DIGITAL COMMUNICATION PATTERNS OF MILENIAL EXTENSIONS AND FARMERS IN YOGYAKARTA (DIY) POST PANDEMI COVID-19

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ABSTRACT

This study examines the communication patterns made by agricultural extension agents for the Special Region of Yogyakarta (DIY) with millennial farmers after the Covid-19 pandemic. The Covid-19 outbreak has changed the way we communicate, especially the use of communication media. Progress Technology also has an impact on social development communication in an area. A very real change can be seen by keeping a distance when carrying out communications and activities. Everyone is forced by circumstances to be able to use communication media, namely gadgets as a communication tool. The words of millennial farmers began to be heard at the beginning of the pandemic, where members of these millennial farmers were different from previous farmers, namely farmers who were media literate and able to adapt quickly to circumstances. Many social media applications are used to communicate during a pandemic, and these millennial farmers choose applications that facilitate their communication. Collecting data in this study using interviews, observation, documentation, and Focus Group Discussion (FGD). Data analysis techniques used with qualitative descriptions. Research informants consisted of extension workers and millennial farmers from four districts and one city, namely Kulonprogo, Bantul, Gunung Kidul, Sleman, and Yogyakarta City. The results of the study show that there has been a change in the pattern of communication carried out by extension workers with post-pandemic millennial farmers, due to the use of technology. After the Covid-19 pandemic, information was digitized for farmer groups, they used information technology to communicate. The pattern of farmer communication during the post-pandemic period has also changed, where millennial farmers play a role in coordinating information

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1. Introduction

Post-covid-19 pandemic communication patterns between agricultural extension workers and millennial farmers are interesting to study, this is due to changes in the way of

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coordination. According to (Kominfo, 2022) during the Covid-19 pandemic there were restrictions and physical activity, thus changing the way people live, communicate, seek and access information from the media. There has also been a shift in conventional media consumption, where for ten years, namely in 2021, it has decreased. Mastery of information technology in the era of competitive information technology advances is an important requirement for society (Damanik, 2012).

According to data from the Association of Indonesian Internet Service Providers (APJII) in 2023 there will be an increase of 1.17 percent or an increase of 5 million people, namely to 78.19% in household internet use in Indonesia. Where in 2023 there will be 215.62 million people out of a total population of 275.77 million people in Indonesia. Internet users based on user age are mostly used by people aged 13-18 years, namely 98.2% with a contribution of 12.15%. Furthermore, users aged 19-34 years accounted for 97.17% with a contribution of 32.09%, aged 35-54 years recorded 84.04% with a contribution of 33.67%, and 47.62% of users aged 55 and over with a contribution 7.19% (Lavinda, 2023).

The pandemic has made the exchange of information carried out through gadgets, exchanging ideas and information, collaborating, collaborating in creating creations and making acquaintances in visual and audiovisual forms (Nasrullah, 2015). Communicating using a device facilitates the exchange of information, and feedback occurs quickly. Devices become interactive media, allowing users to receive feedback flows, so that they can participate and modify the content of information at that time (real time) (Morissan, 2010). Media users can choose the right media, so that the message conveyed is effectively conveyed and right on target. Communities and individuals use the media to meet their needs and satisfaction in accessing information (Trisnani, 2017).

The pandemic requires everyone to be able to adapt to the media, including agricultural extension workers and farmers. There are restrictions on meeting in person or keeping a distance so that the covid virus spreads, making meetings use the media. The word millennial farmer also became famous, when in 2019, farmers aged 19 to 39 years began to be confirmed. The development of millennial farmers during the Covid-19 pandemic is developing rapidly, where these millennial farmers are known as a media literate generation. During a pandemic, they used the media to find and disseminate information. They are agents of change, which according to the theory of innovation diffusion according to Rogers (1971) in (Zulkarimen, 2004) examine messages in the form of new ideas or ideas. Four elements in diffusion according to (Hanafi, 1987) namely: innovation, communication channels, time period, members of the social system. Change innovation occurs when the use of new media uses it as a tool for searching and disseminating information (Tutiasri et al., 2021).

