Global Journal of Agricultural Research, 14 (1),31-41, 2026
Print ISSN: 2053-5805(Print),
Online ISSN: 2053-5813(Online)
Website: https://www.eajournals.org/
Publication of the European Centre for Research Training and Development -UK

Assessment of Extension Workers Use of Social Media for Technology Dissemination in Southwestern Nigeria

* **Adeniyi Suraju Amusat, Tolulope Charles Idowu, and Favour Evans Alapu**
Institute of Agricultural Research and Training, Obafemi Awolowo University, Moor Plantation, Ibadan.
***Corresponding Author:** niyiamusat2000@yahoo.co.uk

doi: https://doi.org/10.37745/gjar.2013/vol14n13141 Published April 06 ,2026

Citation: Amusat A.S., Idowu TC., and Alapu F.E. (2026) Assessment of Extension Workers Use of Social Media for Technology Dissemination in Southwestern Nigeria, *Global Journal of Agricultural Research*, 14 (1),31-41

Abstract: *The study assessed extension workers use of social media tools for technology dissemination in Southwestern Nigeria. This was borne out of the need to improve and ensure a viable, effective and vibrant extension and advisory service delivery in the study area. 74 extension agents were selected through a two-staged sampling procedure. Data were obtained through a questionnaire and analyzed using descriptive and inferential statistics. Results showed that majority of respondents were female (64.9%) with mean age of 40.4 years. Majority sourced information on social media tools through radio ($\bar{x}$=0.94), used WhatsApp ($\bar{x}$=1.88) to a large extent and mostly constrained by epileptic power supply ($\bar{x}$=1.44) and poor network ($\bar{x}$=1.44) in the rural area. The respondents mostly used social media tools for spreading information ($\bar{x}$= 1.916) and for getting feedback from farmers ($\bar{x}$=1.86). Majority of respondents (54.0%) had favourable attitude towards usage of social media tools. Significant relationship existed between respondents age (X^2=5.44, $p< 0.05$), constraints (r= -0.377, $p<0.05$) and their usage of social media. It is recommended that relevant agencies should strengthen rural network, build capacity of extension workers on the use of social media tools particularly on packaging relevant technical information for dissemination to farmers and other stakeholders.*

Keywords: facebook; WhatsApp; extension; technology; social media

INTRODUCTION

Agriculture is the broad practice of cultivating land, growing crops and raising livestock to produce food materials and other products for consumption. Agriculture is fundamental to human sustenance and economic development. Extension services provide farmers with technical advice, training and support on practices like; improved seed varieties, pest control, soil management and

access to markets, acting as vital links between research, farmers and the wider agricultural economy.

Social media platform refers to the utilization of internet and mobile technologies to turn communication into an interactive discourse. Social media platforms are groups of internet applications that build on the technological foundations of Web 2.0, which allow the creation and exchange of user-generated content. Social media platforms form social interaction as a superset of social communication. However, Social media platforms are a tool for communication that allows democratization of knowledge which transforms users from content consumers to content producers (Bokoh et al, 2022).

Social media is an offshoot of ICT that can transform agricultural extension services. Social media are web-based tools of electronic communication that allow users to personally interact with others, individually or in group for the purposes of exchanging information, sharing thoughts and opinions, influencing and facilitating decision-making by creating, storing, retrieving and exchanging information in any form (text, pictures, video) by anyone in the virtual world. The most popular ones are WhatsApp, Facebook, YouTube, Google, Linkedin, Instagram, Blog and Skype. Others like Microsoft teams, Zoom, and Google meet became prominent with the advent of COVID-19 pandemic, when people were forced to work virtually in order to avoid being infected with the deadly disease. Common feature of these platforms is that they can reach millions of people at once and transmit loads of information. This presents a huge potential for extension practitioners to reach out to millions of their clientele.

The agricultural sector in Nigeria has been experiencing a decline due to issues like poor infrastructure, weak connections between professionals and farmers, and limited access to vital agricultural information (Wasihun 2022). To ensure food security, especially for rural communities, the sector needs to improve its efficiency and resilience. Utilizing social media for agricultural communication can foster essential connections among stakeholders and enhance information sharing, leveraging the potential of the internet to address these challenges.

