by the scope of courses, learning facilities, and training. It was also influenced by other factors outside the model. Error coefficient of 0.187 indicated that about 18.7 percent of the model was affected by other factors that have not been included in the model.

Training activities indicated significant but negative relationship to the social competence. This means that the training did not show an impact on improving social competence extension.

Table 4 indicated that the coverage of subject matter and learning facilities showed significant and positive effect on social competence of extension workers. That means an improvement in the scope of subject matter and the quality of learning facilities can improve their social competence. This condition means that these factors are the main elements that contribute to the improvement of social competence of extension workers alumnior in other words high and low levels of social competence of UT alumnus influenced by how much influence these factors.

Coverage subject matter showed the greatest contribution to the social competence or in other words the scope of the course is an effective factor that shows the influence of social competence. Thus, an increase in social competence of UT alumnus can be focused on the development of courses coverage.

On Figure 3, it can be seen that the dominant factor that positively affects the social competence of extension workers was the subject matter coverage. Thus, it can be said that these factors constitute a finding novelty of this research.

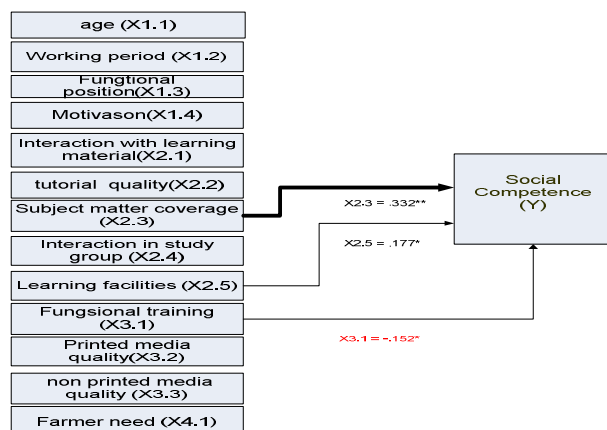


Figure 3. Factors affecting social competence

Strategy for developing the Social Competence of extension workers at Open and Distance Learning (ODL)

The findings of this study indicated that the level of social competence of extension workers was still moderate, which can be seen on the affective aspects. However, the aspects of knowledge and psychomotor was low. The social competence significantly influenced by the coverage of the subject material and learning facilities. Subject material coverage showed greatest contribution on the social competence.

From this statement, it can be said that in order to increase the social competence, there are several strategies that is focused on the development of subject material coverage. In terms of the competence aspects, strategies that can be taken are increasing knowledge aspect on social interaction, and increasing the psychomotor aspect on social interaction skills. The activities focused on social knowledge, namely in terms of communication and cooperation.

As a whole, the effort to improve the social competence can be focused on development of learning process at UT. This effort can be done by increasing the interaction with the learning materials, improving the quality of learning facilities, and the scope of UT learning subjects.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

- 1 The level of social competence of extension workers graduated from UT were considered as middle. Their competence aspects, especially on affective and psychomotor aspects was found relatively high. This means that UT as an Open and Distance Learning (ODL) can be addressed to improve their social competence.
- 2 The social competence was influenced by the level of subject matter coverage and learning facilities. Among those factors, the subject matter coverage showed the contribution of the most dominant.
- 3 Strategies developed to improve the social competence of extension workers of UT alumni are focused on improving the subject matter coverage. In terms of competence

aspects, strategy taken is improving their knowledge and skills aspects, especially in communicating and cooperating extension activities.

Recommendations

Social competence of extension workers of UT alumni need to be increased in order to provide better services to farmers. Effective strategies to improve the social competence of UT alumni is developing the learning activities at UT. Given the level of social competence is not maximum, therefore it need to increase the competence of extension workers with focused on improving the quality of learning, especially in terms of subject matter coverage. Although the subject matter scope of UT is sufficient for the needs of extension workers in carrying out their duties, but the course material need to be improved, in order to fit with the needs of extension activities, and in accordance with current conditions.

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