TIMBOU-AFRICA PUBLICATION INTERNATIONAL JOURNAL AUGUST, 2024 EDITIONS.

INTERNATIONAL JOURNAL OF EDUCATIONAL RESEARCH AND LIBRARY SCIENCE
VOL. 5 NO. 8 E-ISSN 3026-8478 P-ISSN 3027-186X

PERCEPTION OF YOUTHS TOWARD ELECTRONIC AGRICULTURAL EXTENSION AMONG TERTIARY INSTITUTION STUDENTS IN MAIDUGURI METROPOLIS, BORNO STATE, NIGERIA

[1]BURABE, B. I., [1]SHEHU, H., [2]YUSUF, H. A., [3]ORJI, P. O. AND [4]DIKWAMA, A. B.

[1]Department of Agricultural Extension Services, University of Maiduguri, Nigeria. [2]Department of Agricultural Extension and Rural Development, Ahmadu Bello University Zaria. [3]National Agricultural Extension and Research Liaison Services, Ahmadu Bello University, Zaria. [4]Department of Agricultural Extension and Management, Samaru College of Agriculture, Division of Agricultural Colleges, Ahmadu Bello University Zaria, Kaduna State, Nigeria.

Corresponding Author: bburabe@unimaid.edu.ng

ABSTRACT

The study was conducted to assess the perception of youths' towards electronic agricultural extension, establishing the socio-economic characteristics of the respondents and their perception towards electronic agricultural extension as well as identifying electronic agricultural extension constraints as perceived by the youths in Maiduguri Metropolis, Borno State, Nigeria. Two stage sampling procedure was

INTRODUCTION

Agricultural extension service delivery is rapidly changing with the current global advancements in Information and Communication Technology (IC1). This advancement in ICT is ushering in new opportunities for African farmers to improve their knowledge and livelihoods, with help of the application of ICT (computer and Internet) in agricultural extension programs, and delivery of agricultural information to users, and on the internet network has led to the emergence of the electronic agricultural extension (Nwabugwu, *et al*. 2019; Asongu, 2015).

E-extension (E-AE) is the delivery of extension service using web tools, which allow online sharing, collaboration, and networking. Examples of these web tools include websites, networking software, online sharing tools such as emails, blogs,

used to select 120 respondents for this study. Data used in this study were obtained through both primary and secondary sources. The analytical tool used for the study were descriptive (percentage, rank, mean) and inferential (regression analysis) statistics. Result reveal that majority (76.7%) of the respondent were male. Most (56.7%) were in Pre-ND level, 50.0% of the respondents' parents were civil servants. Respondents' Perception towards electronic agricultural extension indicated that 14.7% of the respondents perceived E-AE to be more of social status, while 35.9% of the respondents seen as encouraging the use of ICTs and few (3.4%) of the respondents perceived it as a career development. Inadequate power supply was ranked the major constraint to the E-AE. Regression analysis show that age (6.733), marital status (4.957), E-AE experience (2.235) and level of education (3.412) were significant to perception of the respondents towards electronic agricultural extension. Based on the findings of the study it is recommended that; government should educate, create awareness and sensitize the youths on the need to adopt agriculture as a career through electronic agricultural extension to impact on their future life.

Keywords: Youths, Perception, E-extension, Tertiary Institution and Constraint.

and surveys, video conferencing, instant messaging, community-based telecenters, and mobile phones (Ridha, *et al*, 2017). E-extension could also be termed as a network of institutions that provides a more efficient alternative to the traditional extension system of agriculture. E-extension as a modern mode of communication that can be used to improve the effectiveness and efficiency of extension services. It is a collaboratively built internet-based environment to enhance face-to-face and paper-based transactions, which can also be used as an electronic tool delivering sound and the latest information on agriculture (Renwick, 2019).

Young people are very important resource required for the development of every nation especially for sustainability in agricultural sector. However, with low participation of youth in agricultural sector, the future of the industry is questionable. Youths are distancing themselves away from farming in the face of government making efforts to attract them into the sector, creating employment while producing food for ever growing populations. (Douglas, et al, 2017).

