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Open & Distance Learning (ODL) and Agricultural Extension Workers' Social Competence in Indonesia

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Abstrak

Kompetensi sosial merupakan hal penting bagi penyuluh karena berkaitan langsung dengan tugasnya dalam berinteraksi dengan petani. Makalah ini membahas tentang sejauhmana Belajar Jarak Jauh dapat meningkatkan kompetensi sosial dan aspek-aspeknya; faktor-faktor yang mempengaruhi kompetensi sosial; serta strategi bagi pengembangan kompetensi sosial penyuluh. Dengan menggunakan rancangan *explanatory research*, semua penyuluh lulusan pendidikan jarak jauh (n=111) di empat wilayah yaitu Serang, Karawang, Cirebon, dan Tanggamus digunakan sebagai responden. Data dikumpulkan melalui survey, serta di dukung wawancara mendalam untu kelaborasi. Data dianalisis secara deskriptif dan regresi. Hasil penelitian menunjukkan bahwa tingkat kompetensi sosial penyuluh tergolong sedang; faktor yang mempengaruhi komptensi sosial penyuluh adalah fasilitas belajar, pelatihan, dan cakupan materi belajar. Faktor yang paling dominan mempengaruhi adalah cakupan materi belajar; strategi yang dapat dilakukan untuk meningkatkan kompetensi sosial penyuluh adalah meningkatkan pengetahuan dan keterampilan sosial. Dari temuan penelitian dapat disimpulkan bahwa belajar jarak jauh dapat meningkatkan kompetensi sosial penyuluh. Untuk itu, implikasinya bagi institusi pendidikan jarak jauh adalah memberikan cakupan materi belajar sesuai kebutuhan penyuluh, sedangkan bagi Departemen Pertanian adalah memberikan motivasi dan fasilitas belajar yang mendukung.

Kata kunci: *Belajar Jarak Jauh, kompetensi sosial, penyuluh pertanian*

Abstract

Social competence is essential for agricultural extension worker since it is directly related to their duties to interact with farmers. This article discusses the extension to which Open and Distance Learning (ODL) can improve the social competence and its aspects, the dominant factors affecting social competence, and strategy for the development of social competence of extension workers. Designed as an explanatory research, the entire population of agricultural extension workers (n=111) who were graduated from ODL in four different locations (Serang, Karawang, Cirebon, and Tanggamus areas) were used as respondents. A survey technique was implemented among them. In depth interview was also conducted to elaborate the findings. Data was analyzed by using descriptive and regression analysis. The findings indicated that: (1) agricultural extension workers 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 the 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, 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. As an implication, ODL institution need to support the students by giving a better subject matter coverage, while Agricultural Department need to support the learning quality of agricultural extension workers by giving learning motivation and learning facilities.

Keywords: *Open and distance learning, social competence, agricultural extension workers*

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Introduction

The presence of challenges on extension activities nowadays, such as the developments of science and technology, and the globalization, leads 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 number 16, 2006, 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.

The fact that the level of competence of extension workers is still relatively low was supported by 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 was 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 researches (Huda, 2010; Huda, 2011a; 2011b; Huda and Setijorini, Huda et al., 2010) also indicated the same findings. Such a low competence was related to the fact that the efforts to increase their competence, particularly through education and training, were still inadequate in intensities (Agricultural Department, 2002). These conditions indicated the need for efforts to increase the competence of extension workers.

One important competence that need to be possessed by the extension workers is social competence which is an ability to communicate and cooperate with farmers. This definition is in line with Sumardjo (2010) who stated that social competence involves the ability to interact 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 worker. This is because the competence is a fundamental characteristic that determines the performance of their work (Spencer and Spencer, 1993). Therefore, information or research on the competence of extension workers is important. The competence of extension workers can be increased through learning processes, one of which is through the Indonesian Open Learning University. With its characteristics as an open and distance learning (ODL) as stated in Universitas Terbuka (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 ODL; to what extension 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.

To address those problems, this article discusses the extension to which ODL can improve the social competence and its aspects, the dominant factors affecting social competence, and strategies for the development of social competence of extension workers.

Conceptual 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, 1993; Mangkuprawira, 2004). Nuh (2013) stated that competence is like stairs that must be stepped by the learner to come to the competence of graduate level. 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 article, social competence refers to the ability of agricultural extension workers in conducting extension activities, those are cooperating and communicating extension activities.

Methods

The design of this research was explanatory research. Maxwell and Mittapalli (2008) stated that the term explanatory research implies that the research in question is intended to explain, rather than simply to describe the phenomena studied. This research attempted to explain the phenomenon of social competence of extension workers graduated from ODL. The population in this study was all

extension workers graduated from ODL in the areas of Serang, Karawang, Cirebon, and Tanggamus. Since the number of extension workers in these areas was limited, all of them were drawn from the entire 111 population using census method.