Agricultural extension workers have critical roles to play in order to make disseminated technologies adopted by farmers. Agricultural extension systems are meant to assist farmers and rural dwellers to receive vital knowledge, including agricultural technology in both developed and developing countries. Digital agricultural extension is an accessible, cost-effective solution that allows farmers access to actionable knowledge through extension workers (Akintunde 2023).

An assessment of social media uses in extension reveals both benefits and challenges. Farmers and extension workers globally use social media platforms like Facebook and WhatsApp for information exchange, but faces issues like poor internet infrastructure, illiteracy, high data costs and lack of specific training. While farmers have positive attitudes towards social media for agricultural information, government and extension bodies must invest in better infrastructure and affordability to unlock its full potential in enhancing services and increasing farmer participation.

The integration and utilization of social media for agricultural extension services has become an essential innovation in the dissemination of agricultural knowledge and practices. In line with this assertion (Fadipe et al. 2024). Khan et al. (2020) noted that ICT-based platforms should be integrated into traditional extension methods to make agricultural information accessible to farmers effectively and efficiently. Previous studies have indicated that social media platforms are significantly influencing agriculture by acting as information sources, marketing tools, and delivery methods for extension. Gurdeep et al. (2021) affirmed that most extension agents use social media platforms like Facebook, WhatsApp and YouTube to source agricultural knowledge. Furthermore, the use of social media in extension services may encourage youth to be interested in agriculture. According to Idu et al. (2021), social media platforms offer agricultural extension benefits by providing broad and rapid information dissemination, enabling interactive learning with visuals and discussions, reducing farmer isolation and democratizing agricultural knowledge for improved decision-making and marketing. Platforms like WhatsApp, Facebook, and X facilitate interaction between farmers, extension officers, and consumers, fostering a more connected and informed agricultural community. Social media presents various opportunities to extension officers, this includes timely delivery of science-driven information to farmers (Kapuscinski, 2017). Therefore, the need for extension workers to use social media in their day-to-day activities cannot be over emphasized. Hence, this study assesses extension workers use of social media tools for technology dissemination in southwestern Nigeria. The study considered the following specific objectives:

Objectives

The objectives of the study are to:

i. determine personal characteristics of extension workers
ii. identify respondents' sources of information on social medi
iii. determine the extent of social media use
iv. ascertain respondents' use of social media for agricultural extension activitie
v. determine attitude of extension workers towards the use of social media
vi. identify constraints in the use of social media for agricultural extension activities

METHODOLOGY

The study was conducted in Southwestern Nigeria. Southwestern Nigeria is one of the six agricultural zones in Nigeria. This area has a high concentration of agricultural institutions; extension organizations and research institutes. The study population was 74 public extension workers who are employed in the selected states Agricultural Development Programmes (ADPs) and a two -stage sampling procedure was used to select extension workers. The first stage was a purposive selection of two of the six states within the area, namely, Ogun and Lagos based on the fact that the two states still have functional ADPs. The second stage was a random selection of 37 extension workers in each state making a total of 74 from the 2 states.

Primary data were obtained with the aid of structured questionnaire administered to

respondents while the secondary information were sourced from published documents such as textbooks, journals and internet sources. Extent of social media tool used was measured using a 3 points scale of regularly, occasionally, not at all; usage of social media tool was measured on a 3-point scale of always, rarely, never; Constraints was measured on a 3-point scale of Not a constraint, mild and major. The mean score was generated and used to rank in order of significance. Attitude of extension workers to usage of social media tools was measured using a Likert scale of SA, (5), A (4), U (3), D (2), SD (1) for positive statements and scores reversed for negative statements. The mean score was generated and used to categorize the respondents into positive and negative attitude. Data collected were subjected to descriptive and inferential statistics. The study's dependent variable was the usage of social media tools by the respondents.

Table 1: Personal characteristics of extension agents

Variable	Frequency	Percentage	Mean	SD
Marital Status				
Single	2	2.7		
Married	68	91.9		
Widow	2	2.7		
Divorced	2	2.7		
Gender				
Male	48	64.9		
Female	26	35.1		
Level of Education				
Diploma	20	27.0		
HND/Bachelor's Degree	38	51.4		
M.Sc.	16	21.6		
PhD	0	0		
Age			41.8	0.938
21-30	4	5.4		
31-40	10	13.5		
41-50	32	43.2		
51-60	24	32.4		
Above 60	4	5.4		

