

INNOVATIONS

Social Media as an Information Dissemination Arm to Promote Agricultural Knowledge Among Farmers' in Time of Pandemic

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Abstract

The main focus of this study is to determine the benefits of social media in exchanging information by farmers and how this information will contribute to their farm productivity. The researcher used the process of Descriptive Method in analyzing, organizing, and interpreting the data for each question. The study participants are bona fide individuals who are members of the farmers association. They were selected through purposive sampling. The collection of data was done through online interviews via messenger and calls. Social Media plays a significant role in the agriculture sector, especially on existing farmers' associations in the country; the dissemination of agricultural information is highly required to maintain the connection of the members and agencies that help them. Farmers were found to have a positive attitude towards using social media platforms to improve their agricultural knowledge. They also find social media beneficial not only as a source of information but also a method that opens the door of opportunities for them individually and for the development of their association; from promoting their agricultural products through social media platforms such as "Facebook" to the process of acquiring information and sharing their knowledge to the expert and co-farmers. Farmers' use of social media enables them to access information that will help them learn about strategies and techniques they can apply in the farm area. Still, it does not only help them individually but also contributes to the development of their association; it was revealed in this study that through the help of the farmers' association, they got the chance to be recognized by other agencies through social media platforms and helped them provide their needs in the farm such as seedlings, fertilizers, and machinery.

Keywords: 1. Social Media 2. Information Dissemination Arm 3. Promote 4. Agricultural Knowledge

Introduction

Without social media and the internet, our world is genuinely unimaginable in today's generation. As of January 2020, more than 4.5 billion people use the internet, and 3.80 billion individuals are considered social media users; this shows that nearly 60 percent of the world's population is already online (Kemp, 2020).

In the Philippines, social media usage has become a vast passive people's daily routine. Social media and internet usage is increasing in the country; it provides immediate and easy access to attain the satisfaction of the individuals. People use social media frequently because of the fear of missing out. As the platforms present available sources that can be changed every time, people rely on posts and updates online (Reyes et al., 2018).

In the agricultural field, social media tools became helpful in digital communication and data gathering to provide the information needed by the local farmers and for them to acquire additional techniques and strategies that they can apply in the field.

Not all farmers in the country have stable and reliable access to the internet and social media platforms. The farmer lacking information from formal sources often relies on the data from their peer groups through social interaction (Conley & Udry, 2010). Interpersonal relationships and interaction play a significant role in the agricultural field; this allows the flow of information and creates a bond and strong connection that ties the farmers together.

During the widespread COVID-19 that made the world stop for a long time, the economy of the Philippines dropped, and many Filipinos lost their jobs because some companies and industries had to close due to the restrictions and strict guidelines. In the world of Agriculture, the impact of the virus affects the distribution of products from different areas and especially the productivity of the local farmers. However, this challenge in the field of Agriculture has strengthened the government's strategies and the local farmers to convert challenges to opportunities in building a new and improved chapter in the development of Agriculture.

The role of social media has taken above the priority in disseminating information. The Agricultural Training Institute (ATI), the training arm of the Department of Agriculture, offers free nationwide workshops for people who want to enter the agriculture industry. Indeed, social media has the most power in today's generation; it can be used as a tool in marketing and provides greater confidence to the farmers in understanding the new normal situation and acquiring an additional body of knowledge to improve their farm productivity.

Objectives of the Study

The objectives of the study are:

- To determine the methods used by farmers in acquiring and disseminating agricultural information.
- To assess the farmers' opinions, attitudes, and beliefs regarding social media usage for their farm productivity.
- To identify the benefits of using social media to the farmers.

Review of the Related Literature

Social Media for Information Dissemination

Based on the study conducted by Ballantyne (2009), Web 2.0 creates a significant change in all forms of knowledge and information methods and practices. In the Agricultural field, it is also becoming more technical. The usage of ICT's and virtual networks is spreading as organizations and stations create websites, channels, and blogs to publish content and information readily accessible online.

