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INFLUENCE OF CHARACTERISTICS AND PERCEPTION ON USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTS) BY SELECTED EXTENSION AGENTS IN NORTHERN NIGERIA

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ABSTRACT: *This paper presents the results of investigation into the influence of the perception of Village Extension Agents (VEAs)' on usage of Information and Communication Technologies (ICTs) in three selected States Agricultural Development Projects (ADPs) of Nigeria. Two hundred and four (204) VEAs were sampled as respondents for the study. With aid of Statistical Package for Social Science (SPSS) the data were analyzed and the descriptive statistics were used to present the results. Results of Multiple Linear Regression analysis revealed that usage of ICT was statistically and positively significant on: income (0.039*), sex (0.007**), accessibility to ICT (0.000***) and perception on custom/tradition (0.021*) and perception on availability of infrastructural facilities (0.047*). These variables, by implication, are factors that influenced the usage of ICT by the VEAs in the study areas.*
Key words: Perception, agriculture, extension, extension agents, technologies and communication

INTRODUCTION

The importance of communication in agricultural extension is of tremendous value. Communicating, especially extension and agricultural information and group levels has its importance and advantages. Communicating, in agricultural terms, entails passing of related agricultural information to and between the stake-holders including farmers, extension agents and agricultural scientists. However, agricultural extension communication, in the context of development, is specifically targeted toward improving the livelihoods of the participants (the farmers and extension staff) through the process of exchanging agricultural information between themselves and others (Sennuga and Fadiji, 2020). Hence, the adoption and/or non-adoption of recommended technologies and packages could be attributed to the effectiveness of the communication methods, channels and techniques. The limitations and constraints found in the traditional and formal communication channels have made ICT application more relevant. Consequently, because of its wide application in scope and coverage, a more satisfactory and useful mechanism for innovation in communication in agricultural context is desirable (Omotayo, 2015). This has thus brought about the introduction of ICT as an innovation in agricultural development.

For instance, Leeuwis and van den Ban (2014) documented an extensive work on communication for innovation looking at the changing perspectives and the organizational and inter-organizational issues involved. Specific to the media methods, and process management, the work outlined issues related to farm management, pre-defined issues, exploration and training. Their work went further to examine methods related to information provision with discussion on written and computer-based search and access facilities as well as information-needs assessment.

Rogers and Shoemaker (2008) defined communication as the process by which messages are transferred from a source to a receiver. The authors observed that communication is part of social change process.

Contreras (2007) examined the impact of communication on modernity thus generating a thesis that communication has not played as important role in rural development in developing countries because of a series of structural constraints under which it has operated and, of course, will probably continue to operate. The onus of responsibility is squarely placed on the shoulders of the engineers and scientists to work toward ensuring broad application of it in all ramifications and for all sectors of human economy and development; government, education, agriculture, business, health, communication, transportation, services, aviation, art, tourism, banking and commerce – all of which are linked directly or indirectly to the rural areas and their activities.

According to Van dan Ban and Hawkins (2010), diffusion process (i.e. the stages between when the farmer first hears about favourable innovations and the time he adopts them), and it takes the following stages namely: (1) Awareness (2) Interest or information (3) Evaluation or application (4) Trial, and (5) Adoption. Otolo (2018) found out that the extension agents constituted (38.42%) as their source of information on innovations and development in agricultural sector, followed by the media (34.21%). In addition, the findings further showed 88.9% positive effect of Communication on rural farms to the rural farmers.
Kosakowski (2019), available at: www.ericdigests.org/ accessed in February, 2020) noted the following being the factors observed in successful technology-rich schools:

- ✓ Evidence of a detailed technology plan.
- ✓ Teacher training and continuing education.
- ✓ Support from administration.
- ✓ Support from the community e.g. Parents, businesses, and community members
- ✓ Support from government.
- ✓ Adequate funding and appropriate policy making can help to assure that technology is accessible to all schools on an equal basis.