Use of Social Media Tools				
NO	2	2.7		
YES	72	97.3		
Years of Experience as an Extension Worker			19.3514	6.733
≤ 10	20	13.6		
11-20	40	54.0		
21 and above	14	32.4		

Personal characteristics of extension workers

Result from Table 1 shows that majority of the respondents were male (64.9%) while female accounts for remaining 35.1%. This corroborates Ajayi, 2013 that there were more males in extension than females in Africa. The table also shows that majority (43.2%) of the respondents were between 41- 50 years of age with a mean age of 41.8 years. This implies that respondents still have several years to contribute into agricultural development in the study area. Any investment on training of extension workers on social media usage may likely not be a waste. Furthermore, the findings in this study revealed that majority of respondents were married (91.9%), widowed (2.7%), single (2.7%) and divorced were (2.7%). Educational levels attained by the respondents were Diploma (27.0%), HND/Bachelor (51.4%) and Masters (21.6%). This implies that public extension work usually required certain educational qualifications and this may likely enhance their use of relevant social media tools for their job. This finding is in line with Akintunde,2023.

The table further shows that majority of the respondents (97.3%) had used one or more social media tools for extension service and possessed 11-20 % (54.0%) years of experience. This implies that majority of the respondents are well experienced with adequate knowledge that will enable them to appreciate the usefulness of social media in performing their work and how it can be used to complement the traditional extension system of training and visit which is presently confronted with plethora of constraints. According to Olorunfemi etal, (2018), the performance of agricultural extension system presently in Nigeria is unsatisfactory due to poor funding and inadequate mobility to reach farmers.

Table 2: Sources of Information

Source of Information	Mean	SD
Radio	0.94	0.229
Billboard	0.65	0.481
Internet	0.88	0.314
Television	0.64	0.483
Fellow extension workers	0.80	0.401
Training	0.86	0.346
Newspaper	0.77	0.421
Research institute	0.89	0.314

Sources of Information

The result in Table 2 reveals that major sources of information on social media tools explored by extension workers were radio ($\bar{x}$=0.94), followed by research institute ($\bar{x}$= 0.89) and internet ($\bar{x}$=0.881). Other sources of information on social media tools include training ($\bar{x}$= 0.86), fellow extension agents ($\bar{x}$=0.80), Newspaper ($\bar{x}$=0.77), billboard ($\bar{x}$=0.65) and television ($\bar{x}$= 0.64). This finding implies that radio, research institute and internet are veritable sources of information to extension workers on social media usage. Radio broadcasting is effective in promoting agricultural innovations among farmers and other stakeholders particularly through farmer- focused programming, expert interviews, and interactive programming.

Research institute is the source of agricultural technologies expected to be disseminated by extension personnel. The research institute develops ecologically adaptable, socially acceptable and proven technologies which the extension system (Agricultural Development Programmes) in each of the states of the federation supposed to disseminate to relevant stakeholders especially farmers (Amusat,2021). Internet usage in agricultural extension has revolutionized the way farmers access information, leading to improved productivity and decision making. This has encouraged extension workers to embrace internet use in linking up with farmers.

Table 3: Extent of Social Media Use

Social Media	Mean	SD
Facebook	1.80	0.467
WhatsApp	1.88	0.464
Telegram	0.38	0.644
Twitter	0.17	0.458
Instagram	0.30	0.624
Google Meet	0.32	0.588
Blogs	0.29	0.462
YouTube	0.35	0.645
Zoom	0.79	0.640
LinkedIn	0.20	0.531

Extent of social media use

Whatsapp ($\bar{x}$=1.88) and facebook ($\bar{x}$=1.80) are the tools used to a large extent by the extension workers. Whatsapp and facebook are the most utilized social media tools for extension work among the respondents, this is due to the fact that, the two tools are the most common social media tools in the world according to Akintunde (2023). According to Thakur etal (2018), facebook is a social network platform which individuals used to create profiles, videos, share update and connect with friends and families while whatsapp is also a message app that allows individual users to share information either interpersonally or in groups with the aid of the internet. The two tools are social media facilities used on daily basis to facilitate communication and connect users irrespective of the distance in their locations. Whatsapp allow respondents on daily basis to share information, create and participate in group discussion on both personal and official assignments.