Generally, social media and ICT are already taking over the world through innovations and resource materials that can facilitate communication and find solutions to the Agriculture sector's problems (Burbi& Rose, 2016). Farmers lack in-depth information and knowledge regarding chemical and scientific processes and are more likely to rely on limited resources (Ingram, 2008). The traditional way of farmer-to-farmer interaction is essential, but potential obstacles may occur; in this case, the use of the Internet became an effective way to overcome the challenges by allowing the farmers to share their knowledge, experiences, and opinions with the public (Burbi& Rose, 2016).

Farmers are building new international networks on social media by acquiring and sharing knowledge that enables them to enhance and advance their self-directed learning strategies for farm productivity (Phillips et al., 2018). Facebook groups or pages and Twitter platforms were used mainly by farmers for knowledge exchange, form online discussions, and reach out to professionals, which support on-farm decisions (Phillips et al., 2018).

Social media provides instant and borderless communication aided with increasing mobile and internet subscriptions worldwide (Suchiradipta& Raj, 2018). Social Media can be helpful to agricultural extension and agricultural services; the global reach of knowledge sharing platforms surpasses barriers such as language.

Attitudes towards using Social Media

The freedom of expressing one's opinion or statement on social media creates numerous content by which people tend to be motivated in posting and commenting their concerns online. According to Pfeilet al., the uncertainty about the identity and intentions of other users of these platforms may lead to reluctance to join communities online and participate in social media. While social media usage is dramatically increasing for all ages, some barriers may occur for older adults, such as understanding the Internet as a dangerous place, different social media sites influencing people with unacceptable behavior, and the skills to use gadgets as too much for their age.

However, they are still considered one of the fastest-growing groups of new Web users, aged 65 years and up (Shamugam, 2015). The usage of the Web and different social media platforms proved to be one of the new ways to include the elderly back in society as the generation becomes more modernized. The connection through media interaction brought aging people positive and happier lives as they still get in touch with their relatives and friends (Shamugam, 2015).

Benefits of Using Social Media

Platforms in social media can gain a wealth of knowledge and ideas, the opportunity to establish an essential partnership, opportunity to reach consumers and experts in the field of

agriculture (Balkrishna & Deshmukh, 2017). They found that many organizations have official pages, blogs, and groups on social media, which saves time and money and is easily accessible for farmers.

Small and large businesses in agricultural marketing have taken advantage of Facebook as a marketing channel (Cui, 2014). Facebook pages are considered an effective tool as a marketing platform for farmers to advertise products in the market and promote upcoming events in Agriculture. According to (Zhang et al., 2011), the social media platform “Facebook” is a cyber-community that allows people to interact, gather information, develop relationships, share opinions and upload photos or videos. The Facebook page works as a hub, reflecting the actual and physical market experience (Cui, 2014).

Resources of Agricultural Information

The development in agriculture highly depends on the new knowledge and information by the farmers. According to Tadesse (2008), the access to agricultural information by the settlers and new settlers in farming was shallow; enhancing the participation of farmers in human resource development areas is the best option for empowering farm operators.

Based on the study conducted by Ere (2018), indigenous or local knowledge was used by rural farmers for improved agricultural practice. The traditional way of disseminating messages and information includes print, films, slides, pictures, drama, and dances are the usual practice of people. However, the rise of modern technologies, including ICT materials, provided practical information on the crop status and unlocked the most accessible cultivation and fertilizer application methods in Agriculture. Ere pointed out that ICT-based information is a tool for farmers' easy and effective services, improving their income and economic situation.

Prominent output from the structure of social media dissemination is the generation of massive amounts of information, enabling the users to collect data and exceptional services from the platforms (Kapoor et al., 2017). However, Kapoor pointed out that information overload results in the inability to find credible and reliable resources by social media users.

Research Methodology

This research study uses a descriptive research design with a qualitative approach to gather results and necessary data with accuracy. The instrument used for this study is a guide questionnaire with open-ended questions. The respondents who participated in this study are ten (10) bona fide individuals members of the agricultural association. The researcher used Purposive Sampling to collect data; this technique allows the researcher to delineate the possible results and findings of the research. In analyzing the collected data from the respondents, the researcher used the Descriptive Method process to analyze, organize, and interpret the data for each question. The researcher encoded and transcribed the respondents' answers after the online interview.

Results and Discussion

The Respondents

There are six male participants and four females who fall into ages ranging from 40-to 69 years old, and it was found that the majority of them are experienced farmers for about 20 years and above.