The progress of agriculture is inseparable from the efforts of farmers and the role of agricultural extension workers in disseminating information on how to use it, both in the nursery, maintenance and marketing processes. The counseling process during this post-pandemic period does not only come from extension workers, but also from millennial farmers. Millennial farmers are agents of change, they participate in disseminating information needed by other farmers. They seek, practice, and disseminate information related to food crops, horticulture, animal husbandry, and plantations using the media, both in their groups and in their posts. The counseling process is a way to change farmer behavior, both skills, knowledge, and attitudes of farmers (Mardikan, 2009). Changes in the behavior of millennial farmers in using technology accelerate the technology adoption process. Even though millennial farmers are media literate, they still need the role of agricultural extension workers (Tutiasri et al.,

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The millennial farmer group in 2020 is 29% of 33 million people. The role of millennial farmers is very important, because they have a good understanding of digital technology, are able to identify and verify technology (Retnaningtyas et al., 2021). This research was conducted in the Government of the Special Region of Yogyakarta (DIY), which is one of the areas with the target of creating millennial petai groups for the future sustainability of the agricultural sector (Pertaniandigital, 2020). The DIY government is committed to supporting the millennial farmer growth program by 2024 as many as 2.4 million farmers. This commitment can be seen from the programs aimed at millennial farmers, as well as the inauguration of a thousand millennial farmers in July 2022.

Each region in the DIY regency cultivates and strengthens millennial farmers to maximize the target of creating millennial farmers from DIY. Strengthening millennial farmers is carried out with assistance from agricultural extension workers. Agricultural extension workers are needed as a source of information, especially top-down information, institutional information (sourced from the department of agriculture) to be disseminated to farming communities. Millennial farmers need agricultural extension workers as a source of information and collaboration, not as previously oriented towards venture capital. The aim of agricultural extension is to improve the human resources of farmers to be even better and more profitable. The task of agricultural extension workers is to mobilize, empower and assist farmers to help analyze the situation faced by farmers. The pattern of agricultural extension after the Covid-19 pandemic is interesting to study, because there were changes in the communication procedures that were carried out during the pandemic. Various communication patterns created by groups, examples of communication patterns that are often used by the millennial generation when using communication technology. In this generation, many use multi-way/all-channel communication patterns where communication that occurs within the team is open, not limited to the position level of its members, and does not pass through intermediaries to provide information, so that communication occurs very smoothly and there are minimal barriers to communication (Trianto, 2018).

Communication patterns are the way an individual or group communicates. The pattern of communication is also interpreted as a way of working in communicating in conveying and influencing the recipient of the message. Good communication patterns between extension workers and millennial farmers can complement each other’s information needed for both farmers and extension workers. Extension workers and millennial farmers are used to using digital media through devices as a medium of communication. This research wants to see how the communication pattern was carried out by extension agents for the Special Region of Yogyakarta after the Covid-19 pandemic.

2. Method

The research was conducted for four months, from May to September 2022, this research was conducted on agricultural extension workers and millennial farmers in DIY. The data used in this study were sourced through interviews, observation, documentation, and focus group discussions (FGD). The type of research that the author uses is a phenomenological approach, which seeks to reveal the facts and experiences experienced by individuals to find and understand something that can be seen from the individual’s subjective experience. Therefore, the authors cannot develop their assumptions in their research (Hasbiansyah, 2008). The phenomenological approach aims to describe the meaning of life experiences experienced by
several individuals in relation to certain concepts or phenomena by studying the structure of human consciousness. In this case the research is focused on, what are the communication patterns carried out by extension agents for the Special Region of Yogyakarta after the Covid-19 pandemic. In this study, the determination of informants used a purposive sampling technique, where according to (Suharsimi, 2006), purposive selection of samples will be guided by the conditions that must be met by researchers conducting interviews. Namely, millennial farmers or farmers aged 19-39 years who are in the Yogyakarta area, in this study the informants came from millennial farmers as many as 15 people, while agricultural extension workers, 4 people from the district, 1 person from the city, and 3 people from the Center for Resource Development Agricultural Human Resources at the Department of Agriculture and Food Security, Yogyakarta.

