



USAGE OF WEB TOOLS IN ACCESSING AGRICULTURAL INFORMATION AMONG CROP FARMERS IN SOUTH WEST, NIGERIA

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ABSTRACT

Information is a vital tool in Agricultural production. Farmers may utilize web tools in numerous ways. It may provide new information services to rural regions, where farmers will have more influence over communication channels. Access to new information sources is essential for sustainable farming. Using online technologies effectively and efficiently can make extension workers' jobs simpler and enable information distribution and after-extension services. This enables a free flow and continuous contact with the farmers on updated information that is useful for agricultural productivity. The study therefore described the socioeconomic characteristics of farmers, determined the farmers' usage of web tools in accessing agricultural information and constraints faced in the usage of web tools in accessing of agricultural information. The study was carried out in south west, Nigeria using a multi-stage sampling technique among two hundred and ninety nine (299) crop farmers. Primary data were collected and analyzed using descriptive analysis. Result of analysis showed that most of the respondents were male, 46.8% had primary education with about 15 years of farming experience and an average income of N760,000. The findings further found that whatsapp was the mostly used web tool for receiving agricultural related information by the respondents, however, it requires special types of devices to use some of the web tools, The study concludes that if the constraints faced was solved, then the level of usage of web tools will increase and enhance agricultural productivity. The study therefore recommended among others that crop farmers needs to be trained on almost all the identified web tools.

Keywords: Usage, Web tools, Agricultural, Information, Farmers, Productivity

INTRODUCTION

Advances in information communication technology (ICT) are transforming agricultural extension service delivery. ICT advancements are improving African farmers' knowledge and lives (Tyagi, 2012). According to (Matt, 2015), the implementation of ICT (computer and Internet) in agricultural extension programs and transmission of agricultural information to internet users has led to the electronic agricultural extension (e-extension). The Web tools are "read-write," allowing users to add, distribute, or alter information



(Mohammad, 2011). Web tools reflect the social web, which facilitates collaboration, communication, and involvement (Groff 2013). Web tools are used to improve collaboration, communication, and interaction in learning contexts (Narayan and Baglow 2010). According to Thomas and Thomas (2012), ICT has grown rapidly during the previous three decades. This can be attributed to web tools such as Facebook, Twitter, WhatsApp, Instagram, etc which has transformed worldwide communication. Social media platforms like Facebook, Twitter, YouTube, Wikipedia, blogging, LinkedIn, Google+, and Renren may be used to develop cutting-edge management models in education (Adelakunet *al*, 2020). These learning innovations have often used Microsoft Office products (e.g. PowerPoint), e-mail, and new programs such as online interactive web chats, particular interest forums, streaming video, electronic conference, and VoIP systems, e.g. Skype and "blended learning" courses. These technologies have boosted classroom and company flexibility. The relevance of online tools in development has long been acknowledged and ICTs are the second aim of the Sustainable Development Goals (SDGs), which stress the advantages of new technology in battle against poverty. The paper also said that "connectivity – whether the Internet or mobile phones – is delivering market information, financial services, and health services to rural locations" (Mburu, 2013). Effective use of ICTs in agricultural extension may boost agricultural output and perhaps achieve SDG 2. (SDGs). Many extension workers use digital technologies to teach and learn globally. Affordable phones are driving increasing adoption of these technological platforms (Agbo, 2015).

The broad objective of the study is to assess the usage of web tools in accessing agricultural information among farmers in south west, Nigeria while the specific objectives were to:

- I. describe the socioeconomic characteristics of the farmers in the study area;
- II. identify the level of use of webtools among farmers in the study area; and
- III. ascertain the constraints associated with the use of webtools among farmers in the study area.

METHODOLOGY

A multi-stage sampling technique was used to select respondents for the study. In the first stage, three (3) states were randomly selected from South- West Nigeria (Oyo, Ekiti, Osun States). The second stage involved purposive selection of all Agricultural Development Projects (ADPs) from each of the selected states. The third stage involved selection of 60% of extension workers in the study areas, A sample size of 299 farmers were used for the study (79 from Ekiti; 84 from Osun and 136 from Oyo). Data were analyzed using descriptive statistics such as frequency distributions and percentages.

RESULT AND DISCUSSION

Socio-economic Characteristics of Farmers

The result shows that about 65.9% and 34.1% of the respondents were males and females, respectively. This is evidence to show that males were the dominant stakeholders in farming business. This may be so as farming has been reported to be tedious and debilitating by numerous researchers across the globe. For instance, Acharya *et al.* (2020) reported that farming in India was energy demanding and therefore involved high participation of male. In contrary, Oseni *et al.* (2013) posited that women are heavily involved in the production of arable crops in Nigeria. This implies that both male and female participate in farming and due to the changes in the way of life, the rate at which changes occur in farming is so alarming due to the technological innovations that daily appear to mankind in all spheres of life., the



findings show that the average age of the respondents in the study area was approximately 49 years while only 2.7% and 14.0% of the respondents were less than 30 years and 60 years and above, respectively. This means that farmers in the study area were still active and they would therefore have the energy required to carry out farming and learn about technological innovations that could make farming easy. At the same time, at aged 50, one may not have the required agility to encourage productivity in farming based on the assertions of Mgbenka *et al.* (2015) who reported an average age of 50 years for farmers in Nigeria and recommended that young farmers should be encouraged in order to drive innovations in farming with the aim of promoting agricultural transformation. The findings further showed that the respondents had one form of education with the highest being primary education 46.8%. This means that farmers may easily learn and utilize web tools in their farming operations as Oladeebo and Masuku (2013) reported that education was among the critical factors in the determination of efficiency of farmers in crop production with significant impact on the managerial ability to manage farming enterprises. Similarly, the significance of education to the adoption and utilization of farming techniques had been affirmed by Gombe, (2016) who reported that education is required for farmers to take decisions to adopt and utilize farm-based technologies and lack of education has been a serious setback to making agricultural extension workers' efforts yield results in many parts of Nigeria.