The majority of them own mobile gadgets such as cell phones and tablets as means of communication; they are also connected to the internet and mobile data to access both information

and entertainment. They are also aware of the presence of social media as means to access agricultural knowledge. It was revealed that the majority of them are using the social media platform "Facebook" to keep updated on the news and information which they are operating on a daily and weekly basis; other platforms that they are using are YouTube and Google, which allows them to follow the best practices and techniques.

Sources of Agricultural Information

Farmers acquire information mostly from their peer groups; they usually have a conversation with their co-farmers or neighbors. They also gather information from the agricultural technicians who regularly visit the farmer's land areas. Other information is from the Department of Agriculture, which is handed down to the municipal agricultural office and provides training to the farmers; seminars and training were also their sources of information which delivers essential news and updates on how to improve their farms.

"Facebook" as a Useful Platform for Agricultural Information

The respondents were asked if they are updated on the news and information posted on their Facebook group, and it was revealed that the majority of them have access to the updates from the group. *"From our association group chats, we can say that we're updated from the"* There is an existing Facebook group of the farmers' association in which the members shared information and updates from their productivity. The majority of the respondents answered that they are updated on the Facebook group, which helps to quickly get the data they need.

Opinion, Attitude, and Beliefs towards Social Media Usage

Social Media as an Effective Way to Disseminate Information

The respondents were then asked what they think is the most effective way of sharing and acquiring information; It was revealed that farmers view social media as an effective way to communicate in the modern age. *"Maybe nowadays social media is very convenient for us. It is more updated like if you search for agricultural topics, you can easily access for information, much faster when using the social media or today's technology."*

They find social media as the easiest way to deliver the information and access the data they need to improve their skills in farming; through social media platforms, the farmers have easy and fast access to documents.

Traditional Means of Communication is Essential

Other respondents answered that they find both traditional and modern ways as an effective way of communicating. Conventional media is recognized as an effective way to disseminate information conforms to Meyer (2005). *"For me, it has the same disadvantage; using Facebook is passing by learning; it doesn't retain much information in your memory unlike during training, we can have hands-on experience or participation that can longer retain on our knowledge. With using Facebook, the time you have is limited, and in a week, you will forget what you've seen."*

Some respondents stated that the face-to-face method of sharing information is better as agriculture involves physical and actual skills to improve their strategies and techniques on the farm areas.

Social Media makes the flow of information faster and easier

The respondents were asked if they find social media as easy to use in acquiring and sharing agricultural information; it was revealed that the majority of the respondents agreed that it's an easy way to gather information as they can access it faster and information was readily available online; *"Yes, it's easier; for example, when you post something, it'll be seen easily by the farmers, and in that way, the communication is easier through social media."*

Farmers answered that social media contributes to their agricultural knowledge; they stated that through modern communication, they could generate ideas and obtain new learning that they can apply for their farm or enhance their association's productivity.

Social Media Provides Helpful Information on Farming

The respondents were asked if they agreed with the information they see on social media platforms. The majority of them responded "Yes"; *"Yes because through social media, it is faster to gather information, in just one click, you'll be able to learn."*

Farmers' Positive Attitude on Social Media

In this section, it sought to find out the attitude of the farmers regarding the usage of social media, and they find social media as a valuable and helpful way to gather information about agriculture and communicate easily with other people, it was established that; *"What we feel about using social media is that it's beneficial for us, farmers because we can obtain information that we need for our farm"* *"We feel happy as we can easily acquire and search for information."*

It can be concluded that farmers have a positive attitude toward using social media to acquire and share information, especially during this pandemic, and we are in the digital age.

Farmers' Look for Credible Sources in Social Media

Other findings were revealed as other respondents think we have to filter what has been posted on social media; we have to find credible sources and not just rely on what is already on the internet. *"It depends on the source, who posted, and what has been posted, which means you have to see if those are trusted sources."*

According to Mbugua (2012), farmers' preference in disseminating information from different pathways and media is essential in determining the adoption of technologies and products.

Challenges Encountered when using Social Media.

Wangu (2014) also concluded in her study that the common challenges faced by farmers in using social media include the following; poor network access, power outages, and costly charges when accessing the internet. *"We can't access social media when there's no internet connection or when*

there's sudden connection lost.”“For example, there's a sudden power interruption and poor connection.”