3. Results and Discussion

After the Covid-19 pandemic, DIY agricultural extension workers and millennial farmers were accustomed to using the media to send messages to be more efficient when problems occurred. The media used sees the needs of millennial farmers, the pandemic has made extension workers and millennial farmers have groups in cyberspace. They often hold discussions using gadgets, as a way to keep their distance during a pandemic. The habit of using gadgets or media to communicate is still being carried out, even though now we are entering the post-pandemic period. Face-to-face activities, or associations are permitted and carried out. They take advantage of the sophistication of information technology to exchange information. The large number of teenagers or millennial generations who are involved in the world of agriculture is making progress, both in the field of agricultural processing and in the field of information. Agricultural officers or extension workers are greatly assisted by technologically literate farmers, where they can easily exchange information with each other. They created instant messaging groups, to make coordination easier, by saving time and bringing closer ties between farmers, and agricultural extension workers. Agricultural extension workers, easily coordinate with farmers if there are problems that are conveyed through instant message groups. According to agricultural extension workers, during the Covid-19 pandemic, many people used gadgets to coordinate, even though some came to the office but still maintained health protocols. During the post-pandemic period, many farmers, especially the millennial generation, informed or coordinated when there were problems in the field. With the information conveyed in the Whatsapp group, it makes it easier and faster for us to respond to assistance in the field.

The existence of digitalization of the delivery of information in the world of agriculture makes the flow of information faster, where when there are problems that occur as expressed by informants 1 and 2, they quickly coordinate. The WhatsApp group instant messaging application is one of the digitization media between extension workers and farmers. In addition to exchanging information, farmers also use information technology to carry out digital marketing of agricultural products. They also sell agricultural products through marketplaces, even during the 19th pandemic, making farmers change from selling their agricultural products to online marketing. Millennial farmers have also used digital marketing techniques, by marketing their products online. With online marketing, many networks are formed, they can communicate and collaborate with other farmers. If for example there are new superior seeds, they can provide information to each other. The impact of the pandemic has brought changes for both extension workers and millennial farmers towards the era of digital agriculture.
Digitalization of Agriculture After the Covid-19 Pandemic

Significant changes occurred during the post-covid-19 pandemic, when the world of agriculture entered an era of digitalization, especially in the communications that were carried out. Previously, farmers were synonymous with parents, who did hard, dirty work, with little income because the middlemen bought their crops at a predetermined price. The covid-19 pandemic has made millennials. They continue their discussion groups in cyberspace because communication uses media more efficiently. They use the Whatsapp Group to have deeper discussions and respond directly when there are problems or problems with farmers. This instant messaging application is also used as a media for coordination, when meeting with farmers. After the Covid-19 pandemic, meetings between extension workers and millennial farmers have been held again, but the use of media is still being used for maximum service from extension workers. Extension workers and millennial farmers are used to using technological media to communicate, during the Covid-19 pandemic. The existence of a WhatsApp group consisting of millennial farmers, like WhatsApp can be used to speed up the delivery of what you want to convey, for example if there is a problem it can be responded to immediately, to be sure we have to go to the field to help them, and when we meet the discussion may be more direct and easier. Sometimes Whatsapp language can also be misperceived.

In this modern era, millennial farmers use Whatsapp Groups to communicate with other farmers. Limited face-to-face meetings due to conditions make them use the group for discussion, counseling, and asking group members for help. Even if there are problems they use the group to find solutions to the problems they are facing. After the Covid-19 pandemic, they continued to use information technology to discuss problems. As stated by the second informant: “The Whatsapp group is still used today, for mentoring activities it seems like we ourselves as extension workers and maybe also farmers are all more satisfied when we meet so we can communicate at length, can see directly in the field, so we feel closer, and Farmer friends also feel valued, even though now is the digital era but if I personally immediately get closer”. When there are problems, related to agricultural problems, farmers can easily ask them on the Whatsapp Group, and the answers from extension workers and other farmers are very useful. The fifth informant expressed the same thing, who after the pandemic used to use gadgets to communicate. Even though during the pandemic there were also many farmers who came every day with health protocols. Extension officers from DIY expressed different things, where after the pandemic there were activities on July 6-7 there was the Lumbung Mataraman festival, while this meeting only focused on discussing this matter. For the success of the festival because it is held face-to-face, it is necessary to have frequent meetings with fellow extension workers and farmers.

