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KNOWLEDGE LEVEL OF NATIONAL YOUTH SERVICE CORP MEMBERS ON AGRICULTURAL MOBILE APPLICATIONS USAGE IN OYO STATE NIGERIA

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ABSTRACT

Youths and technology usually move together. The commonest medium of technology transfer is usage of smartphones. Youths cannot do without using mobile phones. Information for capacity building through agriculture are always available on mobile phones through internet. The need to marry innovation in the agricultural sector with mass unemployment among Nigeria youths becomes imperative in making the sector attractive and productive. The study therefore analyzed knowledge level of National Youth Service Corps (NYSC) members on Agricultural mobile applications usage in Oyo state Nigeria. A structured questionnaire was administrated to 252 respondents. It was discovered that WhatsApp, Facebook and Hello Tractor were the most mobile agricultural applications being aware and knowledgeable by the respondents. Poor awareness and high cost of data subscription were major constraints limiting the usage of agricultural mobile applications. Pearson Correlation analysis shows that age (r= 0.615, p = 0.001), Class of degree obtained (r=0.413, p= 0.001), working experience (r=0.511, p= 0.000) are significantly related to knowledge level of using agricultural mobile apps. The study concluded that that NYSC members had low awareness and knowledge about using agricultural mobile apps in the study area. It is recommended that agricultural related CD groups should be giving attention and priority to increase awareness and usage of agricultural mobile apps. This will ensure improvement in agricultural investments and food security in the country.

Introduction

Mobile apps can enhance agricultural productivity and connect farmers with others in an intelligent manner. Mobile communications technology has become the world's most common way of transmitting voice, data, and services, and no technology has ever spread faster. Mobile phone usage in third world countries is playing a vital role for the enhancement of farmers business towards agriculture (Selvi and Balasubramaniam, 2019). Farming communities appreciate a mobile phone as easy, fast and convenient way to communicate and get prompt answers of respective problems.

Mobile phone applications (apps) are designed to offer solutions to farmer information needs by providing weather information, crop market trends, pest and disease damage identification, and advice on pesticide and fertilizer use .When introducing mobile-based tools, focus should be given to younger, more educated farmers growing more specialized crops. Thar *et al* (2020) discovered that the main constraints to adopt agricultural apps are lack of access to smartphone and/or internet (63%) and lack of digital knowledge (20%).

Kumar and Karthikeyan (2019) stated that mobile apps are software programs designed to run on smartphones, tablets and other devices. There is a need for the design and development of a mobile application for farmers, students and agriculture experts with improvisation of content/features in both educational and advisory services. Spreading agricultural related information to farmers in the poorest communities are made easier with the help of cloud computing, integrated Information Technology systems, online education and proliferation of mobile phones. One of the benefits of such connectivity and information flow is that it helps farmers make better land management decisions. The recent advancements in Internet and Cell Phone Technology bring forth great opportunities over the costly and redundant technologies that the smallholder farmer could not have afforded. Sourcerace (2023).

In Nigeria, the mobile phone industry has played an important role in the socio-economic development of the country by creating a platform for innovation, digital inclusion and access to information exchange, finance, markets and governance to millions of citizens who have been excluded from these services (Group Special Mobile Association GSMA), 2016; Ogunniyi and Ojebuyi, 2016). The use of mobile phone applications enables extension agents to contact larger farmers with appropriate and up-to-date information in a timely manner. Generally, the study assessed knowledge level of the NYSC members on agricultural mobile applications in Oyo State. Specifically; the study described the socio economic characteristics; determined knowledge level of on agricultural mobile application usage and investigated the constraints limiting the usage of mobile application by the respondents.

METHODOLOGY

The study was carried out in Oyo State, Nigeria. The National Youth Service Corps (NYSC) scheme was created in a bid to reconstruct, reconcile and rebuild the country after the Nigerian Civil war. The unfortunate antecedents in the national history gave impetus to the establishment of the National Youth Service Corps by decree No.24 of 22nd May 1973. The purpose of the scheme is primarily to inculcate in Nigerian Youths the spirit of selfless service to the community, and to emphasize the spirit of oneness and brotherhood of all Nigerians, irrespective of cultural or social background (NYSC, 2017). Graduates of higher institutions (Degree holders and Higher National Diploma Holders) in all the states of federation, Oyo state inclusive are participating in the scheme.

