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Utilization of Social Media in Agricultural Extension Activities in South Ogan Komering District

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ABSTRACT

The development of science and technology today produces many communication media that can be used to share information quickly. There are many alternative communication media available to help disseminate information. The purpose of this study is to determine the factors that influence agricultural extension workers in the use of social media and to determine the use of social media in agricultural extension activities. The research method used survey methods, namely interviews and questionnaires with the first quantitative problem formulation data analysis using simple linear regression and the first qualitative. The results showed that 4 factors influence the extensionist in the use of social media, namely age, internet network, number of social media accounts, and income. Of the four factors, three factors have a significant effect, namely the age factor, internet network, and income, while the factor that has no significant effect is the number of social media accounts. In the second problem formulation of the use of media for agricultural extension activities, there are four social media in the categories used by the extension workers, namely Facebook, YouTube, WhatsApp, and Instagram. Of these media, the most frequently used by extension workers to support extension activities are WhatsApp and youtube. Various kinds of information are accessed on social media, the most sought after by extension workers, namely pest and disease control and information on commodity prices.

1. INTRODUCTION

1.1. Research Background

The development of science and technology today produces many communication media that can be used to share information quickly. The number of alternative communication media available requires consideration and planning in selecting and using the right communication media to help disseminate information. The use of media, as well as proper communication, will facilitate the information to reach the target effectively and efficiently. The growth of social media users globally in a year reaches more than a quarter-billion [1]. Hootsuite's research results in Ref. [2] also explained that social media users in Indonesia reached 150 million or about 56% of the total production.

The success of the implementation of the extension program is influenced by many factors that can be grouped into factors related to the characteristics of the extension worker [3]. According to Ref. [4], agricultural technology information and research results that will be used as agricultural extension

materials should be relevant to the problems faced by farmers. According to Mulyandari [5], Dasli et al.[6], and Eliana [7], there are several factors behind extension workers and farmers if they want to take advantage of technology including social media. Starting from age, formal education, income, ownership of information technology facilities, length of use, land area, cosmopolitan level, perception of information technology, motivation, behavior in the use of information technology, and types of training that have been followed, and involvement in groups. According to Sumardjo [8], besides having to master information technology, extension workers must also understand the agribusiness system, namely what the market needs. This is the starting point for how to develop agricultural extension materials to assist farmers. The skills that must be mastered by agricultural instructors are mastery and use of social media for effective communication skills, feedback on information and its benefits for extension activities, and introduction of the use of tricks to farmers.

Social media is an online media that is used by each other where users can easily participate, interact, share and create issues on blogs, social networks, forums, and virtual worlds without being limited by space and time. With the rapid development of

today's era, there are many types of social media that we can find on the internet, in addition to the different types of platforms, the types of content on social media are also rich and varied. According to Anggraini [9], the most commonly used social networks or social networks today are Youtube, Facebook, and Twitter. Instagram, WhatsApp, and others. This is also reinforced by Ref. [10], that Youtube is still the most popular social media in Indonesia. The number of youtube users reaches 94% with the age range of users in the range of 16 to 64 years. In the second place, WhatsApp is perched, followed by Instagram in the third position and Facebook in the fourth position

In South Ogan Komering Ulu District, most of the agricultural extension workers have used social media for extension activities, where the target area has smooth signals to allow using social media and in the current era there is a lot of information available on social media accounts, for example training online from the Ministry of Agriculture via a YouTube account with various materials that suit the needs of farmers. Farmers in the South OKU district are also mostly able to use social media. This makes it easier for extension workers to coordinate or communicate with farmers. For this reason, it is interesting to study how to use social media in agricultural extension activities.

1.2. Literature Review

1.2.1. While Agricultural Extension Concept

Agricultural Extension is a learning process for the main actors and business actors so that they are willing and able to help and organize themselves in accessing market information, technology, capital, and other resources, to increase productivity, business efficiency, income, welfare, as well as increase awareness in conservation. environmental function. Agricultural extension activities are carried out by agricultural extension workers, where each agricultural extension has a specific target area.

Based on the Law of the Republic of Indonesia Number 16 of Ref. [11], which is stated in CHAPTER II Article 4, the functions of the extension system are:

1. Facilitate the learning process from the instructor to the target.
2. Strive for easy access for extension workers and targets to existing sources of information, technology, and resources so that targets can develop their businesses.
3. Improve leadership, managerial, organizational, and entrepreneurial skills for extension workers and targets.
4. Assist in analyzing and solving problems and responding to opportunities and challenges faced by extension agents.