According to Widiyanti *et al*, (2018), Youths are part of a farming family, but many rural parents in developing countries do not want their children to farm. Without parental support, it is not easy for young people to get involved in family farming. Furthermore, youth act as catalysts in agricultural development for most developing nations, also there

is recognition that for Africa to achieve food security. Therefore, youth must be regarded as critical agricultural players who need and deserve special attention. They are energetic, passionate and talented and this is thought that if the attributes are applied, they can catalyse agricultural development and solve problems facing agricultural world today. Young people play a very important and active role in all family farms contributing to the overall output (Ridha, *et al*, 2011).

Purpose and Objectives of the Study

A study on the young generations' perception of electronic agricultural extension services is needed to analyze whether the young generations have a positive or negative view toward modem agricultural information dissemination. This perception is assumed to be a determinant of the young generations' willingness to be agricultural extension agents. Therefore, the study was set to assess the perception of youths' toward electronic agricultural extension among tertiary institution students in Maiduguri Metropolis, Borno State, Nigeria. The specific objective were to: identity the socio-economic characteristics of the youth, determine the perception of youth towards electronic agricultural extension, analyze the relationship between the socio-economic characteristics of the youth and their perception towards electronic agricultural extension and identify the electronic agricultural extension constraints as perceived by the youths in the study area.

Methodology

The study was conducted in Maiduguri Metropolis, Bormo State Nigeria. The area lies between latitudes 11° 54' and 11°45^{l} N and longitudes 13° 08^{l} and 13° 14^{l} E (GEONETcast Unimaid, 2019). It has a projected population of 942,669 people in 2020 from the 2006 population of 732,696 people at an annual growth rate of 3.2 percent (NPC, 2006). The climate is hot with temperatures ranging between 35°C and 40°C for a greater part of the year. It has a short rainfall period or three months that lasts from July to September with an average of 647mm per annum (Lake Chad Research Institute, 2017).

Both primary data and secondary information were used for the study. Primary data were collected by means of inteview schedules and administration of questionnaires to the respondents by trained enumerators. Secondary information was obtained from text books, journals, internet, conference proceedings, relevant publications, related project reports and thesis. Two-stage random sampling procedure was used in drawing the sample for this study. The first stage involved random selection of two (2) tertiary institution (Muhammet lawan collage of agricultural Maiduguri and Ramat Polytechnic Maiduguri) in the study area. The second stage involved random selection of 120 agricultural Students of different levels. Data for this study was analyzed using descriptive and inferential statistics. Descriptive statistics that were used include percentage, mean, chart and ranks to describe the socio-economies characteristics of the respondents,

youths perception toward electronic agricultural extension and constraints to face by the youths toward electronic agricultural extension in the study area, Inferential statistics used was Ordinary Least Squares (OLS) multiple regression in order to determine the relationship between the socio-economics characteristics' of respondents and their perception toward electronic agricultural extension. The model is explicitly expressed as:

$Yi = \beta 0+\beta 1X1 +\beta 2 X_2+\beta 3X_3 +\beta 4 X_4 +\beta 5 X_5+\beta 6 X_6 +e$…… (i)

Where: Yi= perception of the youths

β0= Intercept

β1-β7- Estimated coefficients

X_1 =Age (years)

X_2 =Sex (dummy 1 if male and 0 otherwise)

X_3 =Marital status

X_4 =E-extension experience (years))

X_5 = Level of education (years)

X_6 = Parent's occupation

e= error term

Result and Discussion

TABLE 1 Socio-economics characteristics of Sampled Students N=120

Socio-economics characteristics	Frequency	percentage
Age (in years)		
Below 20	10	8.3
21-30	35	29.2
31-40	48	40.0
Above 40	27	22.5
Sex		
Male	92	76.7
Female	28	3.3
Marital status		
Married	20	16.7
Single	89	74.2
Divorced	7	5.8
Widowed	4	3.3
E- Extension experience		
Less than 4	21	17.5
4-8	31	25.8
9-12	40	33.3
12 and above	20	16.7
Don't have any	8	6.7

Level of education				
PND		68		56.7
ND I		24		20.0
ND II		12		10.0
HND		16		13.4
Parent's Occupation				
Civil servant		60		50.0
Farmer	17		14.2	
Business		27		22.5
Others		16		13.3

