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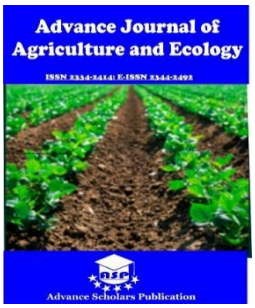

ROLES OF SOCIAL MEDIA IN KNOWLEDGE SHARING AMONG FISH FARMERS IN OGUN STATE, NIGERIA

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Keywords: *Roles, social media, Knowledge sharing, Fish farmers*

Abstract: *The proliferation of social media has transformed communication within various sectors including agriculture and aquaculture. This study examines the roles of social media in knowledge sharing among fish farmers, focusing on the types of fish farming knowledge shared roles of social media platforms in facilitating this exchange, the positive effects of shared knowledge on fish farming and constraints faced by the fish farmers in utilizing these digital resources. Through a comprehensive review of literature and empirical evidence, the study identifies several key types of fish farming knowledge shared including basic fish farming practices, best practices for fish farming management, sustainable fish farming practices and technologies and innovations in fish farming. Furthermore, it revealed that the common roles played by social media platforms in fish farming knowledge sharing were vital channels for information dissemination, real-time communication and engagement, promotion of sustainable fish farming practices and success stories and capacity building and training. The key effects of shared knowledge on fish farming were knowledge dissemination and collaboration, improved fish farming techniques and practices, innovation and technological advancement and enhanced community support and networking and informed decision-making and policy advocacy. Nonetheless, constraints such as lack of digital literacy and technological access, information quality and reliability, information overload and quality control and time and resource constraints pose significant challenges to effective knowledge utilization. Significant relationship exist between the fish farmers' age, household size, years spent schooling and years of fish farming experience and roles of social media in knowledge sharing among the fish farmers. The findings recommend that improved access to technology and the internet in rural areas through partnerships with telecommunication companies and local governments should be advocated as this would enable more farmers to participate in online discussions and benefit from shared knowledge.*

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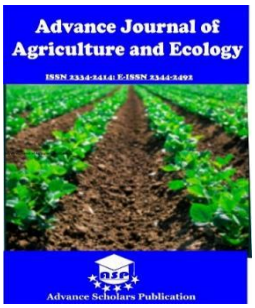

Introduction

Nigerian fish farming presents many opportunities for large-scale production and is a viable solution to achieving the nation's goal of self-sufficiency in fish farming (Kaleem and Sabi, 2021). Fish farming (Pisciculture) is an aspect of agriculture that involves the controlled keeping and rearing of fish commercially in natural or artificial ponds. It is the source of livelihood of millions of small-scale operators in Nigeria. Fish farming contributes to ensuring nutrition security and good health of families (Aphunu and Atoma, 2011). It also provides raw materials for industries in the food value chain. The rapid increase in population of the country and the renewed awareness of the nutritional advantage of fish consumption over meat has continued to the rise in the demand for fish. Fish farming has been significantly influenced by social media, as social media has not only enhanced communication and information sharing in the fish farming community but has also experienced significant transformations in recent years, due to the rise of social media and as the landscape of fish farming becomes more complex, fish farmers often require up-to-date information, best practices and innovative techniques to enhance productivity and sustainability. The role of information in fish farming cannot be overemphasised as farmers need to be updated with various fish farming technologies necessary for high productivity (Benard et al., 2018). According to FAO (2014) effective information dissemination is crucial for promoting responsible fish farming development

Social media refers to digital platforms and tools that facilitate the creation, sharing and exchange of contents among users (Kietzmann and Hermkens, 2011); Obar and Wildman, 2015). In the context of fish farming, social media serves as a critical medium for communication, marketing, education and community engagement with in the fish farming sector. The advent of social media has revolutionized communication and information dissemination across various sectors including agriculture and aquaculture. Fish farmers who often operate in remote areas and may lack access to formal educational institutions or extension services have increasingly turned to social media platforms to share knowledge, exchange experiences and seek advice. Social media platforms like Facebook, Twitter, Instagram and specialized forums have emerged as vital tools for information dissemination enabling the fish farmers to connect with peers, experts and institutions in real time and also provide a unique opportunity for fish farmers to share knowledge, experiences and best practices, fostering a collaborative environment thus knowledge sharing is vital for fish farmers to adopt the best innovative fish farming practices. Social media platforms provide an innovative means for knowledge sharing among the fish farmers, facilitating the dissemination of information, peer networking and collective learning. Also, it serves as a vital tool in this

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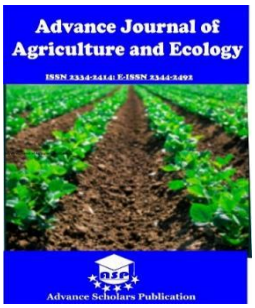

context by enabling farmers to share experiences, seek advice and access information beyond conventional networks (Kumar, et. al., 2021).