Data collected through a survey in order to obtain primary data, using questionnaires which were developed based on the indicators of social competence for extension workers in communicating and cooperating activities. It consisted of several items which cover individual characteristics, learning activities at open and distance learning, open educational resources, and three aspects of social competence (knowledge, affective, and psychomotor). The questionnaire consisted of closed and open questions. The reliability of the questionnaire was measured by conducting a trial on the readability of the questionnaire. The reliability was ranged from 0.6 to 0.9. Quantitative data were analyzed using descriptive statistics, while qualitative information (In depth Interview) was used to complete and elaborate the existing quantitative data. 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

Social competence of extension workers

The level of social competence of extension workers graduated from ODL institution was moderate (Table 1), due to the ability of extension workers in communicating and cooperating extension activities still has not been optimal. This condition indicated that there should be efforts to increase the social competence of extension workers graduated from ODL which were focused on improving the ability of extension workers in communicating and cooperating extension activities.

The moderate level of social competence with the average score of 69 (Table 2), shown by their psychomotor aspect. Their affective aspect was considered as high but their knowledge was low. This indicated that extension workers graduated from ODL 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 extension workers well enough.

These findings is in line with other research using conventional learning setting conducted by Suryaman (2001), Puspadi (2002), Marius (2007), and Gatut (2008) which found that the competence level of extension workers is range from low to moderate. It means that either conventional or open and distance learning (ODL) setting had a similar result in competence level.

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 |
| Total 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 was 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 social competence as a whole.

Table 2. Distribution of the Average Score on Social Competence

| Competence | Sub Competence | Competence Aspects | | | | | | Total Competence Aspects | |
|------------|----------------|--------------------|----|-----------|----|-------------|----|--------------------------|----|
| | | Knowledge | | Affective | | Psychomotor | | mean | sd |
| | | 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 was not optimal on the ability of extension workers in mastering the concepts and ways of communication. This condition indicated that there should be efforts to increase the competence of extension workers in communicating extension activities which focused on improving the communication ability. This was in line with the opinion Sumardjo (1999) which stated 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 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 stated that the quality of information provided depend on the extension worker as change agent, namely: (1) the number of extension activities which was done, (2) the credibility of extension workers, such as emotional closeness and favor of the farmers, as well as to accept feedback, and (3) the level of understanding on farmers' needs. Thus, the extension worker was not enough just to have that information, but must also have the ability to convey the information, and be able to give confidence to farmers on such information.

Their level of knowledge was considered as low, but having faith and action. This suggested that the alumni of ODL still had less understanding of communication, especially about the concepts and ways of communication. However, they were 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 of the extension tasks was to influence or persuade the farmers so that they can accept and implement the information delivered happily, then consequently they increased knowledge and communication skills.

Competence in cooperating extension activities

The level of competence in cooperating extension activities was classified as moderate, which was not optimal due to their low ability to master the concepts and ways of working. This condition indicated that efforts to increase their cooperating competence were focused on improving their ability in mastering the concepts and ways of working.

Their level of knowledge in extension work was low; however their confidential and cooperation actions were classified as moderate. This suggested that ODL alumni still lack of understanding of the concepts and ways of working. However, they had quite positive attitude towards the ways of working in extension activities and reasonably well implemented as action. Therefore, efforts to increase the competence can be focused on improving their knowledge and skills on cooperating extension activities. Given one of their tasks was to build farmers' groups, it is necessary 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. In addition, in practicing ways to communicate they encountered problems, for example the use of internet for communication. This is due to the media was not affordable in their region. Besides, they were still encountering obstacles in the ways to access these communication tools. Therefore, it can be said that the knowledge of extension workers on the concept and the ways to communicate was well enough, but it was still an obstacle to implement.

The dominant factors influencing the social competence

Pearson correlation analysis to examine the relationship between the individual characteristics, learning activities, learning from other sources, and the environment on the social competence were presented on Table3.

Table 3. Correlation Coefficient of Individual Characteristics, Learning Activities, Learning From Other Source, and the Environment on Social Competence

| Variable | Competence | | |
|--|---------------|-------------|----------|
| | Communication | Cooperation | Total |
| Individual Characteristics (X1) | | | |
| Age (X11) | -.203(**) | -.214(**) | -.156(*) |
| Working Period (X12) | -.218(**) | -.172(*) | -.146 |
| Fungsional Position (X13) | .006 | .128 | .079 |
| Learning Motivation (X14) | .111 | .057 | .030 |
| Learning Activities(X2) | | | |
| 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 Facilities Utility (X25) | .156(*) | .143 | .123 |
| Learning From Other Sources | | | |
| Training Benefit (X31) | -.052 | -.113 | -.121 |
| Printed Media Utility (X32) | .023 | .020 | -.006 |
| Non Printed Media Utility (X33) | .073 | -.066 | .017 |
| Environment (X4) | | | |
| Farmer Need (X41) | -.085 | -.042 | -.059 |
| Institution Support (X42) | .103 | .020 | .021 |

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

Age indicated significant but negative relationship with social competence. It means age did not have any impact on the achievement of social competence. This condition was caused by the age of extension workers who on average were elderly so sometimes encounter obstacles in learning, especially on the use of media. Extension worker was less controlled of existing information technology so that their accessibility to the communication media was relatively less.