According to Babu et al.. (2012), in accessing information through modern communication, there are significant constraints that involve poor availability, poor reliability, lack of awareness on available sources of information, and untimely provision of information.

Lack of Enough Knowledge on How to Use Gadget and Social Media

Furthermore, one respondent answered that lack of knowledge on using gadgets and social media is another problem that farmers encounter. A significant gap does exist; *“When you don't have enough knowledge on using gadgets like me, I don't know about it.”*

Environmental Constraints

Other respondents considered the environmental phenomenon as a problem or issue they encounter when using social media; *“There are a lot of environmental problems.”*

Challenges such as poor internet connection and sudden power interruption are the most common problem. There's also an existing gap between the farmers and the usage of the modern method of communication; lack of knowledge on how to use newly invented technologies and the usage of features on social media platforms. Furthermore, some findings discussed the environmental phenomenon, including the farmers' problem with their surroundings.

The traditional way of Communication remains the Most Effective Tool.

The respondents find social media use. However, the traditional way of communicating and acquiring information remains an effective method in the field of agriculture; *“During these times, we are limited to go outside and interact face-to-face that's how social media is favorable today, however, the actual way in farming is still better, it's a fieldwork, we cannot use social media alone in agriculture, the combination of both is still better.”*

Some farmers consider social media as a new way of communicating and interacting; however, the use of the traditional method remains effective as it involves physical or actual works that are extremely important in running the field.

Social Media Impact on Agriculture during Pandemic

The respondents were then asked if they think social media usage will have a significant impact in the field *“Yes because farmers anywhere can interact on groups, they can send information easily and talk about different topics though there's a presence of distance, the time frame is also open like on the conference, you can answer questions directly and can access anytime.”*

Contrary findings were established, others think that practical methods in agriculture and traditional way of communication are still the most effective way to use especially by farmers to increase their farm productivity; *“If pandemic did not happen, I think we're not going to pay attention to using social media, but due to what happened, we are advised to stay inside, we're using social media to divert our attention.”*

They also discussed that we are now using an alternative way to keep in touch with other people due to the pandemic. Still, they believe that the most effective way to improve farm productivity is through traditional methods because there are instances that face-to-face learning is required to understand better the situation of the crops or the farm itself.

Benefits from using Social Media in Agriculture

Social Media Contribution on Farmers' Body of Knowledge

The respondents were asked if social media contributes to their body of knowledge regarding agricultural information, and all of them agreed that social media helps them obtain new learning to improve their farm productivity; *"Yes, because there is modernization in farming today, if you generate to search for something, you'll be able to gain a lot of knowledge"*The respondents were also asked in what ways does social media contributes on their agricultural knowledge, the following statement below revealed a discussion;*"Regarding the information about planting and applying fertilizers on rice crops, we can obtain experience through social media. We are aware of the traditional way of farming, and today social media is a great help because we can follow the step-by-step process to multiply harvest."*

Some respondents specified that social media helps them learn new technological advances that they can use to increase their farm productivity. *"Today, the programs in agriculture along with the new technologies, when you access the link that was given, you'll able to see the information you want to learn."*

Through social media, they can follow videos that show the step-by-step process of applying fertilizers on specific crops, the right amount of measurement they need to use to improve and multiply their harvests, and how to use modern technologies for agriculture. Furthermore, the emergence of social media is followed by the websites and apps that are ready to use to provide services that are needed for farm productivity.

Social Media as Tool to Promote Agricultural Products

Using social media platforms educates the farmers regarding agriculture issues and facilitates the buying and selling of farm products (Kuria, 2014). *"Yes, especially the squash products and rice, we are also able to explain why the prices of rice dropped."*

Social media has become the most effective way to promote agricultural products and services by the farmers; they can sell their harvests at a reasonable price and attract consumers to buy their products regularly. Farmers also pointed out the importance of social media during the global pandemic, by which farmers had to go through the price dropped of squash in the community.