Knowledge sharing is critical for improving agricultural practices. Klerkx and Leeuwis (2009) emphasize the need for interactive networks that facilitate knowledge exchange among farmers, researchers and extension services. Moreover, social media creates tangible bridges among farmers, researchers and policy-makers facilitating the dissemination of cutting-edge research and technologies (Kah, et. al., 2022). Knowledge sharing through social media can enhance the capacity of the fish farmers to adopt innovative practices, improve productivity and alleviate issues such as disease management and environmental sustainability (Kassam, et. al., 2017; Faunce and Hines, 2019). Kaplan and Haenlein (2010) posited that social media is effective in fostering communication among users as platforms like Facebook, WhatsApp and YouTube are increasingly utilized by farmers to share information and techniques. Global Aquaculture Alliance (GAA) (2020), opined that effective knowledge sharing can lead to improved fish farming practices, reduced risks of disease and enhanced product quality. Fish farmers who actively participated in social media groups have reported improvements in their fish farming practices and increased yields. Furthermore, Agyekumhene, et. al., (2021) posited that social media enhance the dissemination of aquaculture knowledge across diverse regions thus the use of social media among the fish farmers is becoming increasingly vital given the importance of efficient practices in ensuring sustainable fisheries and aquaculture to meet global food demands.

The use of social media has significantly improved the farmers' access to information on fish farming techniques, market trends and disease management (Eze, et. al., 2021) thus, the fish farmers who actively engaged in online communities can benefit from peer support and expert advice which can ultimately lead to enhanced productivity and sustainable fish farming practices (Alabi and Afolabi, 2022). Hossain et. al., (2021) reported that social media facilitates the sharing of best practices, technological innovations and market information among the fish farmers, ultimately contributing to improved productivity and sustainable fish farming practices. Additionally, social media served as a platform for the dissemination of scientific research and policy updates, allowing the fish farmers to stay informed about relevant environmental regulations and sustainable practices. Various studies have noted challenges such as digital literacy gaps, misinformation and the informal nature of content shared on these platforms which can hinder their effectiveness as knowledge-sharing tools (Liu, et. al., 2017; Teo and Liu, 2017.) Many fish farmers, particularly in the rural areas, may lack the necessary digital literacy skills to effectively engage with social media platforms. This creates a knowledge

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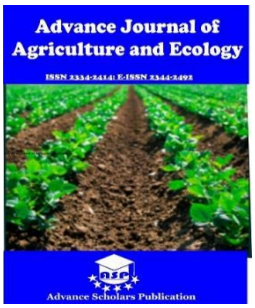

divide that may prevent them from accessing vital information and networks that could enhance their fish farming practices. The informal nature of the content shared on social media can lead to the dissemination of misinformation.

Fish farmers may struggle to discern credible sources, leading to the adoption of unverified practices that could negatively impact their fish farming operations. Despite the potential benefits, there are challenges and gaps in how effectively the social media impacts knowledge sharing among the fish farmers which requires a nuanced understanding of how these platforms can most effectively serve the fish farmers' needs. In view of this, the study examined the roles of social media in knowledge sharing among the fish farmers in Ogun State, Nigeria. Specifically, the study intends to describe the socioeconomic characteristics of the respondents, identify the types of fish farming knowledge shared on social media platforms, identify the roles played by social media platforms in fish farming knowledge sharing, effects of shared knowledge on fish farming and constraints faced by fish farmers in utilizing knowledge shared on social media platforms. It was hypothesized that there is no significant relationship between respondents' socioeconomic characteristics and roles of social media in knowledge sharing among the fish farmers.

Methodology

The study was conducted in Ogun State in south-western Nigeria. The state has a total population of 3,728,098 according to National Population Commission (N.P.C, 2006). The state is located in the rainforest vegetation belt of Nigeria within longitude 2 45' and 3° 55' E and latitudes 7 01 N and 7° 8' N in the tropics. It is bounded in the west by Benin Republic, in the south by Lagos state and Atlantic Ocean, in the east by Ondo State, and in the north by Oyo State. It covers a land area of 16,409.28km2, less than two percent (2%) of the country's landmass. The rainy season starts around the middle of March and continues until late October. The dry season starts in November and lasts until February in most locations in the state. It experiences rainfall pattern similar to others in the southern parts of the country, characterized by two peaks. The vegetation is typical of the rainforest. Rainfall ranges between 1600 and 900 mm annually. The state is warm throughout the year with a temperature of between 28 and 35°C. Humidity is between 85 and 95%. The state has marine and riverine biotopes estimated at 173.8 square kilometres covering 12,482,640Ha, lacustrine biotopes totalling 4,404.35Ha and estuarine biotopes covering a total of 767.3km2 and is well endowed with natural water bodies such as springs, perennial flowing rivers, lakes and brackish waters. There are twenty local government areas in the state. The capital of the state is Abeokuta. The main occupations of the people in the state are: agriculture, fishing, clothing, textiles and civil service. Agriculture is the major occupation of the people of Ogun State, which is favoured by the climatic condition.