WhatsApp is an instant messaging application, still has the advantage of a contact recognition system, verification and sending messages can still be done via a registered cell phone number (Af nibar & Fajhriani, 2020). The WhatsApp application is used by agricultural extension workers to coordinate before holding meetings. Previously, before the meeting was usually coordinated with an invitation letter, when they were going to meet. The existence of digitalization in coordination makes it easier for millennial farmers to coordinate when there are problems. The smooth flow of information or the exchange of messages from extension agents to farmers is easy to happen on the WhatsApp application. Most stakeholders in the agricultural sector use social media to search for information (Barau & Afrad, 2017). The positive impact of the presence of social media is that it makes its users closer, by sharing information with each other or uploading it on the status feature (Tutiasri & Kusuma, 2020).

In addition to the instant messaging application, farmers use Zoom meetings to conduct counseling, where they use zoom meetings. This application is easy to use, because many people can join and have discussions together. The use of zoom meeting media is efficient.
because all farmers can easily join because the capacity for this zoom meeting is a minimum of one hundred participants. This allows users to join in a lot, in addition to viewing videos directly when discussing, making it seem as if they are in the same place. The advantage of using information technology, as stated by informants 4, 16 and 17, is that it makes it easier to coordinate using meeting applications, such as zoom meetings so users don't have to travel far to meet. With information technology also makes the formation of a network of farmers. They easily get acquainted, so they have many colleagues. By using information technology, work is also easy to carry out and can do other jobs.

**Agricultural Extension Digital Communication Patterns**

The communication patterns of farmers during the post-pandemic period will definitely experience changes where communication technology changes the communication patterns of extension agents with farmers. Moreover, the younger generation has taken part in the world of agriculture, namely millennial farmers. They are different from mainstay farmers or farmers over 39 years of age. These millennial farmers, besides being literate with the digital world, they also want to take part in the success of other farmers by sharing what they get, or master and make them successful with other farmers. These millennial farmers create groups or groups to facilitate coordination, or disseminate information.

According to (Kusumajanti et al., 2022) the application of communication patterns in groups, which can accommodate the needs of group members, make them feel safe, the status of joining a group gives recognition, can give members a sense of self-esteem, can meet the social needs of its members, power, what cannot be achieved individually is often made possible through group action, and achieving member and group goals.

![Image of Extension Digital Communication Pattern](image)

**Figure 1**: Image of Extension Digital Communication Pattern

**Image of Extensions Digital Communication Pattern**

The results of research observations conducted show that the Interactional Communication Model is used as a means of communication or as a form of interaction between communicators. Communication Interaction that runs in two directions from the sender to the recipient of the message, and vice versa they use the media so that the message conveyed is immediately conveyed and immediately gets an answer. The interaction model carried out by communicators Extension workers and millennial farmers in DIY have the ability to send and receive messages in an alternating interaction depending on the response desired by the sender.
of the message. Here the government also provides support both to extension workers and to millennial farmers, providing the facilities or assistance needed so that the government program accelerates the formation of millennial farmers in 2024 as many as 2.4 million millennial farmers. Extension agents, millennial farmers and the government interact and synergize together to build success in agriculture.

Agricultural Extension is an agent of change, which provides information and assistance to farmers, from the process of seeding, maintenance, harvesting, and currently agricultural extension workers are also involved in the product marketing process. the development of digital information makes agricultural extension agents adjust what they do. Using media to coordinate, for example the WhatsApp messaging application or zoom meetings. Extension agents also post activities carried out through their social media accounts to share information with farmers. They post both photos and videos related to agriculture. Extension agents have duties and roles to empower farmers to maximize their productivity (Makmur et al., 2019). Even though millennial farmers are a generation who are used to the media in accessing information, they still trust information shared directly by agricultural extension workers. Each district in DIY has different agricultural products, so agricultural assistants or extension workers must also be prepared for the conditions and problems that exist in the field. With the device, it makes it easy to exchange information, as conveyed by informants 2 and 3: Millennial farmers in each region are different, so some are horticulture, some are food, so they are often divided later by officers too, because there are 12 sub-districts, so there is a possibility that someone will do the same thing. If there are difficulties in both the agricultural process and the marketing business of agricultural products. Even if there are problems, there will usually be an exchange of information, either from fellow millennial farmers or from officials, there will be assistance if there are problems in the field. For those in the Gunung Kidul area, it happens to be the Pathuk area from the service that this year has a three-day millennial farmer training facility. They focus more on chili cultivation and horticulture as well. Chili powder is processed and used to increase the yield of farmers’ monasteries. In addition, agricultural extension workers also provide training in the management of agricultural businesses. By providing materials related to management, it is hoped that every farmer in the district will have better skills in managing agricultural products.