Table 1: Distribution of the Respondents based on Socio-economic Characteristics

Variables	Deviation	Freq.	Percentage	Mean	Std. Dev.
Sex					
Male		197	65.9		
Female		102	34.1		
Age (years)					
<30.00		8	2.7		
30.00 - 44.00		110	36.8		
45.00 - 59.00		139	46.5	49.36	10.07
60.00+		42	14		
Years of formal schooling					
<= 6.00		86	28.8		
7.00 - 12.00		88	29.4	10.85	5.89
13.00+		125	41.8		
Highest Educational qualification					
No formal education		62	20.7		
Primary		140	46.8		
Secondary		81	27.1		
Post secondary		16	5.4		
Marital status					
Single		13	4.3		
Married		243	81.3		
Divorced		40	13.4		
Separated		3	1		
Widowed					
Your average income per annum					
<= 360000.00		129	43.1		
360001.00 - 660000.00		82	27.4		
660001.00 - 960000.00		59	19.7	760881.81	146552
960001.00+		29	9.7		
Experience (Years)					
<= 10.00		130	43.5		
11.00 - 20.00		91	30.4	15.1	7.4
21.00+		78	26.1		

Source: Field Survey, 2024

Usage of Web Tools by Farmers

Table 2 indicated that a little above average (54.5%) of the respondents never heard of facebook while only 27.8% had experienced it. Furthermore, only 36.5% of the respondents never heard of blog while just 27.4% had experienced it. In the same vein, 37.5% of the respondents never heard of Whatsapp while 38.8% had experienced it. Skype was only experienced by 8.0% of the respondents and 33.1% had experienced internet while 24.7% had experienced LinkedIn as web tools that could be used to disseminate information to farmers by the extension workers.

These are the most popular web tools among Nigerians for social and business communication.

The recent Covid 19 pandemic has also created opportunities for the use of these web tools for social and business communication and it has shown to be effective. The farmers mostly use WhatsApp (Mean = 2.94) for receiving agricultural related information from the agricultural extension workers in the study area out of the numerous identified web tools. The



poor usage of these identified web tools among farmers may not be unconnected to the poor technical capabilities on the parts of the farmers. Usually, the use of web tools may require some training and the training may be continuous based on needs. This therefore, requires that farmers or users of these web tools must undergo trainings for effective utilization. However, effective training requires resources and these may not be available based on the current structure of agricultural extension organizational financing structure in Nigeria since the withdrawal of the World Bank funding for Agricultural Development Programme where extension training and visit system was among the popular extension strategies in Nigeria.

Table 2: Distribution of Respondents based on Usage of Web Tools

Usage	Mean	Std. Dev
Facebook	1.55	0.80
Google plus	1.70	0.86
WhatsApp	2.94*	0.99
Skype	1.84	0.90
Twitter	1.72	0.98
YouTube	1.90	1.43
Zoom	1.84	0.90
Twitter	1.64	1.06
Instagram	1.57	1.16
Soundation	1.52	1.66
Telegram	1.01	1.78

Source: Field Survey, 2024.

Mean > 2.0 = High Usage

Constraints to the Use of Web Tools

Table 3 shows that almost all constraints identified to the use of web tools were severe except complexity in the use of the tools (Mean = 2.06), needs for special trainings (Mean = 1.98) and reduction in the family physical contact and relationships (Mean = 1.80). This means that constraints such as it requires special types of devices to use some of the webtools (Mean = 2.13), hackers often hack into accounts created with the web tools (Mean = 2.11) and language barriers (as the majority of the text is in English) (Mean = 2.10) recorded high level of severity to the use of web tools in information dissemination. This result is in line with the findings by Yaseen, *et al.* (2020) that, language barrier, lack of awareness, stereotype behavior and content irrelevancy are some of the major social constraints faced by farmers.



Table 3 Constraints to the Use of Web Tools by the Respondents

Constraints	Mean	Std. Dev
Poor internet coverage	1.87	0.96
lack of awareness of information sources available and untimely provision of information	1.83	0.99
Language barriers (as the majority of the text is in English)	2.10	0.92
Electricity/power failure	2.04	0.88
Complex to use	2.06	0.83
Limited knowledge and skills in webtools	2.01	0.84
High cost	2.00	0.85
It requires special types of devices to use some of the webtools	2.13	0.78
Availability of irrelevant/ undesirable content	2.08	0.78
Special training is needed to use web tools	1.98	0.82
Hackers often hack into accounts created with the Web tools	2.11	0.81
Virus attack on files can cause a lot of damage	1.88	0.86
Message delivery can be delayed at times	1.96	0.82
I sometimes encounter technical barriers and malfunctioning of devices	1.83	0.77
It is reducing family physical contact and relationship	1.80	0.78

Source: Field Survey, 2024.

Mean > 2.0 = Severe

CONCLUSION AND RECOMMENDATIONS

Agricultural stakeholders should find a way to encourage the use of web tools among farmers in the study area. Farmers must be trained on the use of web tools to assess agricultural information in order to increase agricultural productivity.

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