Oyo state is bounded by the states of Kwara in the north, Osun in the east, Ogun in the south and by Benin Republic in the west. The state has some tropical rain forest in the south around the state capital, Ibadan. However, it is covered mostly by derived savanna that is largely the result of clearing and burning the former forest cover to provide land for cultivation. The Ogun river is the most important river in the state. Oyo state is inhabited mainly by the Yoruba people (Encyclopaedia Britannica, 2023).

The study randomly selected two Agricultural Development Programme ADP zones namely: Ogbomoso and Ibadan/Ibarapa zones from the four zones in Oyo state. Second stage involved random selection of Ogo Oluwa, Orire and Ogbomoso North local governments in Ogbomoso zone while Ido, Lagelu and Ona Ara local governments from Ibada/Ibarapa zone. A total of 252

corps members (10% of the population)were randomly selected from batches B and C from the selected local governments which constituted the sample size.
The variables that were measured in this study include both the dependent and independent variables. Dependent variable of the study is the Knowledge level of agricultural mobile application usage. It was measured by listing areas of knowledge concerning agricultural mobile application usage. The response was scored as highly knowledgeable - 3, moderately knowledgeable - 2, sparsely knowledgeable -1 and Not knowledgeable – 0.The independent variable for the study is the socio economic characteristics of the respondents and measured accordingly. The descriptive statistics tools that were used is frequency counts, percentages, and means while inferential statistical tools that were used was chi-square analysis.

Results and discussion

Socio-economic characteristics of the Respondents

Data presented in Table 1 revealed the mean age of the respondents was revealed to be 25.30 years. This is in line with NYSC objective of using young and active, and still in productive years for the scheme. Youth's population constituted the bulk of mobile phone users. Youth are capable of exploring the mobile apps for both positive and negative purposes. The results of the sex distribution of the respondents revealed that few (42.9%) of the respondents were males while (57.1%) of the respondents were females. This means that female corps members can be targeted for gender studies in the study area.
Data on table 1 also revealed that few (46.4%) of the respondents practiced Christianity while almost half (51.2%) of the respondents practiced Islam. This implies mobile apps embraced all religious. The table 1 also shows that 45.2% of the respondents were Yoruba, 19.0% of the respondents were Hausa, 33.3.% of the respondents were Igbo, while 2.4% of the respondents were other ethnic tribes. This means ethnicity is not a barrier to usage of mobile apps.
On Community Development CD group, 26.2% of the respondents were in education group, 17.9% of the respondents were in environmental and sanitation and 36.9% of the respondents were in Federal Road Safety Corps FRSC, while 19.0% of the respondents were in HIV/AIDS group. This confirmed that respondents belong to mandatory CD group as one of the pillars of the scheme.

Table 1: Distribution of the Respondents by their socio-economic Characteristics

n=252

Socio-economic Characteristics	Frequency	Percentage	Mean
Age (Years)			
≤ 20	6	2.4	
21-25	135	53.6	25.30
26-30	111	44.1	
Sex			
Male	108	42.9	
Female	144	57.1	
Ethnicity			
Yoruba	114	45.2	
Hausa	48	19.0	
Igbo	84	33.3	

Others	6	2.4
CD group		
Education	66	26.2
Environmental and sanitation	45	17.9
FRSC	93	36.9
HIV/AIDS	48	19.0

Source: Field Survey, 2023

Awareness of Agricultural Mobile Application

Table 2 revealed the distribution of respondents according to their awareness of agricultural mobile application. Majority (86.5% and 90%)of the respondents claimed awareness ofWhatsApp and Facebook respectively. The two contain agricultural groups and channels which are easily accessible. They are common mobile app accessed by Nigerian youths. Agricultural information targeting youths could be channeled towards these media of social media. Close to half (46.5%) of the respondents claimed awareness of Hello Tractor. This means that considerable number of corps members have had of it or visited their site. The rest agricultural mobile apps under this study were sparsely known to the respondents hence they had little awareness about them. There should be increased sensitization on these apps so that society can tap from benefits accrued to them.