Source: Field survey 2018

Table 1 shows the socio-economics characteristics of the respondents' which have always occupied a central position in most research studies carried out by social scientists (Adotu *et al*., 2010). The variables reviewed under the socio economics characteristics of youths are age, sex, marital status, E-extension experience, level of education and parent's Occupation The results revealed that only 8.3% of the respondents fall within the age of 20 years and below, 29.2% of the respondents were within the age of 21-30 years, 40.0% fall within the age bracket of 31-40 years, 22.5% have fall within the age of 41 years and above. This indicates that most of respondents were adults and fall within the economically active age group and such group are most likely active in e-extension practices and tends to develop more interest in electronic extension for information delivery. These results also similar to that of Romanus, *et al*, (2021) which shows that majority (69 %) of the total sample are between the ages 15-35 years and are classified as youth. The descriptive analysis of the socio economies characteristics of the respondents in the study area presented in Table 1 indicated that youths studying agriculture was dominated by male (76.7%) and remaining 23.3% were female. This is in line with the study of Yusuf, *et al*, (2019) which shows that the majority (56.47%) of the students were male, with a mean age of 23 years, the modal (92.09%) age group being 20-25 years. The study revealed that 74.2% of the respondents were single, 16.7% were married and 5.8% were divorced while 3.3% were widowed. Therefore, marital status has an influence on the electronic agricultural extension among the youths because married people have more responsibilities and hence take whatever they do with higher level of seriousness. That means, they will be willing to seek information using electronic means about the modern agriculture in order to improve their standard of living with their family. This is similar to the report of Romanus *et al,* (2021) which observed that a more significant percentage of respondents (65.34%) are married. This means that married youth are more likely to participate intensively in agriculture than unmarried ones. This could be because the youth who are married have more family obligations than those who are not married.

Table 1 shows how long respondents had been experienced in the electronic agricultural extension. The findings indicates that half (50.0%) of the respondents had 9-12 years and above in experience, 43.3% had experience to 4-8 years, while few (3.3%) of the respondents do not have any experience of electronic agricultural extension. It is clearly shows that most of the respondents had a reasonable numbers of years in using electronic agricultural extension experience. This is also enable them to be abreast with electronic agricultural extension. The finding on educational level revealed that most of the respondents (56.7%) were in Pre-ND, 20.0% were in National Diploma one (ND1), while 10.07% of the respondents were in National Diploma two (ND II) and the remaining 13.4 % of the respondents were in Higher National Diploma (HND). Therefore, education level of the respondents could motivate them to develop interest in electronic agricultural extension, there by assess information through the use of some modern electronic media like mobile phone. This also contradict with the study of Lucy, (2017), which observed that 60.2% had secondary or college (certificate or diploma) education while the remaining 39.8%, while 7.3% had no formal education, 20.4% had primary education and only 12.1% had university education. About the youth's parent occupation the result indicated that half (50.0%) of the respondents parents were Civil servants, followed by businessmen/women which had 225% of the respondents, while 14.2% of the respondents indicated their parents were farmers and the remaining 13.3% indicated that their parents engage in other occupation like politic, blacksmithing, contractors and many more.