According to Sumardjo [8], besides having to master digital technology, extension workers must also understand the agribusiness system, which is what the market needs. This is the starting point for how to develop extension materials to assist farmers. Extension workers and farmers can also use social media such as YouTube, Facebook, Telegram, Instagram, WhatsApp, and the like in agricultural extension activities. Research by Ref. [12] confirms the above opinion that agricultural information plays an important role in the agricultural development process. information by utilizing digital communication, namely by packaging agricultural extension material messages, therefore extension workers must master access to digital communication and develop it for farmers verbally and visually [2].

1.2.2. Social Media Concept

Social media or social media is becoming an increasingly globalized and entrenched phenomenon. Its existence is increasingly inseparable from the way of communicating between humans. As a form of virtual communication, social media is the result of advances in Information and Communication Technology (ICT) and Information Communication Technology (IKT). According to Santoso [13], social media is defined as an online application, means and media intended to facilitate interaction, collaboration, and sharing of materials. According to Ref. [10] in the 2020-2021 Digital GWI survey, the largest social media include Youtube, WhatsApp, Instagram, and Facebook.

1.2.3. Types of Social Media

The use of technological devices such as computers, smartphones, or tablets has experienced a very high increase, this is also directly proportional to the need for internet networks. Many things will be done and social media is one of the most frequently used features by internet users today. According to Ref. [10], types of social media that are frequently accessed and most popularly used today, sorted by the most users are as follows:

1. **Youtube** is a video-sharing website created by PayPal employees in February 2005. This site allows the use of uploading, watching, and sharing videos. Youtube is an online video-sharing platform that allows you to view, share and upload video content.
2. **WhatsApp** is an instant messaging application that allows us to send files, messages, pictures, videos, photos, and other online chats. As an instant messaging application, WhatsApp is a free cross-platform instant messaging application that also utilizes Facebook's voice-over IP technology.
3. **Instagram** is an application that allows users to take photos and share them on various social networking services, including having their own Instagram. Instagram is a mobile-based visual platform that allows sharing of images and videos.
4. **Facebook** According to Ref. [14] review, the full definition of Facebook is a social networking site that allows users to interact with each other users around the world. The phrase "Facebook" is the basic principle that distinguishes Facebook from other social networks, which is to display all information from the user. Facebook offers a variety of advanced features that have never existed on social media before. Besides being able to exchange messages, with Facebook a user can create a personal page, add friends, create and update status, share various content, video calls, and much more. Facebook is also equipped with privacy tools to limit who has the right to see what users share.

1.3. Research Objective

The purpose of this study is to determine the factors that influence agricultural extension workers in the use of social media and to determine the use of social media in agricultural extension activities and categories of information accessed by extension workers. This study is to analyze the extent to which the use of social media (Facebook, Youtube, WhatsApp, and Instagram) to support Agricultural Extension activities in Ogan Komering Ulu Selatan District

2. MATERIAL AND METHOD

The research method used is a survey method, namely interviews using questionnaires, where according to Ref. [15] the material of this method can trace all information that is expected to represent the research objectives. In addition, the survey method was also carried out by observation and literature study. The sampling method used in this research is the Census where the population is in the form of the Government Official Agricultural Extension Officers (PPL) who work in the South OKU District and use social media as many as 50 people and all of them are sampled. The data taken are primary and secondary. After the data was collected, the researchers conducted data processing to facilitate the analysis. This data analysis can provide meaning and meaning that is useful in solving research problems. In the data processing method, there are three ways, namely using editing, coding, and tabulating [16]. In problem formulation using the qualitative method Based on Sofyan [17], in the Journal of Research Design published by Ristekdikti, qualitative research can be understood as a research procedure that utilizes descriptive data, in the form of written or spoken words from observable people and actors.

3. RESULT AND DISCUSSION

3.1. Utilization of Social Media by Agricultural Extension Officers

Social media is a web-based communication tool or application that allows its users to interact with each other by sharing or obtaining existing information. Definition of Utilization Utilization is a derivative of the word 'Benefits', namely an encounter that merely indicates the activity of receiving. This encounter generally leads to the acquisition or use of useful things, either directly or indirectly, to be useful.

The use of social media by agricultural extension workers is the intensity of social media which describes the frequency and duration of agricultural extension workers using social media in extension activities such as obtaining agricultural information and facilitating communication with the matter concerned. This is in line with the opinion of Adekoya [18], namely, the use of information technology has an important role in an agricultural extension system because it can provide extension services from various agricultural sectors and play an important role in rural development. The level of use of social media by agricultural extension workers is shown in the following table.