In summary, he concluded that these factors suggest that for technology to succeed, like any educational tool, it cannot exist in isolation, but must be made an integral part of the entire instructional process. The internet, (technically known as the World Wide Web (www), is another technology which provides immense mass usage. In this direction, Mojaye (2006) examined the role of the internet in some selected Nigerian newspapers and their patterns and nature of its utilization in terms of: information posted on their websites, number of internet-connected computers and frequency of sourcing stories from the internet. Other areas they examined were; reporters with e-mails and those that file-in stories through it, and above all, the benefits accruable from using internet facilities.

However, some of the factors identified being responsible for deficient communication in agriculture include: lack of adequate trained agents, ignorance of the participants/parties involved, cultural impediments, organizational problems, deficient communication strategies and lack of required input and resources. Others include; language barriers, indifference, differing perspectives, illiteracy, prejudices, etc (Umar, 2005, Sennuga *et al.*, 2020).There are numerous studies in literature on perception study. Perception has been variously defined.

In Psychology, it is: (a) Recognition and interpretation of sensory stimulus based chiefly on memory, (b) The neurological process by which recognition and interpretation are effected, and
It is also defined as (a) Insight, intuition or knowledge gained by perceiving, and (b) The capacity for such insight.

Wikipedia (2019b), (accessed online in March, 2020 at: http://en.wikipedia.com) puts Self-perception theory (SPT) as an account of attitude change developed by psychologist Daryl Bem. The theory posits that people develop their attitudes by observation and making conclusion on the causative attitudes. Also, the theory suggests that a person induces attitudes without accessing internal cognition and mood condition. Little (2016)'s literary contribution to the theory of perception delved into understanding perception, the fundamental basis of perception; the concept of immediate perception and; the psychological aspects of perception in universal context. He however, attempted to build a bridge of connection between objects and events in the understanding perception of reality. Hoffman (2018) and Hoffman (2019), in another dimension, argued that our perceptions constitute a *specie-specific user interface* that guides behaviour in a *niche*". He drew his assertion on Interface Theory of Perception (ITP), stressing a kind of human perception based on framework motivated by evolution, to guide research in object categorization. He stated that a goal of perception is to estimate true properties of the world.

In a similar work, according to Dilworth (2015), writing on the Theory of Perception, stated that "a basic fact that all theories of perception must account for is that perception enables us to acquire information about worldly objects and their properties". His work on The Reflexive Theory of Perception, argued for a broadly behavioural theory of perception, stated that perception of an object or property X by an organism Z consists in Z being caused by X to acquire some disposition D toward X itself. Hence, this explains perception intentionally and correct versus incorrect, successful versus unsuccessful, perception in a plausible evolutionary framework. In application of perception in studies, it has been found to be useful in making findings and drawing cogent conclusions, including areas such as ICT.

Fadij, *et al*. (2010) examined the role of the extension agents in Kaduna State, Nigeria in terms of role perception, role performance, and role consensus. Specific to role perception, he examined congruency between role perception and role performance that is, whether the perceived or not perceived roles were performed or not performed. Adesope and Matthew-Njoku (2015) reported that 85% of the respondents had access to computers while 15% did not have access. The study highlighted perception statements showing agreed mean of the respondents as follows:

- Information technology (IT) makes information from other parts of the world easily accessible (3.34)
- Information technology is a welcome idea (3.57)
- There are still more benefits related to agriculture yet untapped from IT (3.15)
- The agriculture industry has benefited positively from information technology (3.15)
- IT makes linkages functions of agricultural research more reliable (3.44)
- The awareness of about improved agricultural technologies will increase with the coming of IT (3.55)
- Communication of agricultural ideas will continue to be worthy through Utilization of IT (3.76).