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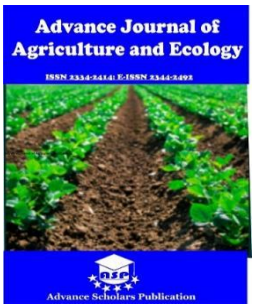

Commonly cultivated crops are maize, yam, plantain, beans, cocoa, rubber, palm tree, sugar cane, kola nut, citrus and cassava. The commonly reared livestock in the State include sheep, goat, poultry, cattle, and local chickens. The state was divided into four agricultural extension zones namely: Abeokuta, Ilaro, Ijebu-Ode and Ikenne. The daily temperature of Ilaro agricultural zone ranges between an average minimum of 230C to a maximum of 34.20C. The zone is situated between the latitudes of 60 53' N and longitude 30 1'E. The climate of the area is classified as tropical while precipitation is 1257mm. According to Ogun State Agricultural Development Programme (OGADEP) structure, Ilaro agricultural zone is divided into four extension blocks namely Imeko, Sawonjo, Ado-odo and Oke–odan. This agricultural zone is well known as best ecological suitable areas for fish production and hence the state is referred to as "the basket of fish for the nation" because of abundance of wetland with annual growth rate of 3% per annum. The population of study consist of all registered fish farmers in Ogun State, Nigeria. A multistage sampling technique was used in selecting samples for the study. The state was divided into four agricultural extension zones namely: Abeokuta, Ilaro, Ijebu-Ode and Ikenne. In the first stage, three zones were randomly chosen out of the four zones in the State namely; Abeokuta (6blocks), Ijebu-Ode (6blocks) and Ikenne (4blocks). In the second stage, five blocks were purposively selected from the three zones due to higher proportion of the fish farmers viz; Abeokuta (2blocks), Ijebu-Ode (2blocks) and Ikenne (1blocks). In the third stage, three extension cells were random sampling selected from the five blocks making a total of fifteen cells Lastly, ten registered fish farmers were randomly selected from each of the fifteen cells thus making a total of one hundred and fifty (150) fish farmers that constituted the sample size for the study. Primary data was collected using a well-structured questionnaire and interview schedule. Data was analysed using descriptive and inferential statistical tools to test the stated hypothesis.

Results and Discussion

Fish farmers' socioeconomic characteristics

Results presented in Table 1 show that in Lagos State, 38% the fish farmers were between the age range of 40-49 years while 34.7% were between the age range of 50-59 years and 23.3% of them were between 30-39 years. Also, 1.3% are below 30 years and 2.7% are 60 years and above with a mean age of 47 years. Middle-aged farmers may be more familiar with traditional methods of communication but could also be increasingly adapting to digital platforms as technology becomes more prevalent. This finding is in collaboration with report of Van Deursen and Van Dijk, (2014) that research indicates that age can influence technology adoption, with younger individuals often being more adept at using social media. However, older adults can benefit from peer-led training and support. Also, Pew Research Centre (2021) reported that while older

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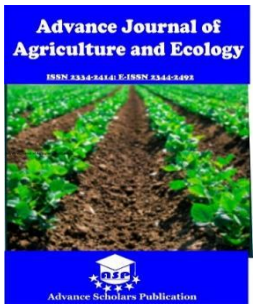

adult may use social media differently compared to younger generations, they are increasingly becoming active participants. This demographic shift can encourage knowledge sharing as older farmers leverage the platforms to connect with peers. Table 1 further shows that in Lagos State, 59.3% of the respondents were males while 40.7% were females. In the contexts where male dominance is prevalent, men may be more likely to access and share information on social media. Additionally, the dynamics of information sharing can reflect gender roles where male farmers dominate discussions and knowledge dissemination. This is in line with the report of Huyer (2016) that gender biases in access to technology can influence knowledge sharing stressing the importance of creating gender-sensitive platforms that encourages diverse participation. Also, 82% of the fish farmers were married, 8.7% divorced, 5.3% single while 4% were widowed. This implies that married respondents engaged in fish farming and may have access to a broader support network enhancing their social capital in the study areas. This finding support the report of Bennett (2017) that social media fosters community among fish farmers enabling them to create groups focused on specific topics which can motivate the farmers to engage more actively in knowledge sharing. Similarly, 48.7% of the fish farmers had household size of between 5-6 persons, 31.3% had household size of between 3-4 persons while 10% had household size of between 1-2 and 7 persons and above respectively with a mean household size of 5 persons. This implies that the respondents in the study areas had medium-size household. A larger household size might indicate a greater potential for shared resources and knowledge within families. This finding support the report of Kye and Abubakar (2021) that family size influences access to technology and shared learning experiences which can be beneficial in farming contexts. The Table also revealed that 53.4% of the respondents spent 13 years and above schooling while 44% of them spent between 7-12 years schooling and 1.3% spent between 1-6 years schooling and 14 years as the mean year spent schooling. This indicated that majority of the respondents (98.7%) spent a significant number of years having formal education and with an average of 14 years of schooling; these farmers have basic to intermediate literacy skills which can facilitate their engagement with social media. The educational background of the fish farmers can enhance their ability to seek out and critically evaluate information shared on social media. This is in tandem with the report of Kimmons et. al., (2019) reported that social media platforms can act as repositories of knowledge where farmers can access resources like research articles, instructional videos and expert advice. As shown in Table 1, 49.4% of the fish farmers had less than 10 years of experience in fish farming, 30% had between 10 to 14 years of experience while 11.3% of them had between 15 to 19 years of experience and 9.3% of the respondents had 20 years of experience and