Table 2: Distribution of Respondents based on Agricultural Mobile Apps awareness

Agricultural Mobile Apps Awareness*	Frequency	Percentage
Hello Tractor	117	46.4
AgrowData	57	22.6
Probity farms	88	34.9
Thriveagric	93	36.9
WhatsApp	218	86.5
Facebook	227	90.0
Compare-the-market	79	31.3
Farmcrowdy	114	45.2
Releaf.NG	16	6.3

Source: Field Survey, 2023
*** Multiple response**

Level of Knowledge of Agricultural Mobile Application

Table 3 revealed the distribution of respondents according to the level of knowledge of agricultural mobile application. Agricultural mobile application helps to bridge the gaps between those involved in agriculture and research institute ranked first(1^{st}) with Weighted Mean Score (WMS) of (2.45). This implies the use of agricultural mobile application is considered critical in agricultural development because it is a tool for communication between those involved in agriculture and research institute. The introduction of smartphone provided a visible solution to this challenge. Smartphone serve as tools for sharing and discussing information among people. . The statement "helping people to invest in any farming initiative of one's choice through sponsoring" ranked tenth (10^{th}) with WMS of (1.33). It could be deduced that respondents had little knowledge about investment in agriculture.

Table 3: Distribution of Respondents based on the Level of knowledge of Agricultural mobile application

Knowledge level*	WMS	Rank	Decision
Agricultural Mobile Application help to bridge the gap between those involved in agriculture and research institute	2.45	1st	High
Provision of access to financial services, productivity enhancing technologies	2.17	3rd	High
Helping people involved in agriculture to get trusted buyers for their agricultural products	2.19	2nd	High
Provision of modern "Uber style" way to rent tractor and other agricultural tools	1.90	9th	Low
Helping people involved in agriculture to get subsidized inputs (seed and fertilizers vouchers) from retail shops	1.99	7th	Low
Agricultural Mobile Application can be used to track, forecast and monitor price trends of agricultural commodities	2.05	5th	High
Helping to get social networking	2.01	6th	Low
Monitoring weather conditions	1.98	8th	Low
Accessing global market	2.14	4th	High
Helping people to invest in any farming initiative of one's choice through sponsoring	1.33	10th	Low
Grand mean	2.02		

Source: Field Survey, 2023
*** Multiple response**

Constraints on the use of Agricultural Mobile Application

Table 4 indicate the constraints limiting the use of agricultural mobile apps. Majority (75.0%) claimed poor awareness, This implies that respondents were not really aware about the use of agricultural mobile apps.Also, 53.6%claimed high cost of data subscription. This implies that some agricultural mobile app sites may be consuming data.

Table 4: Distribution of the respondents based on constraints limiting the use of agricultural mobile application

Constraints*	Very serious	Serious	Not serious	Not a constraint
Poor awareness of agricultural mobile application	189(75.0)	54(21.4)	3(1.2)	6(2.4)
Poor electricity supply for phone charging	99(39.3)	99(39.3)	45(17.9)	15(3.6)
High cost of data for subscription	135(53.6)	84(33.3)	27(10.7)	6(2.4)
Poor network for mobile services	99(39.3)	84(33.3)	48(19.0)	21(8.3)
Complexity of agricultural mobile application	105(41.7)	102(40.5)	36(14.3)	21(3.6)

Source: Field Survey,2023
*** Multiple response**

Pearson correlation analysis between selected socioeconomic characteristics of respondents and knowledge level of using agricultural mobile apps.

Table5 shows that age (r= 0.615, p = 0.001), Class of degree obtained (r=0.413, p= 0.001), working experience (r=0.511, p= 0.000) are significantly related to knowledge level of using agricultural mobile apps. This means that increase in age could influence knowledge level of using agricultural apps. The more mature a person is, the more he/she likely seeks information to utilize their potentials on mobile apps. Also, class of degree obtained is related to academic performance. The better the class of degree obtained, the more a person look for useful knowledge on mobile apps. In addition, high working experience could influence exposure of respondents to seek better knowledge on mobile apps.

Table5:Pearson correlation analysis between selected socioeconomic characteristics of respondents and knowledge level of using agricultural mobile apps.

Socio-economic characteristics	r	P- value	Remark
Age	0.615	0.001	Significant
Class of degree obtained	0.413	0.001	Significant
Working experience	0.511	0.000	Significant

Source: Computed data, 2023

Conclusion and Recommendations

Based on the findings of this study, it can be concluded that NYSC members had low awareness and knowledge about using agricultural mobile apps in the study area. It is recommended that agricultural related CD groups among NYSC members should be giving attention and priority to increase awareness of agricultural mobile apps. Also, Nigerian graduates especially agricultural graduiates are encouraged to broaden their knowledge through utilization of agricultural mobile apps. This will ensure improvement in agricultural investments and food security in the country.

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