Perception of the Respondents towards Electronic Agricultural Extension

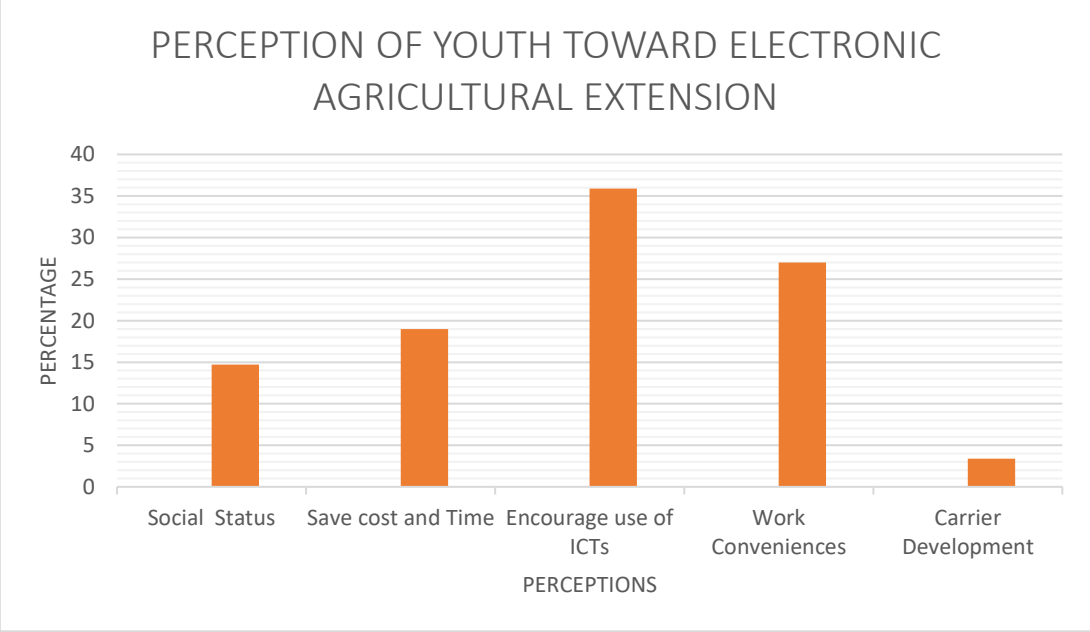

Fig 1.

Figure 1 shows the Perception of the respondents towards electronic agricultural extension which indicated that 14.7% of the respondents perceived E-AE to be more of social status, 19.0% of the respondents seen as save cost and time in dissemination of agricultural information, while 35.9% of the respondents as encouraging use of lCTs, also 27.0% of the respondents perceived as work convenience and few (3.4%) of the respondents perceived as a carrier development. Widiyanti *et al,* (2018) observed that young generation's perception of agricultural Work is a form of positive (good) or negative (bad) assessment on working in the agricultural sector. The results show that most of the young generations (55.83%) have a fairly good perception of income in the agricultural sector.

Table 2. The electronic agricultural extension constraints as perceived by the youths

Problems Encountered	Frequency*	Percentage (%)	Rank
Power Supply	65	21.0	1st
Poor Network	34	11.2	4th
Lack of capital	25	8.1	6th
Cost of Electronic media	38	12.3	2nd
Unaware of delivery package	12	3.9	10th
Underutilizing of smart phone	35	11.4	3rd
Ownership Problem	18	5.8	8th
Language Related Problem	26	8.4	7th
SMS Related Problem	8	2.6	11th
Socio-cultural Problem	33	10.6	5th
Lack of resources	15	4.8	9th
Total	**310**	**100.0**	

Source: Field survey Data 2018

***Multiple response exists**

The result on Table 2. Shows that inadequate power supply is the major constraint that contribute to perceive the E-AE by the respondents and this could also affect their access to electronic media and information dissemination, as most electronic gadgets require source of power to operate. High cost of some electronic media was another constraint recorded which ranked as second (2nd) problem. However, low income of the students could not allow them to afford some of the electronic media sources. Underutilizing of smart phone is ranked as 3rd problems. The constraint ranked fourth was Poor Network. Other problems include Lack of capital, Language Related Problem, ownership problem, Lack of resources and Unaware of delivery package ranked as 6th, 7th, 8th, 9th and 10th respectively. It also necessarily that there should be provision of digital electronic gadgets

for the students of higher institutions even as loan to meet with the recent development in the disseminating of agricultural information.

Table 3. Relationship between the Socio-economic Characteristics and the perception of youths' toward Electronic agricultural extension

Variables	Coefficients	Std. Error	t-value
(Constant)	0.168	0.055	3.069**
Age (X_1)	0.511	0.076	6.733**
Sex(X_2)	0.024	0.029	0.822^{NS}
Marital status (X_3)	0.210	0.042	4.957**
E-extension experience (X_4)	0.118	0.053	2.235**
Level of education (X_5) 0.090	0.026	3.412***	
Parent's occupation (X_6)	-0.050	0.029	-1.699^{NS}
R^2	0.947		
Adjusted R^2	0.945		

Source: Field survey Data 2018

*=Significant at 1%

***-Significant at 5%

NS= Not Significant

The Influence of Socio-economies Characteristics on the perception of youths' toward electronic agricultural extension are presented in Table 3. The statistical significance of the estimated regression coefficient in the dependent variable was explained by various independent variables included in the model. The coefficient of determination (R^2) was 0.947. This means that all the selected independent variables included in regression analysis explained 94.7% of the variation of the perception in the E-AE by the respondents. This therefore, indicated that the independent variables (age, marital status, E-AE experience and level of education) were significant at 5% and good determinants of the perception in E-AE by the respondents. This is in line with the report of Renwick, (2019) which observed that a significant relationship at the 0.05 level between age and overall extension workers' attitudes towards E-extension (p = 0.028; rs= -0.180), The negative value indicates that, as the age of the respondents increases, their perception towards E-extension becomes negative, conversely indicating a positive perception from young respondents. Young people can adopt new technologies and techniques more swiftly and show more energetic behavior Overcome challenges, as compared with older adults.