Millennial farmers are a media literate generation, they can easily access information from the media, and create messages that are disseminated to other farmers. The difference between millennial and millennial farmers is that they are agents of change where the success of other farmers is their responsibility. They consciously share tips, or information that they have tested or have applied so that they can be successful. Development of success in each group and region is part of their activities. Farmers are happy to provide tips related to the process of nursery, maintenance, harvesting and even marketing of agricultural products. They also invite farmers in other groups to be able to work together, for example in the field of animal husbandry requiring animal feed so they will look for farmers who can fulfill the desired feed. On the contrary, when plant farmers need fertilizer for their plants, they will look for breeders who are able to prepare their manure needs. They synergize together for agricultural success.

The government invites the younger generation, namely millennial farmers, to enter the world of agriculture with a new system. Millennial farmers are aware that what is needed is not only capital from the government for success in the agricultural sector, but also connections that facilitate their activities. The way the government treats millennial farmers is also different from previous flagship farmers. Millennial farmers are more interested in exchanging information and technology and the facilities they want. For example, when their
livestock is sick, or their crops are damaged, they want to be treated immediately or get convenience when an outbreak occurs. When they want seeds from abroad they hope for help from the government, facilitating the process. Communication between the government and extension workers as well as with millennial farmers is now easily established, with digital media.

**Millenial Farmers and Information Digitazion**

Millennial farmers have a role in digitizing information, where they have the ability to organize messages. They act as liaisons, both fellow farmers, agricultural extension workers, the government and the world outside agriculture for the welfare of farmers. They make unique and interesting breakthroughs, both in production and marketing, especially matters related to information. They have a fairly wide network, considering that most millennial farmers do not come from agricultural education, but from other majors who are interested in getting involved and continuing their parents’ business. As stated by informant 5, who sees millennial farmers as different from other senior farmers. “They sometimes have a wider network, so that they can complement each other, both with fellow farmers and with agricultural extension workers”.

Digitalization in the world of agriculture is part of development communication, where millennial farmers are part of the agents of change. One manifestation of the agent of change is the creation of an information society, which has strategic and economic value. (Rogers, 1983) The existence of the adoption of innovation makes progress of technological civilization, where there is a consideration of whether there are benefits from technology. The level of innovation adoption utilized by the community as a means of fulfilling services for the community. Adoption of technological innovation indicates the creation of new forms of media, including mass media, which makes society inseparable from the massive flow of information (Astrid faidlatul Habibah, 2021). The same thing is done by millennial farmers, they use information technology as a form of digitization in the world of agriculture. They use the media to share the methods they have succeeded in doing, and get good results. They build a communication network with fellow farmers using the media. This was desired by informant 13: “We also use the media to build a communication network between millennial farmers throughout DIY. Later, if the communication has been carried out, many positive things will emerge, such as collaboration. Then we communicate, and see what the response from other farmers is like, if it's implemented it's suitable or not. We also collaborate with other farmers whether it is suitable or not, the media for communication are now widely used and effectively used”.

As stated by informant 13 they take advantage of information technology to communicate and collaborate with other farmers as a form of mutual support. In addition to easy access to information, they are also supported by extension workers who provide facilities and assistance so that the activities they carry out run smoothly. The government also has a very big role for millennial farmers, because it provides the support and facilities needed by farmers. The government even facilitates millennial farmers who wish to adopt agricultural procedures from abroad. The government provides full support for the millennial generation to be able to create, try, so that they can be financially independent in the agricultural sector. The millennial generation is interested in the world of agriculture, because there are changes in digitalization, both production procedures, both from planting, maintenance and marketing, all carried out in a modern way.
4. Conclusion

The digital communication pattern of extension workers and millennial farmers in the regions (DIY) after the Covid-19 pandemic, illustrates that there has been a change from conventional patterns to mediated patterns. By communicating using the media, both the government, extension workers and millennial farmers can easily carry out the communication process, and together work together to build the world of agriculture. The government, extension workers, and millennial farmers have their respective duties in the agricultural sector. This different pattern is due to digitalization that enters and provides changes in the agricultural sector, especially in the field of communication.

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