Learning Subjects indicated areal and positive impact on the social competence. It means the coverage of existing courses in the curriculum meet the needs of extension workers in conducting outreach activities.

Factors that have a significant relationship were analyzed using multiple regression analysis to see the impact of individual characteristics, learning activities, learning from other sources, and environmental factors on social competence. The results of regression analysis were presented on Table4. From the table, the regression model can be written 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 $Y_{1.2}$ = social competence; $X_{2.3}$ = subject matter coverage; $X_{2.5}$ = learning facilities; and $X_{3.1}$ = training. The regression equation suggested 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. Functional 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.

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

| Variable | Competence | | | | | |
|--|---------------|------|-------------|------|----------|------|
| | Communication | | Cooperation | | Total | |
| | 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 Period (X12) | -.140 | .060 | -.075 | .329 | - | - |
| Fungsional Position (X13) | - | - | - | - | - | - |
| Learning Motivation (X14) | - | - | - | - | - | - |
| Interaction With Learning Material (X21) | .030 | .595 | - | - | - | - |
| Tutorial Quality (X22) | - | - | - | - | - | - |
| Subject Matter Coverage (X23) | .300 | .001 | .262 | .003 | .332** | .001 |
| Interaction With Colleague (X24) | - | - | - | - | - | - |
| Learning Facilities Utility (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

Table 4 indicated that the coverage of subject matter and learning facilities indicated 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 indicated that these factors were the main elements that contribute to the improvement of social competence of extension workers graduated from ODL. In other words, high and low levels of social competence of extension workers influenced by how much influence these factors.

Coverage subject matter indicated the greatest contribution to the social competence or in other words the scope of the course was an effective factor that influences the social competence. Thus, an increase in social competence can be focused on the development of courses coverage.

On Table 4, it can be seen that most factors, either individual characteristics (age, working period, position, and motivation), learning activities (interaction with learning material, tutorial quality, interaction in study group), learning sources from others (printed and non printed media quality), and environment, did not have significant influence on social competence of agricultural extension workers. However, some factors such as subject matter coverage and learning facilities indicated a significant influence. One of them, that is subject matter coverage, even indicated the dominant factor that positively affects the social competence of extension workers. This means that improvement on the quality of subject matter coverage can increase the level of social competence of agricultural extension workers. Therefore, it can be said that this factor constitute a finding novelty of this research. This finding lead to an implication for UT as an open and distance learning to develop the subject matter coverage in order to improve the social competence of agricultural extension workers.

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 was focused on the development of subject material coverage. In terms of the competence aspects, strategies that can be taken were 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 the development of learning process at open and distance learning institution. This effort can be done by increasing the interaction with the learning materials, improving the quality of learning facilities, and the scope of learning subjects.

Conclusion and Recommendations

Conclusions

The level of social competence of extension workers graduated from open and distance learning (ODL) institution were considered as moderate. Their competence aspects, especially on affective and psychomotor aspects were found relatively high. From the findings, it can be concluded that ODL can be addressed by agricultural extension workers to improve their social competence. By studying on distance education institution, they can improve their competence without leaving their duties on extension activities. This condition indicated that Universitas Terbuka (Indonesia Open Learning University) as an educational institution can contribute to improve the quality of agricultural extension workers in Indonesia.

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.

Strategies developed to improve the social competence of extension workers were focused on improving the subject matter coverage. In terms of competence aspects, strategy taken was improving their knowledge and skills aspects, especially in communicating and cooperating extension activities.

Recommendations

Social competence of extension workers need to be increased in order to provide better services to farmers. Effective strategies to improve the social competence were developing the learning activities at Indonesia Open Learning Activities. Given the level of social competence is still moderate, therefore it need to increase which focused on improving the quality of learning, especially in terms of subject matter coverage. Although the subject matter scope was sufficient for extension workers in carrying out their duties, however the course material need to be improved in order to fit with the needs of extension activities, and in accordance with current conditions.

Since the social competence of agricultural extension workers was considered as moderate, therefore in order to improve it, Agricultural Department need to support the learning quality of agricultural extension workers by giving learning motivation and learning facilities.

Considering the limitation of this study which was still preliminary, it is necessary for future research to assess the social competence of agricultural extension workers on a wider scale in order to obtain more comprehensive information.

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