



# **USE OF NEW MEDIA FOR COMMUNICATION AMONG EXTENSION AGENTS AND FARMERS IN OYO STATE, NIGERIA**

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## **ABSTRACT**

The study was carried out to investigate the use of New media for communication among extension agents and farmers in Oyo State, Nigeria. Forty Extension agents and eighty farmers were randomly selected. Data collected were subjected to descriptive analysis using frequencies and percentage. Majority of extension agents (90.0%) were aware of Social Media. Farmers (97.5%) were aware of Agricultural websites. Extension agents (85.0%) have access to Agricultural Blogs, farmers (87.5%) have access Agricultural Websites. Extension agents also have high access (75.0%) to New media and farmers have high access (67.5%) to New media. Majority of Extension agents in the study area have a benefit derived from the use of New media as to enhance their job commitments. Farmers have the benefits derived from the use of New media as it saves time and money. Majority of Extension agents in the study area used new media to source for information on farmers' livelihood and possible ways of improving their living standards. Extension agents (55%) and also farmers (60.0%) have high level of use of new media. It is recommended that Extension agencies should organize in-service training for the staff on skill acquisition and importance of New media use in sourcing and disseminating innovation and also the Nigerian government should address the problem of using the New media in agricultural and rural development via focusing on providing broadband connectivity and a content centric development approach particularly in the rural areas.

**KEYWORDS:** New media, Communication, Extension Agents, Farmers

### **Background to the study**

According to Leeuwis and Van den Ban (2004), the New media, which is a hybrid media, the same as the internet, combine the functional properties of mass media and of interpersonal communication, which can potentially reach large numbers of people in many different locations. New media such as E-mailing, Web-browsing, online telephoning, online Newspapers, e-Books, Journals and e-learning are other ways through which new innovations can get to the farmers from different research institutes (Oduntan, Olayemi and Oko, 2021). The problems of illiteracy and ignorance coupled with inadequate flow of information are obvious in many countries. The importance of information on research and development has promoted literacy and knowledge.

In many countries nowadays, emphasis is being placed on the need to use New media to exchange information with the stakeholders such as: farmers, extension agents, researchers, administrators, policy-planners, marketers, cooperatives, agro-processors, Non-Governmental Organizations (NGOs) etc. New media is user-friendly, easy to access, cost effective and well-protected from unauthorized accesses, also serves the following purposes: record text, drawings, photographs, audio, video, process descriptions, and other information in digital formats; produce exact duplicates of such information at significantly lower cost; transfer information and knowledge rapidly over large distances through communications networks; develop standardized algorithms to large quantities

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of information relatively rapidly; and achieve greater interactivity in communicating, evaluating, producing and sharing useful information and knowledge. (Oduntan, Olayemi and Oko, 2021).

Nigeria has an agricultural research system made up of 17 commodity-based research institutes and a special national extension institute of over 45 faculties of agriculture in conventional federal, state, and private universities (Saliu and Age, 2009). The important task of extension is the exchange and sharing of information, knowledge and skills. New media such as different internet platforms which include agricultural websites, WhatsApp and Facebook are fast means of disseminating innovation to farmers and obtaining quick feedbacks, but extension services still adhere to old extension methods of contacts which have been individual and group methods that result in a delay in feedback (Aromolaran *et al.*, 2016). The use of internet-based mobile apps enhances researchers and extension workers job commitments also saving time, but fluctuations of internet connectivity and epileptic power supply were factors influencing the use of internet-based mobile apps (Oose, Fapojuwo and Agbabiaka, 2021). Anna *et al.*, (2019) stated that majority of extension workers in Agricultural Research Institute need vital information from the internet to enhance their job performance and that the most prominent use of the internet by extension workers was to search for research-based information.

## MATERIALS AND METHODS

The study was carried out in Oyo State, South-West, Nigeria. Oyo State is one of the six states in the southwestern geopolitical zone of Nigeria. Oyo State comprises of thirty-three (33) local government areas (LGAs) and has a land mass of about 27,249 km<sup>2</sup> (square kilometres) and a coordinate of 8.157°N and 3.0147° E. Its population is estimated at 6,617,720 in 2007 (NPC, 2007). Oyo State has an equatorial climate with dry and wet seasons and relatively high humidity. An average annual rainfall is between 800 mm and 1500 mm while average daily temperature ranges between 25°C and 35 °C, almost throughout the year. The vegetation pattern of Oyo State is that of rain forest in the south and guinea savannah in the north. Thick forest in the south gives way to grassland interspersed with trees in the north. Extension agents and farmers from different Agricultural Development Programme zones in Oyo State were considered for the study. A multi stage sampling technique was used to select the respondents. The first stage involved a random sampling of two (2) zone from four (4) Agricultural Development Programme (ADP) zones in Oyo State, in which Ibadan / Ibarapa and Saki zones were