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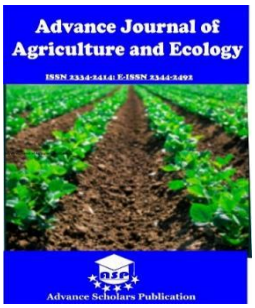

above in fish farming with 9 years as the mean years of experience. This indicated that the respondents' years of experience are quite encouraging as most of them have been in the business for a long time. Farmers with substantial experience may be more willing to share their knowledge and best practices on social media, fostering a culture of peer-to-peer learning. This finding supports the report of Jansen, et. al., (2010) that seasoned farmers can act as knowledge brokers in their communities by sharing insights and practices on social media.

Table 1: Distribution of respondents by socioeconomic characteristics (n=150)

Characteristics	Frequency	Percentage	Mean
Age(yrs)			
<30	2	1.3	47yrs
30-39	35	23.3	
40-49	57	38	
50-59	52	34.7	
60>	4	2.7	
Sex			
Male	89	59.3	
Female	61	40.7	
Marital status			
Single	8	5.3	
Married	123	82	
Divorced	13	8.7	
Widowed	6	4	
Household size			
1-2	15	10	5
3-4	47	31.3	
5-6	73	48.7	
7>	15	10	
Years spent schooling			
No formal education	2	1.3	14yrs
1 to 6	2	1.3	
7 to 12	66	44	
13>	80	53.4	
Fish farming experience			
<10	74	49.4	9yrs
10 to 14	45	30	
15 to 19	17	11.3	
20>	14	9.3	

Source: Field Survey, 2025

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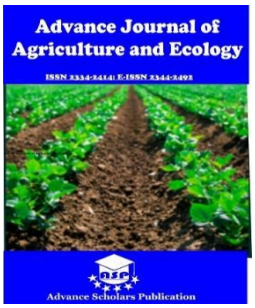

Types of fish farming knowledge shared on social media platforms

Result presented in Table 2 reveals that the types of fish farming knowledge shared on social media platforms include basic fish farming practices and best practices for fish farming management ranked 1st with a weighted mean score of 1.99, sustainable fish farming practices ranked 3rd with a weighted mean score of 1.94 and technologies and innovations in fish farming ranked 4th with a weighted mean score of 1.93. This indicates that basic fish farming practices, best practices for fish farming management, sustainable fish farming practices and technologies and innovations in fish farming were the common types of fish farming knowledge shared on social media platforms in the study area. This implies that the types of fish farming knowledge shared on social media are vast, influencing accessibility, peer learning, innovation and the quality of the information. This is in line with the report of Alawadhi and Morris (2017) that social media's real-time communication capabilities enable timely knowledge sharing which is crucial in dynamic environments like fish farming.

Table 2: Distribution of respondents by types of fish farming knowledge shared on social media platforms

Types of fish farming knowledge shared on social media platforms	WMS	Rank
Basic fish farming practices	1.99	1st
Fish feeds and feeding	1.88	6th
Disease management and health	1.88	6th
Sustainable fish farming practices	1.94	3rd
Technologies and innovations in fish farming	1.93	4th
Market trends and economic aspects	1.91	5th
Networking and collaboration	1.82	9th
Regulatory compliance and policy information	1.74	11th
Best practices for fish farming management	1.99	1st
Fish species and nutrition	1.85	8th
Community engagement and culture	1.78	10th

WMS: Weighted Mean Score
Source: Field Survey, 2025

Roles played by social media platforms in fish farming knowledge sharing

Result presented in Table 3 reveals that vital channels for information dissemination and real-time communication and engagement ranked 1st with a weighted mean score of 2.04, promotion of sustainable fish farming practices and success stories ranked 3rd with a weighted mean score of 2.01 and capacity building and training ranked 4th with a weighted mean score

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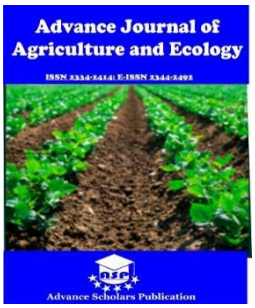

of 1.89 were the roles played by social media platforms in fish farming knowledge sharing. This indicates that the common roles played by social media platforms in fish farming knowledge sharing were vital channels for information dissemination, real-time communication and engagement, promotion of sustainable fish farming practices and success stories and capacity building and training. This implies that social media platforms serve as essential channels for disseminating information on fish farming practices as this enables the dissemination of information to a broader audience. The role of social media in knowledge sharing among fish farmers can facilitate communication, collaboration and the dissemination of information which can enhance fish farming practices and improve productivity. This is in line with Kumar et. al., (2020) that social media platforms serve as effective tools for knowledge exchange among farmers, enabling them to share experiences and solutions to common challenges in fish farming.