Table 4: Usage of social media for agricultural extension activities

Usage	Mean	SD
Conducting Training	1.83	0.447
Spread information to farmers quickly	1.91	0.368
Getting feedback from farmers	1.86	0.424
To create awareness on new innovation	1.52	0.649
To organize farmers meeting	1.52	0.736
Disseminate new innovation	1.55	0.734

Usage of social media for agricultural extension work

According to Table 4 prominent among the activities in which the extension workers use the social media platform for were spreading information to farmers quickly ($\bar{x}$=1.916), getting feedback

from farmers ($\bar{x}$=1.861), conducting training ($\bar{x}$=1.833) and disseminating new innovation($\bar{x}$=1.55). Disseminating general agricultural information to farmers and other stakeholders and collection of feedback are major work assignments of extension agents in any functional agricultural extension system.

Table 5a: Attitude of extension workers towards the use of social media for technology /information dissemination

Statements	**SA**	**A**	**U**	**SD**	**D**	**Mean**	**SD**
Use of social media will facilitate timely information dissemination to farmers	44	30	0	0	0	4.57	0.502
Use of social media will not help extension work	6	42	4	14	8	2.71	1.226
Use of social media will help me to keep abreast of latest technology in agriculture	10	58	6	0	0	4.05	0.481
Using social media to interact with farmers will be expensive	2	28	22	10	12	3.08	1.147
Erratic power supply will limit the use of social media for extension	0	40	20	6	8	2.80	1.023
Low digital skill of both extension agents and farmers will hamper the usage of social media for extension work	2	40	16	6	10	2.82	1.140
Use of social media will be beneficial to extension workers	20	40	8	6	0	4.00	0.887
Use of social media will enhance the knowledge of extension agents on general agriculture	24	38	6	4	2	4.05	0.982
Use of social media will not slow down passage of information to farmers	0	16	2	10	46	4.11	1.254
Extension agent cannot afford the cost of data for using social media to work	0	6	14	6	48	4.21	1.082

Attitude of extension workers towards the use of social media for agricultural extension activities

Table 5a shows attitude of extension workers toward the use of social media for technology /information dissemination and accordingly, respondents strongly agreed to the following statements ; use of social media will facilitate timely information dissemination to farmers ($\bar{x}$=4.57) , use of social media will help me to keep abreast of latest technology in agriculture ($\bar{x}$= 4.05), use of social media will enhance the knowledge of extension agents on general agriculture ($\bar{x}$= 4.05), use of social media will not slow down passage of information to farmers ($\bar{x}$=4.11), use of social media will be beneficial to extension workers ($\bar{x}$=4.00). The above responses showed that respondents had positive perception to the use of social media tools for agricultural extension work while the statement; extension agent cannot afford the cost of data for using social media to work

($\bar{x}$= 4.21) attested to the high cost of data and poor wage/salary of agricultural extension workers in Nigeria.

Table 5b: Attitude Category

Unfavourable	Favourable	Mean	SD
34 (46.0%)	40 (54.0%)	1.51	0.5070

Table 5b shows that majority of respondents (54.0%) had favourable attitude as compared to (46.0%) with unfavourable attitude. This implies that majority of extension workers were more positively disposed to the use of social media for extension activities. The extension workers have realized that social media tools would facilitate timely information dissemination and spread of technology in real time to farmers. This result shows that the extension agents would be willing to use social media tools for their jobs and there is also the probability of adopting other social media tools which they have not been used before.

Table 6: Constraints in the use of media for technology dissemination

Constraints	Not a constraint	Mild	Major	Mean	SD
Limited access to internet and devices	20	32	22	1.02	0.77408
Complexity of devices and social media platforms	10	46	18	1.11	0.63113
Digital literacy gap	14	40	20	1.08	0.69179
Lack of traininsg and support	28	42	4	0.66	0.58554
High cost	6	54	14	1.11	0.52251
Epileptic power supply	12	16	46	1.44	0.73463
Poor network in the rural area	12	16	46	1.44	0.77254

Constraints in the use of social media for technology dissemination

Table 6 reveals that poor network in the rural area ($\bar{x}$=1.44), epileptic power supply ($\bar{x}$=1.44) and complexities of device and social media platforms ($\bar{x}$=1.11) were the major source of constraints facing extension workers in the use of social media for disseminating technologies to end users. Poor network and epileptic power supply are the major problem of rural community in utilizing social media in their environment.