selected. The second stage involved a random sampling of two blocks each from the selected zones to make four blocks. The third stage included a randomly sampling of one cell from the selected blocks to make four cells, 5 villages were selected from the chosen cells using simple random sampling to make 20 villages. From the selected villages, 4 farmers each were selected from the villages to make 80 farmers. Also, ten extension agents were randomly selected from the four blocks to make 40 extension agents. Primary data was obtained by using a questionnaire for extension agents and farmers. The level of new media use for communication and was operationalised on a 3-point scale of Never 0, Occasionally 1, Frequently 2 for the following new media platforms: Email, Video conferencing, Agricultural websites, Online Agricultural Journals, Agricultural blogs and Social media like Telegram, Twitter, Facebook and WhatsApp and was further categorized into High and Low using the minimum and maximum scores obtainable from each of the items.

## RESULT AND DISCUSSIONS

The results on table 1 shows the distribution of the Extension agents based on their socio-economic characteristics. Result on age distribution shows that 15.0% of the respondents could be considered to be young with ages below 30 years. The distribution also shows that respondents between 30 and 44 years of age made up the largest proportion of 45.0%. The mean age is 43.1250 years which implies that most of the extension agents in the study area are still productive but are gradually getting old, outliving their productive age. This agrees with the findings of Aromolaran *et al.*, (2016), that majority of extension agents in Oyo State were above 40 years of age. It also shows that 70.0% of the respondents were male while 30.0% were female. This distribution shows that males are more involved in extension work than females in the study area. The result also shows that 17.5% of the respondents had HND, 77.5% had B.Agric, and 5.0% had M.Sc. This is an indication that many of the respondents are educated and that could contribute to their comprehension of the New media, thereby increasing the likelihood of New media use in the study area. This finding corroborate Adetumbi, *et al.*, (2013) who opine that the use of the New media is influenced by the level of education of extension agents. Estimated monthly income distribution as shown in Table 1 shows that 27.5% of respondents earn below ₦50,000, 67.5% earn in the range of ₦50,000 - ₦100,000 and 5% earn above ₦100,000 per month. This implies that extension agents in the study area were average income earner according to the Nigeria Living Wage Individual scale.

**Table 1: Distribution of Extension Agents by their Socioeconomic Characteristics**

Variables	Frequency	Percentage (%)	Mean	SD
<b>Sex</b>				
Male	28	70.0		
Female	12	30.0		
<b>Age</b>				
<30	6	15.0	43.1250	10.81828
30-44	18	45.0		
45-59	13	32.5		
≥ 60	3	7.5		
<b>Marital status</b>				
Single	5	12.5		
Married	29	72.5		
Widowed	1	2.5		
Divorced	5	12.5		
<b>Religion</b>				
Christianity	21	52.5		
Islam	19	47.5		
<b>Educational attainment</b>				
HND	7	17.5		
B.Agric	31	77.5		
M.Sc	2	5.0		
<b>Estimated monthly income (₦)</b>				
< 50,000	11	27.5	68750.0000	24409.69753
50,000-100,000	27	67.5		
> 100,000	2	5.0		

Source: Field survey, 2021

The results on table 2 shows the distribution of farmers according to their socio-economic activities. It shows that most of the respondents (43.8%) were between 30 to 44 years while few 7.5% of them were 60 years and above, respondents below 30 years were 15.0% and those between 45 and 59 years were 33.8%. The mean age of 42.3750 years shows that most of the respondents were still in their growing age. This means that they were in their useful years, which could make them use new media to get information on agriculture. This is in agreement with the findings of Ekeanya *et al.*, (2017) who asserted that most of the people who engaged in agricultural activities were above the age 40. The results also shows that majority (77.5%) of respondents were male, (22.5%) were female. This shows that there are more male farmers than female in the study area. Result of marital status on table 2 reveals that majority (78.8%) of the respondents are married. This is in line with the findings of Ayanda (2019), that a larger percentage of the farmers in Oyo State were married. This implies that most of the respondents in the study area had family

responsibilities to cater for and this could instigate them to use new media to get useful information to enhance their farm production. The results shows that 10.0% of the respondents had no formal education, 17.5% had Primary education, 61.3% had secondary education while 11.3% had tertiary education. This implies that majority of the respondent have some level of education with the highest number of respondents having secondary education, it can be said that most of the respondents are literate and could understand basic information and instructions that are disseminated with new media. On income generated, result shows that a larger proportion (61.3%) of respondents generated between ₦50,000 and ₦100,000 from their farm production monthly. The mean income of ₦61250.0000 implies a normal monthly income generated by the respondents from their farm production. This would have increased their scale of production in the study area. This agrees with the findings of Coster *et al.*, (2021), who opined that an average income of ₦68,979.50 was earned from on-farm activities.