Table 1. Percentage of Extension Based on Level of Utilization of Social Media

Social Media Utilization Rate	Social Media Users							
	FB (ppl)	%	Youtube (Extention worker)	%	WA (people)	%	IG (people)	%
1. Frequency								
0 times/week	8	16	-	-	-	-	7	24
1-2 times/week	12	24	4	8	-	-	11	22
3-4 times/week	17	34	15	30	9	18	13	26
>5 times/week	13	26	31	62	41	82	19	38

3.1.1. Facebook

Facebook is a social networking site and service where users can post comments, share photos and links to news or other interesting content on the web such as playing games, streaming videos, and chatting. This social media technology innovation can be used by extension workers to provide materials as well as introduce technology and social media to farmers.

Table 1 shows that the never category is where the extension worker never uses a Facebook account to support extension activities, in the table e the category never contains 8 people or 16%, which rarely is <3 times/week in accessing information through Facebook amounting to 12 people or 24%, this shows that most of the respondents use the media in outreach activities. Extension workers who fall into the frequent category are 3-5 times/week totaling 17 people or 34%. Extension workers in the category of always accessing information media >5 times/week totaling 13 people or 26%. In outreach activities, social media is used to access information, which is accessed in the form of information on how to cultivate rice or corn, fertilization methods, and price information. the reason is that Facebook media can be used to access information quickly and easy to use.

The results of the interview with the extension worker on behalf of (Nia Fitria/38 years old) said that I often access information through Facebook which only >5 times access in 1 week the media that is used by Facebook to access information about planting problems because Facebook media can be used for communication. via chat by extension workers. This is in line with Ref. [19] regarding the use of Facebook in agricultural extension activities, one of the benefits of Facebook for agricultural extension workers is that farmers who want to get information about agriculture or solutions to problems they face can access or join a group or community by using their respective registered accounts.

3.1.2. WhatsApp

Ref. [19] stated that WhatsApp is an application for instant messaging each other, allows us to exchange images, videos, photos, and voice messages, and can be used to share information and discussions. Whatsapp is one of the media used by South OKU extension workers in agricultural extension activities. Table 1 shows that the frequent category is 3-5 times/week, with 9 people or 28% accessing the information. Extension workers who are always included in the category are >5 times/week, totaling 41 people or 82% who access. For the category of never and

rarely not here, it can be seen that the WhatsApp application is in great demand by extension workers in the South OKU district in the process of extension activities. The results of interviews with extension workers on behalf of (Rizki/25 years old) say that I use WhatsApp media to access extension activities for problems facilitate communication with farmers, coordinate meeting schedules, access data transmission, photos, and videos, when farmers have problems in the field, they can directly coordinate with extension workers via WhatsApp. And also the extension worker on behalf of (Joko/51 years old) said that WhatsApp supports me in outreach activities, where I can create *Gapoktan* farmer groups, which make it easier for me to access communication with farmers. When they go to the target area when they want a group meeting, they don't know the farmer's house they want to visit, farmers can directly share the location of the place, even though not all farmers know the use of WhatsApp, but some farmers, including millennial farmers, have used WhatsApp media.

This is in line with the opinion of Jumiati [20] who said that WhatsApp is an internet-based application that allows users to share various kinds of content according to the supporting features. WhatsApp also has various features that can be used to communicate with the help of internet services.

3.1.3. YouTube

The development of Youtube as one of the most popular social media by the community is an opportunity in the agricultural world. Youtube can be used as an extension media as a means of conveying communication between extension workers and the extension target, namely farmers.

It can be seen in the description of the table above that the use of youtube media shows that the highest category is always (>5 times/week accessing information via youtube) which is 31 people or 62%. Extension workers who fall into the frequent category are 3-4 times/week totaling 15 people or 30 percent. Then the rare category is 1-2 times/week, totaling 4 people or 8 percent, for the never category there are 0 people, this shows that most respondents use the media to access YouTube media in supporting outreach activities. Examples of activities that are often followed by extension workers such as training for extension workers, seeking information needed in the field, such as controlling pests and diseases that are attacking the target area, and helping find materials to be conveyed to farmers such as proper and correct fertilization methods, use of machinery, etc.

The results of the interview with the extension worker on behalf of (Hendri Dunan/45 years) said that I use the YouTube media to access information >5 times/week, in its use to support extension activities I often participate in online training activities on YouTube, such as talking to program instructors from BPPSDMP, then also looking for information that needed in the field. The youtube account is very helpful for us, especially in this day and age, even though I'm old or not a millennial, it doesn't deny me accessing social media in the process of counseling activities.