Table 3: Distribution of respondents by roles played by social media platforms in fish farming knowledge sharing

Roles played by social media platforms in fish farming knowledge sharing	WMS	Rank
Vital channels for information dissemination	2.04	1st
Peer learning and networking	1.64	7th
Support for marketing and business	1.63	8th
Access to expertise	1.66	6th
Promotion of sustainable fish farming practices and success stories	2.01	3rd
Crisis management and response	1.60	11th
Feedback and market trends	1.61	10th
Awareness of market trends and policies	1.63	8th
Innovation promotion	1.73	5th
Research and development collaboration	1.55	12th
Capacity building and training	1.89	4th
Real-time communication and engagement	2.04	1st

WMS: Weighted Mean Score
Source: Field Survey, 2025

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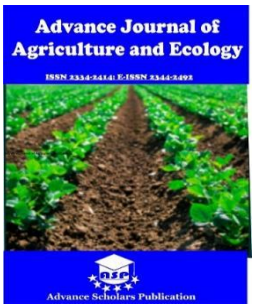

Effects of shared knowledge on fish farming

Table 4 reveals that knowledge dissemination and collaboration and improved fish farming techniques and practices ranked 1st with a weighted mean score of 2.57, innovation and technological advancement ranked 3rd with a weighted mean score of 2.55 and enhanced community support and networking and informed decision-making and policy advocacy ranked 4th with a weighted mean score of 2.52 were the common effects of shared knowledge on fish farming. This indicates that the key effects of shared knowledge on fish farming were knowledge dissemination and collaboration, improved fish farming techniques and practices, innovation and technological advancement and enhanced community support and networking and informed decision-making and policy advocacy. This implies that the effects of shared fish farming knowledge on social media significantly impact the roles played by these platforms as social media platforms facilitate rapid knowledge dissemination and foster collaboration among fish farmers. Farmers can easily share best practices and local experiences leading to a broader understanding of diverse fish farming methods. Also, the sharing of fish farming knowledge on social media platforms democratizes access to information, enabling fish farmers to obtain insights that they might not otherwise reach through traditional means. This finding is in tandem with the report of Kafle and Rijal (2021) that social media significantly increases the dissemination of best fish farming practices among the fish farmers thereby improving their overall productivity.

Table 4: Distribution of respondents by effects of shared knowledge on fish farming

Effects of shared knowledge on fish farming	WMS	Rank
Knowledge dissemination and collaboration	2.57	1st
Enhanced community support and networking	2.52	4th
Access to markets and business opportunities	2.38	8th
Skill development and training	2.32	10th
Feedback mechanisms	2.32	10th
Empowerment of smallholder fish farmers and advocacy	2.47	6th
Improved fish farming techniques and practices	2.57	1st
Behavioural change	2.47	6th
Informed decision-making and policy advocacy	2.52	4th
Market expansion and consumer engagement	2.38	8th
Crisis management and response	2.27	13th
Sustainable challenges	2.32	10th
Innovation and technological advancement	2.55	3rd

WMS: Weighted Mean Score
Source: Field Survey, 2025

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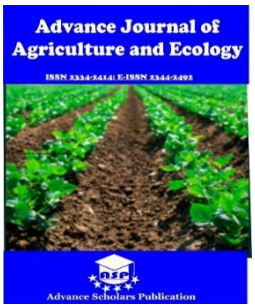

Constraints faced by fish farmers in utilizing knowledge shared on social media platforms

Result presented in Table 5 reveals that lack of digital literacy and technological access, information quality and reliability, information overload and quality control ranked 1st with a weighted mean score of 2.45 and time and resource constraints ranked 4th with a weighted mean score of 2.36 were the common constraints faced by fish farmers in utilizing knowledge shared on social media platforms. This indicates that in the study area, the common constraints faced by fish farmers in utilizing knowledge shared on social media platforms were lack of digital literacy and technological access, information quality and reliability, information overload and quality control and time and resource constraints. This implies that the constraints faced by fish farmers in utilizing knowledge shared on social media platforms can significantly impact the effectiveness of these platforms in facilitating knowledge sharing as a lack of digital literacy among the fish farmers restricts their ability to navigate social media platforms effectively and engage with shared knowledge. Many farmers may struggle to utilize tools necessary for accessing and applying information thus digital divide can lead to increased inequality between those who can access and understand digital information and those who cannot. Also, many fish farmers working in rural areas may have limited time to engage with social media platforms due to their demanding schedules which can lead to a lack of consistent interaction with the shared knowledge and potential learning opportunities. This finding is in line with the report of Kumar and Singh (2019) that the demands of daily farming activities can leave little room for social media engagement limiting farmers' exposure to valuable knowledge sharing opportunities. Similarly, Liu et. al., (2021) reported that the unchecked nature of social media can present significant risks to knowledge quality, as many fish farmers working in rural areas may have limited time to engage with social media platforms due to their demanding schedules and this can lead to a lack of consistent interaction with the shared knowledge and potential learning opportunities (Khan et. al., 2021).