Table 2: Distribution of farmers by their Socioeconomic Characteristics

Variables	Frequency	Percentage (%)	Mean	SD
<b>Sex</b>				
Male	62	77.5		
Female	18	22.5		
<b>Age</b>				
<30	12	15.0	42.3750	11.00676
30-44	35	43.8		
45-59	27	33.8		
≥ 60	6	7.5		
<b>Marital status</b>				
Single	8	10.0		
Married	63	78.8		
Widowed	4	5.0		
Divorced	5	6.3		
<b>Religion</b>				
Christianity	39	48.8		
Islam	32	40.0		
Traditional	9	11.2		
<b>Educational attainment</b>				
No formal education	8	10.0		
Primary education	14	17.5		
Secondary education	49	61.3		
Tertiary education	9	11.3		
<b>Estimated monthly income (₦)</b>				
< 50,000	26	32.5	61250.0000	28656.63155
50,000-100,000	49	61.3		
> 100,000	5	6.3		

Source: Field survey, 2021

Table 3 shows the level of awareness of New media among Extension agents. The results shows that Social Media like WhatsApp, Facebook Twitter etc. and Agricultural blogs has the majority of respondents. 90.0 % were aware of Social Media,

82.5% were aware of Online Agricultural Journals, 90.0 % were aware of Agricultural blogs, 82.5% were aware of Agricultural Websites, 85.0% were aware of Email and 80.0% were aware of E-video conferencing.

Table 3: Awareness of New Media type by Extension Agents

Awareness	Yes F (%)	No F (%)
Social Media e.g., WhatsApp, Facebook, Twitter etc.	36 (90.0)	4 (10.0)
Online Agricultural Journals	33(82.5)	7 (17.5)
Agricultural Blogs	36 (90.0)	4 (10.0)
Agricultural Websites	33 (82.5)	7 (17.5)
Email	34 (85.0)	6 (15.0)
E-video conferencing	32 (80.0)	8 (20.0)

Source: Field survey, 2021

Result on Table 4 shows that Agricultural Websites has the majority of respondents. 96.3% were aware of Social Media, 80.0% were aware of Online Agricultural Journals, 90.0 % were aware of

Agricultural blogs, 97.5% were aware of Agricultural Websites, 96.3% were aware of Email and 77.5% were aware of E-video conferencing.

**Table 4: Awareness of New Media type by Farmers**

Awareness	Yes F (%)	No F (%)
Social Media e.g., WhatsApp, Facebook, Twitter etc.	77 (96.3)	3 (3.8)
Online Agricultural Journals	64(80.0)	16 (20.0)
Agricultural Blogs	72 (90.0)	8 (10.0)
Agricultural Websites	78 (97.5)	2 (2.5)
Email	77 (96.3)	3 (3.8)
E-video conferencing	62 (77.5)	18 (22.5)

Source: Field survey, 2021

Table 5 shows that majority of the Extension agents has access to Agricultural Blogs. 77.5% have access to Social Media, 80.0% have access to Online Agricultural Journals, 85.0 % have access to

Agricultural blogs, 80.0% have access to Agricultural Websites, 60.0% have access to Email and 70.0% have access to E-video conferencing.

**Table 5: Accessibility to New Media type by Extension Agents**

Accessibility	Yes F (%)	No F (%)
Social Media e.g., WhatsApp, Facebook, Twitter etc.	31 (77.5)	9 (22.5)
Online Agricultural Journals	32 (80.0)	8 (20.0)
Agricultural Blogs	34 (85.0)	6 (15.0)
Agricultural Websites	32 (80.0)	8 (20.0)
Email	24 (60.0)	16 (40.0)
E-video conferencing	28 (70.0)	12 (30.0)

Source: Field survey, 2021

Results on Table 6 shows that 85.0% of the farmers have access to Social Media, 77.5% have access to Online Agricultural Journals, 85.0 % have access to

Agricultural blogs, 87.5% have access to Agricultural Websites, 67.5% have access to Email and 71.3% have access to E-video conferencing