This is in line with Ref. [21] opinion [21], Agricultural extension workers who want to distribute extension videos as well as become YouTube content creators can still explore various types or other methods that can be used. Currently, there are not many channels that specialize in agricultural content. This is certainly a potential for developing agricultural extension media in the form of a YouTube page.

3.1.4. Instagram

Table 1 shows that the highest category is Always, which is >5 times/week, totaling 19 0 people or 38 percent, this shows that most of the respondents use the media to access information. Extension workers who enter the frequent category are 3-4 times/week totaling 13 people or 26 percent, the rare category is 1-2 times/week totaling 11 people or 22 percent, then the never category is never done for one week accessing information via Instagram, amounting to 7 people or 24 percent. This shows that there are respondents who do not use Instagram media in outreach activities. Because usually Instagram media is more famous among millennials. On Instagram social media, there are many accounts that access information about agriculture such as digital farmer account names, millennials farmer, we are agriculture, agricultural news, etc. Information accessed by extension workers based on questionnaire results such as commodity price information, information from the ministry of agriculture, and information on agricultural technology, cultivation, and livestock.

The results of interviews with extension workers on behalf of (Toni, S/35 years) said that I use Instagram media to access information >5 times/month, I use Instagram media in outreach activities, namely to access information usually about schedules and addresses of training held by various agencies, then many accounts provide knowledge about agriculture shortly and clearly through photos, texts, and videos, such as food crop cultivation, stew methods, rejuvenation and maintenance of coffee plants, pest and disease problems. I also use Instagram to sell agricultural products, such as my target area's processed, original coffee. This is in line with the opinion of Philip Kotler (2012: 568) in the Ref. [22], Instagram is also one of the drivers of development in the marketing industry. Many entrepreneurs use Instagram as a promotional medium for the goods or services offered. Not only small entrepreneurs, but many brands also use Instagram intensely to provide information about the goods they produce

Then on behalf of (Budiyanto/59 years old), he said that I did not use Instagram media in outreach activities because YouTube and WhatsApp were enough for me to access information because I think that at my age, Instagram media is too complicated compared to YouTube and WhatsApp. This is in line with the databox records of the Napoleon Cat Report, [23] showing that there were 91.01 million Instagram users in Indonesia in October 2021. This number decreased by 7.18% compared to August 2021 which reached 98.06 million users. It is noted that the majority of Instagram users in Indonesia are from the 18-24 year age group, which is 33.90 million. In detail, 19.8% of the application's users are women, while 17.5% are men. The age group of 25-34 years is the second Instagram user in the country. It is noted that 16.9% of female users of this application, while 15.3% of male users are recorded.

Based on Table 2, it can be seen that the variety of agricultural information most accessed by extension workers is pest and disease control, namely 50 people or 100 percent, accessing the information on food crop cultivation (corn and rice) as many as 42 people or 84 percent. The use of balanced fertilizers is 35 people or 70 percent, to access information on commodity prices, namely 50 people or 100 percent, rejuvenation and coffee plant cuttings as many as 23 people or 46 percent, then information about the use of agricultural machinery as many as 27 people or 54 percent.

Table 2. Percentage of Agricultural Extension Officers based on a variety of agricultural information most accessed by extension workers

No	Access a lot of information the variety of information that is widely accessed in South OKU	Number of people)	Percent (%)
1	Pest and Disease Control	50	100%
2	Cultivation of food crops (rice and corn)	42	84%
3	Use of Balanced Fertilizer	35	70%
4	Commodity Price Information	50	100%
5	Coffee plant rejuvenation and cuttings	23	46%
6	Use of agricultural machinery	27	54%

The information accessed by extension workers is by the needs of farmers in the field but seen from the percentage that is needed a lot, namely information on pest and disease control and price information compared to other information. This is in line with the research of Humaidi [24], which states that social media is an online media that can be used by extension workers to easily access information, create messages, interact and participate, which is carried out through social networking and is not limited to including agricultural content.

4. CONCLUSION

Based on the results of the research that has been carried out, it can be concluded: (1) The categories of use of social media used by agricultural extension workers are from the highest to the lowest, namely WhatsApp, Youtube, Facebook, and Instagram; (2). There are six categories of information accessed by extension workers, from the results of research, the most widely accessed information is pest and disease control and information on agricultural commodity prices.

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