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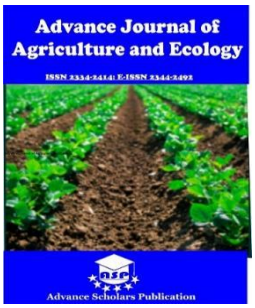

Table 5: Distribution of respondents by constraints faced by fish farmers in utilizing knowledge shared on social media platforms

Constraints faced by fish farmers in utilizing knowledge shared on social media platforms	WMS	Rank
Lack of digital literacy and technological access	2.45	1st
Misinformation and credibility issues	2.26	8th
Information overload and quality control	2.45	1st
Cultural and language barriers	2.33	5th
Lack of structured guidance	2.26	8th
Time and resource constraints	2.36	4th
Fragmented network and lack of local relevance	2.33	5th
Regulatory limitations	2.19	11th
Information quality and reliability	2.45	1st
Technical and infrastructural challenges	2.25	10th
Socioeconomic barriers	2.28	7th

WMS: Weighted Mean Score
Source: Field Survey, 2025

Hypothesis testing

Ho1: There is no significant relationship between respondents' socioeconomic characteristics and roles of social media in knowledge sharing among the fish farmers

Relationship between respondents' socioeconomic characteristics and roles of social media in knowledge sharing among the fish farmers

The correlation analysis result presented in Table 6 shows that there was a significant relationship between fish farmers' age (r=0.520, p=0.000), household size (r=0.232, p=0.000), years spent schooling (r=0.310, p=0.000) and years of fish farming experience (r=0.561, p=0.000) and roles of social media in knowledge sharing among the fish farmers. This implies that younger fish farmers with higher educational attainment tend to be more tech-savvy and comfortable with social media, which facilitates diverse forms of information exchange. This is in line with the report of Tsaia and Huang, (2021) that older farmers may exhibit reluctance to engage with technology. Furthermore, Education can foster skills that enhance a farmer's ability to utilize social media for learning about new techniques and practices. This is in collaboration with the report of Koehler, (2019) that higher educational attainment helps farmers process and critically analyse information, making them more likely to engage in sophisticated discussions on social media. Also, Mastorakos and Pappas, (2020) reported that larger household sizes often come with diversified responsibilities that can limit an individual's availability for engaging on social media

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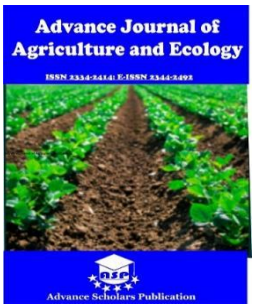

platforms. Larger households can bring together multiple perspectives and experiences, enriching discussions within social media groups (Meyer, 2021). Experienced fish farmers often act as knowledge hubs on social media, providing practical insights that can guide less experienced farmers. (Nations and Leclere, 2022). Farmers with years of experience might be more inclined to adapt innovative practices discussed on social media, promoting sustainability in fish farming (Wang et. al., 2023).

Table 6: Summary of Correlation showing relationship between respondents' socioeconomic characteristics and roles of social media in knowledge sharing among the fish farmers

Socioeconomic characteristics of the fish farmers'	r-value	p-value	Decision
Age	0.520	0.000	S
Household size	0.232	0.000	S
Years spent schooling	0.310	0.000	S
Years of fish farming experience	0.561	0.000	S

Significant at 5% level of significance

Conclusion and recommendations

The roles of social media in knowledge sharing among fish farmers are multifaceted and critically important for advancing fish farming practices. Social media platforms facilitate the sharing of diverse types of fish farming knowledge ranging from basic fish farming practices, best practices for fish farming management, sustainable fish farming practices and technologies and innovations in fish farming. The positive effects of this shared knowledge include knowledge dissemination and collaboration, improved fish farming techniques and practices, innovation and technological advancement and enhanced community support and networking and informed decision-making and policy advocacy. However, despite the benefits, various constraints such as lack of digital literacy and technological access, information quality and reliability, information overload and quality control and time and resource constraints pose significant challenges to effective knowledge utilization hinder the full potential of social media as a knowledge-sharing tool. Addressing these challenges is essential for maximizing the benefits of social media for fish farmers and ensuring that knowledge sharing translates into tangible improvements in the fish farming practices thus it was recommended that;

1. Training initiatives aimed at improving digital literacy among fish farmers be implemented, focusing on the effective use of social media platforms for knowledge sharing.
2. Formation of online communities or support networks on social media where experienced farmers can mentor newcomers should be

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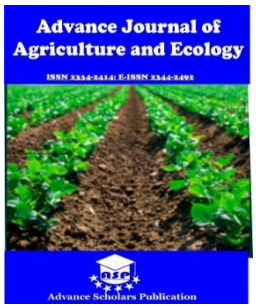

encouraged as these networks can facilitate the exchange of valuable insights and best practices.

