

Extension Agents' Preference on Communication Media for Innovation Dissemination

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ABSTRACT

Along with the development of extension, extension workers are expected to always be dynamic and follow existing changes. One of the changes made is the strategy of choosing media for extension in accordance with field conditions and the needs of farmers so that extension activities can achieve the planned targets. This study aims to determine the preferences of extension workers in choosing media for disseminating innovations and to determine the influence of the role of coworkers on the preferences of agricultural extension workers in using extension media in group communication in Sleman Regency, Yogyakarta. This study used a survey method and 40 extension workers in all UPTD BP4 Region I -VIII Sleman Regency were selected through simple random sampling. The analysis conducted to determine the preference of extension workers was the Cochran test. To determine the role of coworkers on farmers' preferences, a simple linear regression test was conducted. The results show that agricultural extension workers have a tendency to choose extension media that are generally used. In addition, the role of coworkers significantly influenced the preferences of agricultural extension workers.

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ABSTRAK

Seiring dengan perkembangan penyuluhan, penyuluh dituntut untuk selalu dinamis dan mengikuti perubahan yang ada. Salah satu bentuk perubahan yang dilakukan adalah strategi memilih media penyuluhan yang sesuai dengan kondisi lapangan dan kebutuhan petani agar kegiatan penyuluhan dapat mencapai target yang telah direncanakan. Penelitian ini bertujuan untuk mengetahui preferensi penyuluh dalam memilih media diseminasi inovasi dan mengetahui pengaruh peran rekan kerja terhadap preferensi penyuluh pertanian dalam menggunakan media penyuluhan dalam komunikasi kelompok di Kabupaten Sleman, D.I. Yogyakarta. Penelitian ini menggunakan metode survei dan dipilih 40 penyuluh di seluruh UPTD BP4 Wilayah I -VIII Kabupaten Sleman melalui simple random sampling. Analisis yang dilakukan untuk mengetahui preferensi penyuluh adalah uji Cochran. Untuk mengetahui peran rekan kerja terhadap preferensi penyuluh an untuk mengetahui peran rekan kerja terhadap negerahana. Hasil menunjukkan bahwa penyuluh pertanian memiliki kecenderungan untuk memilih media penyuluhan yang pada umumnya sering digunakan. Di samping itu, faktor peran rekan kerja berpengaruh secara signifikan terhadap preferensi penyuluh pertanian.

Kata Kunci: preferensi; penyuluh pertanian; media penyuluhan; peran rekan kerja

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INTRODUCTION

Despite a number of obstacles that Indonesia faces, including restricted access to technology and information, inadequate infrastructure, and ongoing efforts to increase agricultural extension's efficacy, advancing extension activities in Indonesia remains a top priority. The discrepancy between the unrealized agricultural potential and the subpar productivity levels observed in the field is indicative of this scenario. To acknowledge this, the active involvement of human resources can support agricultural development today and, in the future, especially if agricultural extension agents act as empowerment intermediaries. The realization of these conditions leads to agricultural development results that allow farmers along with other stakeholders to be involved in the realization of agricultural successes which support food independence and increase the income levels of farmer families.

In Indonesia, the large choice of communication media: information media and extension media require extension agents able to choose what media they like most or use frequently (Derana & Hadiyanto, 2018). In India, more than half of extension agents in Maharashtra have a medium category in using communication media, which is correlated with job satisfaction (Padole et al, 2017).

The role of extension workers contributes to the success of extension and economic improvement of farmers. The motivations of extension workers in performing their duties can be stimulated by the role of coworkers. According to Taheri & Miah (2020), the working environment is the crucial thing that influences individuals who work in it. Karna et al. (2016) explained that the dynamism of the working environment has an important role in improving performance. Agricultural extension officers receive ICT devices from their organisation but do not receive financial support for buying internet packages, maintenance, and relevant training (Kabir et al, 2022).

The behavior to improve capabilities in providing services to farmers directs extension workers to follow a change. The form of such behavior is awareness in choosing extension media which is also known as preference. Beside the preference of extension workers, the needs and characteristics of farmers can also be a major consideration. Mwololo et al. (2019) indicated that extension methods are highly dependent on farmers' socioeconomic conditions such as education, access to markets, attitudes, and economic conditions. In addition, Moyo & Salawu (2019) reported that farmers also consider media that are interesting and convenient to use such as multimedia application in extension activities. On the other hand, Landini (2022) added that extension workers also conduct horizontal learning through exchanging opinions and experiences with their colleagues, including other matters regarding the choice of what to do or what to use.