This is in line with Legodi and Shai (2020) who identified poor network access and power outages as challenges when using social media for extension service delivery in Kesse's district in Kenya. Lack of training and support ($\bar{x}$=0.66) is not a constraint to social media use for extension workers probably because of the fact that the major social media tools used by extension workers are the one being used for day to day interactions with friends, family and colleagues. This has made them

to be conversant with its operations and therefore they may not require any further training and special support on its usage.

Table 7: Relationship between selected socioeconomic characteristics, constraints and usage of social media tool for technology dissemination

Variables	PPMC	χ^2	Df	P-value	Decision
Age	-	5.442	4	0.004	S
Gender	-	0.994	1	0.319	NS
Marital Status	-	2.836	3	0.271	NS
Educational status	-	1.771	2	0.413	NS
Years of experience	0.178	-		0.298	NS
Constraints	-0.377	-		0.023	S

Table 7 shows that significant relationship existed between respondents age, constraints faced by respondents and their usage of social media. This implies that age of respondents affects their usage of social media for extension jobs. The younger the respondents, the more they would try to explore the use of social media for their day to day assignments in technology dissemination and receiving of feedback from farmers and other stakeholders. Also, constraints faced by respondents also influence their usage of social media for agricultural extension service. The more the constraints, the less they used social media and vice versa.

CONCLUSION AND RECOMMENDATIONS

The study assessed extension workers use of social media for technology dissemination in the study area. From the findings, it can be concluded that majority of extension workers were female, married with average age of 40.4 years and 19 years of experience. Majority of respondents made use of different social media tools for extension services, had favourable attitude to the usage of social media tools but constrained by epileptic power supply and poor network in the rural area. It is recommended that relevant agencies should strengthen rural network, build capacity and skills of extension workers on the use of social media tools particularly on packaging relevant technical information for dissemination to enhance farmers' knowledge.

REFERENCES

Ajayi, A. O. (2013). Assessment of Agricultural Extension Agents' knowledge and Attitude Towards Agricultural Insurance in Osun State, Nigeria. *Journal of Agricultural Science and Applications*, *2*(3), 143-150.

Akintunde M.AO. (2023) Assessment of Use of Selected social media Tools by Extension Workers to disseminate Climate Smart Agriculture (CSA) Information to Farmers in Lesotho. FARA Research Report Vol 7(10):80-94. https://doi.org/10.59101/frr072310

Amusat, A. S**.** (2021). Attitude of Research Scientists and Constraints to Effective Research-Extension-Farmers-Input Linkage System Model in Nigeria. *Moor Journal of Agricultural Research,* (22): *125-135***.**

Bokoh, Mausi A. Mr.; Bello, Morenikeji M. Miss; and Idowu, Adeola A. Miss, (2022) "Use of Social Media Platforms for Dissemination of Information and Creating Awareness about Library Resources and Services among Students in Lagos State University, Nigeria". Library Philosophy and Practice (e-journal). 6832 https://digitalcommons.unl.edu/libphilprac/6832

Fadipe, M. O., Ilori, A. R., Adewunmi, A. A., & Oladele, O. O. (2024). Determinants of Utilization of Social Media for Agricultural Extension Service Delivery in Ogun State, Nigeria. *Nigeria Agricultural Journal, 55*(3), 437-445.

Gurdeep, S., Pritpal, S., Tiwari, D. and Kulwant, S. (2021). Role of social media in enhancing agricultural growth. Indian Journal of Extension Education, 57(2): 69-72.

Idu, E. E., Ajah, A., Alabi., T. and Nnaji, J. N. (2021). Determinants of social media usage in agriculture among youths in the Federal Capital Territory. Direct Research Journal of Agriculture and Food Science, 9: 36-41.

Khan, N. A., Ma, W., Owusu, V., & Shah, A. A. (2023). Does ICT-based farm advisory improve farmers' adaptation to climate change? Evidence from Pakistan. *Climate and Development*, *15*(8), 639-654.

Legodi, L.T. & Shai, K.B., (2020). Afrocentric assessment of the implications of social media on South Africa's socio-politics: A boon or bane? African J. Democracy & Government., 7(4): 67–80.

Thakur, D. & Chander, M. (2018). Use of social media in Agricultural Extension: some evidences from India. International Journal of Science, Environment and Technology, 7(4), 1334-1346.

Wasihun, A. (2022). Agricultural Research and Extension Linkage: Review on Roles in an Improved Agricultural Technology Transfer in Ethiopia. Journal of Natural Sciences Research, 13(4), 8-11.