3. Mechanisms to regulate the quality of information shared on social media platforms be developed which would involve collaborations with agricultural experts and institutions to verify and disseminate information that farmers can trust.

4. Improved access to technology and the internet in rural areas through partnerships with telecommunication companies and local governments should be advocated as this would enable more farmers to participate in online discussions and benefit from shared knowledge.

5. Research that focuses on understanding the specific types of knowledge that fish farmers find most useful and relevant be fostered as such insight can guide the development of tailored content and resources that meet the farmers' needs.

6. Engage policymakers to support initiatives that promote digital engagement in agriculture, this includes funding for technological infrastructure and programmes aimed at integrating social media into farming practices

References

References on Roles of Social Media in Knowledge Sharing

Alabi, O. O., & Afolabi, O. A. (2022). Impacts of social on information access and knowledge sharing among fish farmers in Nigeria. Journal of Aquaculture Research and Development.

Agyekumhene, C., de Vries, J., van Paassen, A., Macnaghten, P., Schut, M., & Bregt, A. (2021). Utilization of social media in aquaculture knowledge sharing. Aquaculture Reports, 20, 100789. https://doi.org/10.1016/j.aqrep.2021.100789

Alawadhi, S., & Morris, A. (2017). The role of social media in knowledge sharing among farmers in Kuwait. Knowledge Management Research & Practice, 15(3), 337–344. https://doi.org/10.1057/kmrp.2015.28

Aphunu, A., & Atoma, C. N. (2011). Extent of use of ICT of fish farmers in Isoko Agricultural zone of Delta state, Nigeria. Journal of Agricultural Extension, 15(1), 10–21. https://doi.org/10.4314/jae.v15i1.2

Benard, R., Dulle, F., & Lamtane, H. (2018). Use of ICTs in sharing agricultural information among fish farmers in the Southern Highlands of Tanzania. Working Paper. http://www.suaire.suanet.ac.tz:8080/xmlui/handle/123456789/2483

Bennett, G. (2017). The role of social media in agricultural extension: A review. Journal of Agricultural Extension.

Eze, D., Nwankwo, S. I., & Onwuka, I. G. (2021). Role of social media in disseminating

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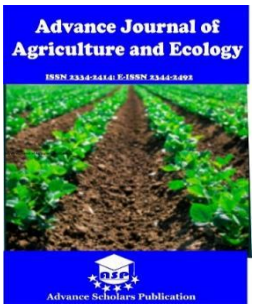

agricultural knowledge among fish farmers in Nigeria. International Journal of Agriculture, Environment and Food Sciences.

FAO. (2014). APFIC/FAO regional expert workshop on regional guidelines for the management of tropical trawl fisheries in Asia: Phuket, Thailand, 30 September - 4 October 2013 (RAP Publication 2014/01). FAO Regional Office for Asia and the Pacific.

Faunce, C., & Hines, G. (2019). The role of social media in knowledge exchange of aquaculture management practices. Journal of Aquatic Research and Education, 11(1), 45–56.

Global Aquaculture Alliance. (2020). Best practices in aquaculture production.

Hossain, P. R., Amjath-Babu, T., Krupnik, T. J., Braun, M., Mohammed, E. Y., & Phillips, M. J. (2021). Developing climate information services for aquaculture in Bangladesh: A decision framework for managing temperature and rainfall variability-induced risks. Frontiers in Sustainable Food Systems, 5. https://doi.org/10.3389/fsufs.2021.644548

Huyer, S. (2016). Closing the gender gap in agriculture. FAO.

Jansen, T., Dempster, T., Thorstad, E. B., Uglem, I., & Fredheim, A. (2010). The role of social networks in knowledge sharing among farmers. Social Networks, 1(1), 71–83.