Thus, it is crucial to acknowledge the preferences of extension workers for extension media and how the influence of coworkers on agricultural extension workers's preference in the utilization of extension media. There are two hypotheses, which are: (1) it is predicted that agricultural extension workers have different preferences in choosing innovation dissemination media, and (2) it is predicted that coworkers have a significant effect on agricultural extension workers' preferences in choosing the media innovation for dissemination.

METHODS

This research employed a quantitative approach with a survey method. These approaches align with the research, which uses data collection methods that are intended to gather field data and facts to describe both internal and external aspects. details that accurately and realistically depict the internal and external variables that affect agricultural extension workers' preferences for extension media in group communication (Derana & Hadiyanto, 2014). In order to provide more detailed explanation, this study also makes use of qualitative data as supporting data, particularly when discussing the variables that affect agricultural extension workers' decision to use communication media for the agricultural extension.

This research was conducted in Sleman Regency. This research focuses on agricultural extension workers who works in the fields of food crops, horticulture, and agriculture so that the research was conducted in each Technical Implementation Unit (UPTD) of the Agricultural and Fisheries Extension Center (BP4) in Sleman Regency which includes eight extension units covering Regions I-VIII. Respondents in this study were 40 agricultural extension workers in Sleman Regency. Five samples were taken from each of the eight extension units in Sleman Regency using a simple random sampling technique.

According to this theory, there are a number of internal and external aspects that come into play, such as the ability of farmer groups to provide guidance and the role of coworkers, as well as the education level, motivation, and experience of extension workers.

These factors are thought to have the potential to affect how extension workers feel about extension media. This study not only believed that the selected respondents could accurately reflect the entire population of extension workers, but it also expected to analyze the purported causes. The chosen respondents are able to accurately represent Sleman Regency's entire agricultural extension worker population.

The data analysis method used to answer the first objective of this study and validate the first hypothesis about extension workers' preferences for communication media in innovation dissemination was the Cochran test. The media analyzed including PPT, pictures or photos, video slides, posters, folders or leaflets, maps, specimens, Whatsapp, and Youtube.

- H0: Extension workers have the same preference for all innovation dissemination media that have been used
- Ha: Extension workers have different preferences for all innovation dissemination media that have been used
- H0 is rejected if the asymp.sig. value is less than alpha (5%).

Meanwhile, a single linear regression test was conducted to answer the second objective and prove the second hypothesis about the influence of coworkers on extension workers' preferences in choosing innovation dissemination media.

- H0: Coworkers' role does not have a significant influence on extension workers' preferences for innovation dissemination media
- Ha: Coworkers' role has a significant influence on extension workers' preferences for innovation dissemination media

H0 is rejected if the asymp.sig. value or sig.2-tailed less than alpha (5%).

RESULT AND DISCUSSION

The Media of Agricultural Extension

In their duties, agricultural extension officers in Sleman Regency strive to provide appropriate and good services to the farmer groups they guide. Like an individual, agricultural extension workers also have characteristics that characterize them. characteristics. In carrying out their duties, agricultural extension workers need the the most appropriate way in order to channel the information they have to the farmer groups in accordance with what the extension workers expect. farmer groups in accordance with what the extension agent expects, namely that farmer groups can understand and practice the information provided. and practice the information channeled.

Mentioned again, according to what already written that in order to get the results in accordance with the expectations of the extension workers must be able to adjust the extension program, see the conditions of the target target program, look at the conditions of the target audience such as the age of farmers, the level of education level of the farmers, and ensuring the use of simple media. In other words, the more extension workers understand the conditions that really occur in the field both in terms of human resources and in the field both in terms of human resources and in terms of agricultural problems, it can reduce the risk of misunderstanding. it can reduce the risk of misunderstanding between the extension worker and the farmer group.

Extension preferences for extension media with the highest results of extension workers choosing extension media that they often and really like to use because the extension media is easy to operate. On the other hand, the selection of extension media is also influenced by media that are able to convey more interesting information results. This interesting context is assessed based on the assessment of each agricultural extension agent, because if re-examined the choice of extension media for each extension agent is also different. Then, the extension agent chooses an extension media because the extension media is able to convey information clearly to farmer groups as a learning medium and extension media is able to represent or accommodate all information conveyed.

Media is an intermediary used in extension activities. (Anang, 2022) asserts that counseling media supports counseling activities, giving contact a high priority during the process. According to this definition, the media serves as a tool or an intermediary in extension efforts. Extension personnel will find it very useful to encourage their farmer groups' guidance in all areas from thoughts, feelings, and attention to their capacity to manage their agricultural businesses. As the extension agent hopes, a person's desire to learn can be formed through the production of a stimulus. Determining the most popular medium utilized by extension workers is one of the goals of this study materials that are are most dominantly used by extension workers in group communication in Sleman Regency. Each agricultural extension agent has its own reasons for choosing the extension media to disseminate agricultural information to its targets (Eksanika, 2017). The use of extension media currently adapts to developments and considers the ease of preparation. Extension workers prefer media that are easy to prepare and have a maximum impact on the intended target.