**Table 6: Accessibility of New Media type by Farmers**

Accessibility	Yes F (%)	No F (%)
Social Media e.g., WhatsApp, Facebook, Twitter etc.	68 (85.0)	12 (15.0)
Online Agricultural Journals	62(77.5)	18 (22.5)
Agricultural Blogs	68 (85.0)	12 (15.0)
Agricultural Websites	70 (87.5)	10 (12.5)
Email	54 (67.5)	26 (32.5)
E-video conferencing	57 (71.3)	23 (28.8)

Source: Field survey, 2021

The results on Table 7 shows that most of the Extension agents with the highest percentage of (90%) had a benefit derived from the use of New Media as to enhance their job commitments. This is followed by enhancing their effectiveness on daily

work (87.5%), making the diffusion of innovations easy (85%), it helps to save time (85%), it is very easy to use (82.5%), it gives solution to problems faster (82.5%), It helps improve my productivity (80%) and information is always up to date (77.5%).

**Table 7: Benefits Derived from the Use of New Media Type by Extension Agents**

Benefits derived from the use of new media	Yes F (%)	No F (%)
It is very easy to use	33 (82.5)	7 (17.5)
It gives solution to problems faster	33 (82.5)	7(17.5)
Information is always up to date	31 (77.5)	9 (22.5)
It helps improve my productivity	32 (80.0)	8 (20.0)
To enhance my job commitments	36 (90.0)	4 (10.0)
It helps to save time	34 (85.0)	6 (15.0)
It enhances my effectiveness on daily work	35 (87.5)	5 (12.5)
The new media makes the diffusion of innovations easy	34 (85.0)	6 (15.0)

Source: Field survey, 2021

The results on Table 8 shows that most of the farmers with the highest percentage (90%) had a benefit derived from the use of New Media as it saves time and money. This is followed by enhancing their effectiveness on daily work (87.5%), increasing

their farm yield (85%), making diffusion of innovations easy (85%), it is very easy to use (82.5%), it gives solution to problems faster (82.5%), it helps improve my productivity (80%) and information is always up to date (77.5%).

**Table 8: Benefits Derived from the Use of New Media Type by Farmers**

Benefits derived from the use of new media	Yes F (%)	No F (%)
It is very easy to use	66 (82.5)	14 (17.5)
It gives solution to problems faster	66 (82.5)	14 (17.5)
Information is always up to date	62 (77.5)	18 (22.5)
It helps improve my productivity	64 (80.0)	16 (20.0)
It saves time and money	72 (90.0)	8 (10.0)
It increases my farm yield	68 (85.0)	12 (15.0)
It enhances my effectiveness on daily work	70 (87.5)	10 (12.5)
The new media makes the diffusion of innovations easy	68 (85.0)	12 (15.0)

Source: Field survey, 2021

The results on Table 9 shows that more than half (55.0%) of the Extension agents had a high level of use of the new media while 45.0% of them had a low level of use. This implies that most of the respondents use New Media for communication.

Table 10 shows that more than half (60.0%) of the farmers had a high level of use of the new media while 40.0% of them had a low level of use. This implies that most of the respondents use New media for communication.

**Table 9: Level of New Media use by Extension Agents**

Level of Utilisation	Frequency	Percentage	Minimum	Maximum	Mean	SD
Low (5.00 – 16.1749)	18	45.0	5.00	22.00	16.1750	3.12875
High (16.1750 – 22.00)	22	55.0				
Total	40	100.0				

Source: Field survey, 2021

**Table 10: Level of New Media Use by Farmers**

Level of Utilisation	Frequency	Percentage	Minimum	Maximum	Mean	SD
Low (5.00–23.9249)	32	40.0	5.00	34.00	23.9250	5.17241
High (23.9249–34.00)	48	60.0				
Total	80	100.0				

Source: Field survey, 2021

## CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of this study, extension agents and farmers in Oyo State were aware and also have access to New media, there was a high level of New media use by both extension agents and farmers. The study also concluded that the major benefits derived from the use of New media by extension agents and farmers were enhancing job commitments, effectiveness of daily work, saving time and ease of use. The following recommendations were made based on the findings:

- Extension agencies should create awareness and organize in-service training for the staff on skill acquisition and importance of New media use in sourcing and disseminating innovation. This will encourage extension agents to increase their extent of New media use.
- It is necessary that access to Internet facilities be provided with other supporting amenities such as a constant supply of electricity, regular upgrading of Internet skills, software and hardware. This could re-orientate and prompt extension agents' interest in the better use of New media.
- The need for community enrolment mainly by NGOs or Public-Private Community partnership for the need of using the New media to source for agricultural information.
- The Nigerian government should address the problem of using New media in agricultural and rural development via focusing on providing broadband connectivity and a content centric development approach particularly in the rural areas.

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