Kafle, S., & Rijal, K. (2021). Social media as a communication tool among fishermen in Nepal: Opportunities and challenges. Sustainability, 13(4), 2105. https://doi.org/10.3390/su13042105

Kah, J., Larkin, S. L., & Karp, F. (2022). Enhancing sector communications: Social media in aquaculture and fisheries management. Marine Policy, 133, 104663. https://doi.org/10.1016/j.marpol.2021.104663

Kaleem, O., & Sabi, A. F. B. S. (2021). Overview of aquaculture systems in Egypt and Nigeria: Prospects, potentials, and constraints. Aquaculture and Fisheries, 6, 535–547. https://doi.org/10.1016/j.aaf.2020.10.004

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite: The challenges and opportunities of social media. Business Horizons, 53(1), 59–68. https://doi.org/10.1016/j.bushor.2009.09.003

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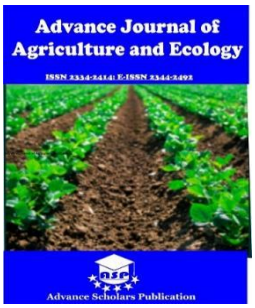

Kassam, A., Berhanu, A., & Ali, A. (2017). The role of social media in building knowledge and sharing experiences among fish farmers in Africa. African Journal of Aquaculture and Marine Sciences, 3(2), 78–85.

Khan, G. F., Swar, B., & Lee, S. K. (2021). Social media risks and benefits. Social Science Computer Review, 32, 606–627. https://doi.org/10.1177/0894439315605808

Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. Business Horizons, 54(3), 241–251. https://doi.org/10.1016/j.bushor.2011.01.005

Kimmons, R., Veletsianos, G., & Stewart, M. (2019). The role of social media in the sharing of agricultural information: A systematic review. Journal of Applied Communications, 103(1). https://doi.org/10.4148/1051-0834.2230

Klerkx, L., & Leeuwis, C. (2009). Establishment and embedding of innovation intermediaries: A structural analysis of the role of the innovation broker in agricultural innovation systems. The Innovative Broker, 23–38.

Koehler, M. (2019). Educational background and its relationship to social media engagement in agricultural knowledge sharing. Journal of Agricultural Education and Extension, 25(1), 3–19. https://doi.org/10.1080/1389224X.2018.1521524

Kumar, P. C., Divakar, S., Paswan, A., Azad, C., & Tyagi, S. (2020). Smallholder farmers' perception on mobile phone advisory potential in farming in Bhagalpur, India. Current Journal of Applied Science and Technology, 38(6), 1–8.

Kumar, G., Engle, C., & Tucker, C. (2021). Factors driving aquaculture technology and practice. Journal of the World Aquaculture Society, 49(3), 447–476. https://doi.org/10.1111/jwas.12553

Kumar, A., & Singh, S. (2019). Social media as a marketing tool for small scale farmers. Agricultural Marketing.

Kye, S., & Abubakar, A. (2021). Family size and knowledge sharing practices in agriculture. Journal of Agribusiness in Developing and Emerging Economies.

Liu, Y., Gan, T., & Zhao, J. (2017). Understanding the challenges of social media for farmers: The case of the aquaculture industry. Journal of Agricultural Extension and Education, 26(3), 283–298.

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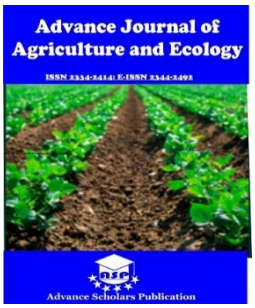

Liu, Q., Shao, Z., Tang, J., & Fan, W. (2021). Examining the influential factors for continued social media use. Industrial Management & Data Systems, 119, 1104–1127. https://doi.org/10.1108/IMDS-10-2018-0468

Mastorakos, T., & Pappas, D. (2020). The impact of household structure on agricultural innovation dissemination. Agricultural Economics Review, 21(4), 32–47.

Meyer, J. (2021). Family dynamics in agriculture: Implications for collective knowledge sharing. Rural Sociology Review, 86(1), 11–25.

Nations, M., & Leclere, D. (2022). The role of experienced farmers in social learning: A case study in aquaculture. Aquaculture Research, 53(1), 45–58. https://doi.org/10.1111/are.15423

Obar, J. A., & Wildman, S. (2015). Social media definition and the governance challenge: An introduction to the special issue. Telecommunications Policy, 39(9), 745–750. https://doi.org/10.1016/j.telpol.2015.07.014

Pew Research Center. (2021). The future of digital communications. https://www.pewresearch.org

Teo, J., & Liu, X. (2017). Social media usage in aquaculture: Opportunities and challenges. Aquaculture Reports, 6, 70–78. https://doi.org/10.1016/j.aqrep.2017.03.003

Tsai, Y. S., & Huang, C. (2021). A study on the relationship between the digital divide and the integration of social media in agricultural activities. Journal of Rural Studies, 85, 255–267. https://doi.org/10.1016/j.jrurstud.2021.05.001

Van Deursen, A. J. A. M., & Van Dijk, J. A. G. M. (2014). The digital divide shift to digital inequality: The role of social media in knowledge sharing. Journal of Information Technology.

Wang, Q., Rossignoli, C. M., Dompreh, E. B., Su, J., Ali, S. A., Karim, M., & Gasparatos, A. (2023). Sustainable intensification of small-scale aquaculture production in Myanmar through diversification and better management practices. Environmental Research Letters, 18(1), 015002. https://doi.org/10.1088/1748-9326/ac9a34