Characteristics and Resources of Agricultural Extension Workers in Sleman Regency

Age, gender, and length of service are among the factors that play an important role in shaping identity as an agricultural extension worker. The existence of these factors is considered to be able to influence the way extension workers work, especially in learning and accepting new things.

No	Extension Work	ters Characteristic	Number (person)	Percentage (%)
1	Gender	Male Female	28 12	70,00 30,00
2	Age (Year)	15-64	40	100,0
3	Length of Service (year)	<10 10-20	7 29	17,50 72,50
		21-30	1	2,50
		>30	3	7,50

Table 1. Characteristics of Extension Workers Based on Age, Gender, and Length of Service

Source: Analysis of Primary Data, 2023

Based on Table 1, it is known that gender is dominated by male with a total of 28 persons or 35.00% of the total extension workers. Meanwhile, the total number of female extension workers are 12 persons or 15.00% of the total extension workers with an age range of 15-64 years. There are 29 people or 72.50% of extension workers who have 10-20 years of working experience. The data states that extension workers are at a productive age in employment with a long working experience,

supported by an age range that is still productive. On the other hand, agricultural extension workers in Sleman have taken formal education with the majority of S1 education amounting to 70% of the total respondents. Therefore, it can be concluded that agricultural extension workers in Sleman Regency are considered to have the attitudes, abilities/skills, and behaviors that are needed in accordance with their duties. behavior that is needed in accordance with the duties of agricultural extension workers who are considered capable of providing services and teaching to who are considered capable of providing services and teaching to farmers in order to overcome agricultural problems in Sleman Regency in accordance with the overcome agricultural problems in Sleman Regency in accordance with experience and learning gained during formal education.

With the good quality of agricultural extension workers, the extension workers directly have the drive to fulfill their needs as extension workers who can influence farmers. Motivation is described as a drive or desire that guides a person's behavior in action. In this study, motivation is defined as the desire or drive of agricultural extension workers who influence agricultural extension workers in choosing extension media to support group communication activities. Basically, the urge arises because of the needs within themselves that are still unmet. Similar to what is written in McClelland's theory that there are strong needs, the resulting behavior also leads to actions to achieve satisfaction in service and teaching to farmers to overcome agricultural problems in Sleman Regency in accordance with the experience and learning gained during formal education.

In fact, according to Hanafiah, et al. (2013) extension workers who have high motivation in conveying information and fostering farmers will use 80-90% of their abilities, while for extension workers who have high motivation in conveying information will use 80-90% of their abilities, while for extension workers who have low motivation, they will give only 20-30% of their abilities. Extension workers who have low motivation will provide only 20-30% of their abilities. This statement proves that it takes a strong desire or need strong desire or need in starting something so that the results obtained are also maximized. The main topic in this research focuses on preferences, which are closely related to choose behavior. Preferences if linked back to Mc Clelland's theory will be very suitable and very supportive, because the more the extension workers have a high sense of need, the more they will be able to achieve their goals. Extension workers have a high sense of need in fostering their farmer groups, the higher the group, the higher the accuracy of the selection of extension media that is applied during extension activities.

Agricultural Extension Workers' Preferences in Using Innovation Dissemination Media

The media for disseminating innovations chosen by extension workers are Powerpoint (chosen by 50% of extension workers) and Whatsapp (chosen by 30% of extension workers). Extension media preferences emphasized the elaboration of the reasons or causes that determine the preferences of agricultural extension workers on the use of extension media. The selection of media for disseminating innovations through extension activities is based on several capabilities of the media. First, extension media is able to display information sources in accordance with the expectations of extension workers. Second, extension media is able to display extension material to be more interesting. Third, extension media can convey information clearly to farmer groups as a learning medium. Fourth, the extension media can represent or accommodate all the information conveyed by the extension agent. Fifth, extension media conveys a specific message during extension activities that involve a communication conducted together with several people in it.