Conclusion and Recommendation

The findings of these study indicated a good perception on electronic agricultural extension, in terms of saving cost and time in dissemination of agricultural information, encouraging use of ICTs and work convenience. However, to encourage more positive

perceptions, some efforts are needed by young generations to love the agricultural sector and finally to be interested in electronic agricultural extension for disseminating agricultural information and ideas. Some of those efforts can be accomplished by empowering the Young generations to become young farmers entrepreneur through agribusiness optimization efforts, appreciating the role of youth in agricultural development and approaching the young generation through creating electronic media platforms such as face book, whatsApps, telegrams or organizing clubs and association. Also media digitization era expected to be efficient and effective to restore the optimism and interest in the agricultural sector among young generations. Government should also educate, create awareness and sensitization of the students on the need to adopt agriculture as a career through electronic agricultural extension

REFERENCES

Adofu, I., Antai, E. and Alabi, O. (2010). Informal Savings Mobilization and Investment: A Case Study of Rotating Savings and Credit Associations (ROSCA) in Kogi state, Nigeria. *Continental journal of social sciences.* 3: 7-17

Adedeji O. A. (2017). An E-Readiness and Attitude Assessment of Agricultural Science teachers to ICT in teaching and learning. Available online at: https://www.scribd.com/document AN-E-READINESS-AND-ATTITUDEAssessment-of-Agricultural-Science-Teachers-to-ICT-In-Teaching-and-Learning. Retrieved on 28/08/2020

Douglas, K., Singh, A. S.and Zvenyika K. R. (2017). Perceptions of Swaziland's youth towards farming: A case of manzini region. *Forestry Research and Engineering: International Journal*. 1(3):83-89.

Gichamba, A., Wagacha, P. W., and Ochieng, D.O. (2017). An Assessment of e-Extension platforms in Kenya. *International Journal of Innovative Studies in Sciences and Engineering Technology* (JISSET) 3(7): 36-40

Library of Congress (2016). Electronic Supplementary Guidelines. Library of Congress Collection Policy Statements. https://www.loc.gov/acq/devpol/electronicresourses assessed on 12/12/21

Lucy, K. N. (2017).Youth in Agriculture; Perceptions and Challenges for Enhanced Participation in kajiado North Sub-County, Kenya. *Greener Journal of Agricultural Sciences*, 7 (8) 203-20

Nwabugwu, T. S., Nwobodo, C. E., and Okoro, J. C. (2019) Awareness and Use of E-Resources among Public Extension Personnel in Anambra State, Nigeria. *Journal of Agricultural Extension* 23 (1) 161-170

Raksha, I., Rao, S., Meera, S. N. and Kumar, V. (2015). E-Readiness in Agricultural Extension system. *Indian Journal of Extension Education.* 15 (2): 77- 81

Renwick, S. (2019). Potential for Use of Information Communication Technologies (ICT) in Agricultural Extension. Available online: http://uwispace.sta.uwi.edu/dspace/bitstream (accessed on 10 July 2019).

Widiyanti, E., Setyowati, N. and Ardianto D. T. (2018). Young generation's perception on the agricultural sector. *International Conference on Climate Change IOP Conf. Series*: Earth and Environmental Science 200 (2018) 012060)1-4

Ridha, R. N., Burhanuddin and Wahyu, B. P. (2017). Entrepreneurship intention in agricultural Sector of young generation in Indonesia, *Asia Pacific Journal of Innovation and Entrepreneurship* 1:1 76-89

Romanus, O., Bola, A. A., Alexander, N. W., Paul, M. D. N., Djana, M., Tahirou, A., Victor, M. and Zoumana, B. (2021). Assessing the Effect of Youth Participation in Agriculture on Poverty Reduction in Nigeria. A Contributed Paper Prepared for Oral Presentation at the *31st International Conference of Agricultural Economist 17-21* August, *2021 New Delhi, India*. 1-33

Yusuf, S. F. G., Popoola, O. O. and Olutegbe, N. S. (2019). Perceptions of Undergraduate Students to Practical Agriculture Experience at the University of Fort Hare, South Africa *Journal of Agricultural Extension,* 23 (1) 210-222