Learnings and Take-aways from Social Media Usage for Farming

The respondents said, *"I'm trying the modern techniques and methods that I see from social media and see what the result will be."*Farmers learn different things from social media, such as the proper ways to apply fertilizers on particular crops, the correct measurement on each seedlingplanted, and how to use new machinery that will contribute to their farm productivity. Through social media, they can also stay updated on the projects and programs intended for,

efficiently promote their agricultural products and find buyers who can sell their crops for a reasonable price.

Social Media for Agriculture

The respondents were asked would consider social media as part and source of agricultural information, and all of them agreed as social media is the fastest way to access the information they needed;

“Of course, because we cannot remove social media on our lives now and in agriculture, we can monitor the process on how to improve our rice crops, for example, our source of information and discussion comes from Philippine Rice Research Institute (Philirice), on how to multiply our harvests.”

Farmers also consider social media as part of their sources of agricultural information as they find social media highly beneficial to their knowledge and the improvement of their skills in the farm field area.

Facebook serves as the Tool in sharing Farmers' Productivity.

To seek further information from the respondent's perception on the usage of social media in agriculture, the respondents were then asked if the social media platform “Facebook” can help them share their farm routine and other farm productivity; *“Yes, for example, from the cooperative and the farmers' association, we are having virtual seminar instead of attending in actual, we can use social media as we are staying at home. For example, they are posting seminars and meetings, also, the prices of the products; the flow of information can be easily disseminated to the people.”*

Farmers find the social media platform “Facebook” helpful to share and acquire information. Through their Facebook group, they can exchange their daily farm productivity with their co-farmers and recommend the best strategies on how they work to improve their farm.

Social Media Creates Opportunities

The respondents were asked to share one experience that shows how social media gave them opportunities in the field and how it helped them and their association; *“For example, when we had training on rice and squash, social media helped and contribute to the farmers' productivity, it creates opportunities for us. Now, there are a lot of people helping us, and for our organization to improve and harvests to multiply.”*

During the global pandemic COVID-19, the farmers from the community experienced another pandemic on their squash harvests wherein the prices of their crops dropped extremely low and hit almost 1.00 PHP per kilo. Residents and farmers started posting on Facebook, seeking help in buying their products, which then spread on the internet and reached the national and local news.

With the help of social media platforms, organizations and other groups started to negotiate with farmers regarding their squash harvests and bought them at a reasonable price. The farmers' association was also able to receive new machinery which they could use to improve their farm productivity and at the same time help the farmers in the community.

Conclusion

The data analysis shows that Social Media plays a significant role in the agriculture sector, especially in existing farmers' associations. The dissemination of agricultural information is highly required to maintain the connection of the members and agencies that help them. Farmers from the association obtain information from the Department of Agriculture along with the Municipal Agriculture technicians, co-farmers, social media, and seminars or training; they find these sources helpful for acquiring agricultural information.

The study further found that the majority of the farmers have a positive attitude towards using social media platforms as their means of seeking agricultural information. They are using social media to gather data and, at the same time, share their knowledge. Furthermore, the combination of social media and the traditional way of communication is also considered an effective way to increase their knowledge and farm productivity. Respondents also believed that using social media and conventional methods to acquire agricultural confirmation is the most effective way to improve farm productivity.

A majority of respondents, however, experience technical difficulties in accessing information online due to poor internet connection, power interruption, and lack of enough knowledge on using the gadget and social media platforms.

From the findings of the study, it can also be concluded that Facebook is the most common platform among farmers from the association; the majority of the respondents are using this app every week. The use of Facebook also helps them share and post their crops within the association to attract potential buyers and increase their farm profit. Moreover, farmers use of social media enables them to access information that will help them learn about strategies and techniques they can apply in the farm area; they have discussed that through the help of the farmers' association, they got the chance to be recognized by other agencies through social media platforms and helped them provide their needs in the farm such as seedlings, fertilizers, and machinery.

Recommendations

1. The researcher focused on the role of social media in farmers' associations at Batitang, Zaragoza, Nueva Ecija. A similar study can target a particular area of social media use.
2. Future researches may consider social media strategies that can be used to reach out to farmers of the association.
3. Future research may focus on Facebook as it is the most common social media platform that farmers have access to.
4. The researcher thinks that it is also better to consider the total population of the farmers' association to obtain further information and to find out the view and perception of the farmers on the use of social media platforms for agricultural purposes.

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