Table 2.	Results	of Cochran	Test
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Cochran Test	Value
- Cochran's	249.122
- Asymp.Sig	0.000*
* H0 is rejected with alpha of 5%	

Source: Analysis of Primary Data, 2023

Based on Table 2, the Cochran test results show that the Asymp Sig is 0.000 and less than alpha. Thus, the hypothesis is rejected so it is concluded that extension workers have different preferences for the use of PPT media, pictures or photos, video slides, posters, folders or leaflets, maps, specimens, Whatsapp, and Youtube. Extension workers prefer and dominantly use PPT and WhatsApp. With this understanding, it can be explained that the media dominant media used is PPT, followed by Whatsapp media. It can be said that PPT is the most dominant media for extension activities, indicating that the frequency of use is frequent and extension workers like to use it. extension activities, which indicates that the frequency of use is frequent and extension workers like the way the media works. with the way the media works, but the results in the field say that agricultural extension workers prefer Whatsapp as a media for extension activities. Agricultural extension workers are more likely to choose Whatsapp as the extension media that they like to use.

PPT was chosen as the most dominant media for group communication activities because for extension workers PPT is a media that is easy to use for farmers and for extension workers because basically PPT is included in the Audio-Visual-Silent Media, where the media displays images and text simultaneously to video. With that, according to the agricultural extension workers, PPT is easy for farmers to understand because farmers prefer to be explained through the PPT assistance because farmers like to directly hear and see, for PPT is also easy for farmers to understand because it can include text, images, to videos, PPT makes it easy for extension documentation for every extension activity. every extension activity, easy to store, flexible, does not require the internet, the results displayed are attractive and the requires the internet, the results displayed are interesting and easy to understand, make themselves agricultural extension workers to be able to express and increase their creativity. With PPT extension workers consider that the concept of how PPT media works is like talking or chatting with each other so it does not burden both parties.

Therefore, the frequency of using PPT is very high, namely one month three times every time there is a meeting, but exceptions if the situation or request from the farmer group wants to use other media as a medium for counseling then PPT is not used. All the advantages of PPT, for extension workers the disadvantage of PPT is that it must require an LCD Projector which is not available or damaged, so that some of the PPTs are not used. Availability is insufficient or damaged, so some agricultural extension workers ensure by buying their own LCD Projector. The explanation above illustrates that basically PPT must indeed be used and has become a necessity for the dissemination of information. The above explanation illustrates that basically PPT must be used and has become a necessity for the most effective and efficient dissemination of information, although basically the media is only a means and depends back on the agricultural extension workers who deliver it. Furthermore, for Whatsapp, the agricultural extension workers answered that they like and most However, Whatsapp was not chosen as the dominant media because basically Whatsapp is a media that relies on the role of cellphones and the internet in its use. Reviewed again the average age of farmers is> 60 years old which makes Whatsapp a difficult choice to make this media the main media for extension activities. For agricultural extension workers in Sleman Regency, Whatsapp is a medium that is easy, fast, and cheap to use, supported by its role that can be used remotely, storing information is also easy to disseminate.

Extension worker Agricultural extension officers complain that information conveyed on Whatsapp is not well received by farmers, even though 98% of members of the guidance farmer groups in Sleman Regency already have Whatsapp. This is because members prefer to be directly explained rather than just invited to read. In addition, extension workers feel that by disseminating information on Whatsapp, extension workers feel that no feedback is obtained and does not cover all ages.

Based on the explanation above, PPT and Whatsapp have their advantages each in its use as a teaching aid and as a tool. According to Iswadji (2003) cit. Anas (2014) teaching aids are tools or objects made that are used to assist in developing learning principles, while tools are tools used to facilitate extension activities.. In other words, in this case, if it is related to the advantages and disadvantages of PPT and Whatsapp, it can be said that PPT media acts as a teaching aid in direct counseling activities, but if circumstances do not allow or there are obstacles to direct extension activities, Whatsapp can act as a tool to assist in the dissemination of information.

The Influence of Coworker Roles on Preferences

The work environment is the most important thing that influences the individuals who work in it. In the work environment, coworkers are classified as a non-physical work environment which includes good working relationships with coworkers or harmony that exists within a scope of work. In other words, agricultural extension workers will tend to look at the situation of the surrounding environment to adjust their performance. With that, coworkers are part of one of the influences for agricultural extension workers to choose and determine a matter, because basically individual has a tendency to follow good things based on their prior knowledge and beliefs and implement them for profitable benefits. In this study, the role of coworkers will be seen based on good working relationships with coworkers or harmony that exists in a scope of work, as well as the role of coworkers in providing information, motivating, and assisting the extension workers in making extension media.

The role of coworkers in this study is examined through the role of the nonphysical work environment which includes good working relationships with coworkers or the harmony that exists in a work environment. Coworkers are part of one of the influences for extension workers to choose and determine something because basically individuals have a tendency to follow good things that are considered profitable. In this study, the role of coworkers will be seen based on good working relationships with coworkers or harmony that exists in a scope of work, as well as the role of coworkers in providing information, motivating, and assisting extension workers in utilizing extension media. The following is presented the results of the level of attainment of the role of coworkers.

No	Indicators	Category
1	Extension workers are motivated by colleagues' skills in utilizing extension media.	Strongly Agree
2	Extension workers choose extension media according to the choice of extension media that is mostly used by colleagues.	Not Sure
3	Extension workers choose extension media according to the facilities of their colleagues.	Not Sure
4	Extension workers choose extension media according to the recommendations of their colleagues rather than choosing media that are in line with their ability to operate the media.	Disagree
5	Extension workers choose extension media that are in accordance with the recommendations of their colleagues compared to choosing extension media that are in accordance with the conditions or background of the guided farmer groups	Disagree
	Average	Not Sure

Table 3. Characteristics of Agricultural Extension Workers Based on the Role of Coworkers

Source: Analysis of Primary Data, 2023

Based on Table 3, extension workers are unsure if the role of coworkers can influence the preferences of extension workers on innovation dissemination media. In other words, agricultural extension workers are still skeptical that the role of coworkers can influence the extension worker's personality to influence him or her in the choice of the use of extension media. It was found that agricultural extension workers strongly agree that they have a good relationship in friendship, but good relationships in friendship do not influence or motivate them to choose extension media in accordance with the choice of extension media used by the majority of colleagues. If it can be concluded, agricultural extension workers in Sleman Regency prioritize their abilities and the interests of the farmer groups they guide rather than having to follow the use of media that is predominantly used by their colleagues. The main reason for this is because although the extension workers have the same tasks, the responsibilities of each extension worker are different in terms of the agricultural conditions of the area under their guidance and the characteristics of the farmer groups under their guidance. This is evidenced from the results that agricultural extension workers disagree if they choose extension media according to the advice of coworkers compared to choosing media that are in accordance with the ability of extension workers to operate them and agricultural extension workers also disagree if they choose extension media in accordance with the advice of coworkers compared to choosing extension media in accordance with the conditions or background of the guidance farmer group.

Variable	Coef. Regresision	t-stats	sig.	note
- Coworkers role	0,345	17.592	0.069	NS
Constant	42.298			
R	0.291			
R squared	0.084			
F cal.	17.263			
Alpha	0.05			

Table 4. Single Regression Analysis Results

Source: Analysis of Primary Data, 2023

From the simple linear regression analysis, the results obtained showed that the sig value. 0.069 which is greater than alpha 0.05 (H0 failed to be rejected). This means that the independent variable (X), namely the role of coworkers, has no effect on the preference of agricultural extension workers in choosing innovation dissemination media (Y). The value of extension workers' preferences for innovation dissemination media will remain at 42,298 whether the role of coworkers increases or decreases.

Although in theory, the work environment affects the way individuals work, this study shows different results because it has a different focus. The role of coworkers in this study is focused on the non-physical working environment which includes good working relationships with coworkers or harmony that exists within a scope of work, as well as the role of coworkers in providing information, motivating, and assisting extension workers in utilizing extension media. It is the same with agricultural extension workers who in their daily activities involve farmers or coworkers as productivity supporters. as productivity support. Agricultural extension workers will tend to see the situation of the surrounding environment to adjust their performance. Colleagues' co-workers are part of one of the influences for agricultural extension workers to choose and determine something. determine something because humans have a tendency to follow good things that are considered profitable. good things that are considered profitable. Therefore, indirectly There is a possibility that extension workers will follow the advice, attitudes, behavior, traits, and habits of fellow extension workers who are considered to be a role model.

In practice, agricultural extension workers have a good and very close relationship and help each other in completing shortcomings in extension activities. However, the choice and use of media remains in accordance with the desire of the extension agent themselves or in accordance with the request of the group. In essence, agricultural extension workers pay attention to anyone's recommendation if it is suitable for the conditions of the assisted groups. The extension worker first sorts out the information obtained from colleagues.

CONCLUSION

Agricultural extension workers' preferences or tendencies in choosing innovation dissemination media based on the criteria of the media include: the ability to display accurate sources of information, to display material to be more interesting so that messages are conveyed clearly to farmer groups, effectiveness in delivering messages, ease of operation, and minimum limitation by space and time. Extension workers do not have the same preference for all innovation dissemination media that have been applied. Extension workers tend to use PPT and WhatsApp. The role of coworkers does not significantly affect agricultural extension workers' preferences for innovation dissemination media. Extension workers are selective in choosing the media used.

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