Possession of requisite skills and knowledge to use a technology has been found to be factors related to individual experience of and attitudes towards using technologies (Osagie, 2008, Sennuga and Fadiji, 2020). A study by Cole (2008) found evidence of a variety of attitudes toward Information Technology by library users, and even though their way of display of positive attitude toward the use of computers, lack of regular access to ICT facilities, will not make them get up-to-date information on development in technology. Leeuwis and van den Ban (2014) attempted to establish a link between perception, knowledge and information as they declared that Perceptions or meanings inform us about a particular state of affairs, and thus constitute information. They asserted that, contrary to notions like perception and meaning, the term information is, in everyday language, often associated with knowledge that has been captured and

stored in a physical (or nowadays electronic) form such as a book, leaflet, file, newspaper, picture, sound, website, etc.

Similarly, Yahaya *et al.,* (2006) discovered that electronic media are effective in all aspects of rural life. The study further agreed that there is a significant relationship between attitude of rural dwellers and their perception of effectiveness of electronic media. The role of perception in a study on agricultural science teachers in Young Farmers' Club Programme has been reported by Ajayi (2008). In a study that examined relationship between personal characteristics and access to information, Adekoya and Ajayi (2016) found education enhances individual's access to information. Atajeromavwo *et al.,* (2010) on the practitioners' perceptions on the relevance of agricultural and rural development activities and ICT, found out that 91% of the respondents agreed that ICTs can be used easily to connect via network researchers for easy access to information, 91% agreed that ICTs can facilitate international exchange of ideas for agricultural development and 86% agreed that it can facilitate research-extension institutions linkage for effective agricultural information dissemination. Sofowora (2010) found out that the older adults had indicated some perceived negative effects of GSM phones usage.

Information and Communication Technologies (ICTs or ICT) is a relatively new means of disseminating information among people worldwide. ICTs have been defined as and it comprises of processing and transmission of information by electronic means such as radio, television, telephones (fixed and mobile), computers, Pocket PCs and the internet (CTA, 2003). Generally, the various available ICT components/devices include the following: Radio, Television, Multi-media systems (VCDs, DVDs, VHS, over-head projectors), Telephones (Land-lines and Mobile phones), Internet (E-mailing, Web-browsing, telephoning), Computers and Personal Digital Assistants (PDAs).Others include: Media Players (MP 2, 3 & 4), Geographic Information System (GIS), Geographic Position System (GPS), Cable Satellite, online Newspapers, e-Books, journals, tablet systems and smart phones, ipods and ipads.

This involves the use of the above-listed media to exchange information with the stakeholders such as: farmers, extension agents, researchers, administrators, policy-planners, marketers, cooperatives, agro-processors, Non-Governmental organizations (NGOs). The world today is still confronted with the problems of illiteracy and ignorance coupled with inadequate flow of information. The importance of information on research and development cannot be over-emphasized. Indeed, the usefulness of information and credibility of information source have been found to be positively and significantly related to adoption of improved cassava production technologies (Matthews-Njoku, 2003). Oninowu (2009) built an historical background around the use of communication support facilitates by rural and agricultural development organizations to promote the uptake of improved technologies or messages within farming communities. This was exemplified in the Nigerian situation with State ADP radio programme producers given trainings in 1990-1991 and 1993 by their Federal Agricultural Coordinating Unit (FACU) – although now defunct.

Wikipedia (2010a) stated that ICT, apart from being 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 of information relatively rapidly; and achieve greater interactivity in communicating, evaluating, producing and sharing useful information and knowledge.
The following are objectives of this study;
a). To identify the Village Extension Agents (VEAs)' Characteristics

b). To identify some perceptions of Village Extension Agents
c). To identify those perceptions of Village Extension Agents that influence ICT Usage.
d). To make appropriate recommendations on the usage of ICT by Village Extension Agents

MATERIALS AND METHODS

A structured questionnaire was designed to adequately elicit information needed for the study. A multi-stage sampling technique was used for the study. The first stage was identification of the study area and the population. The population for research was the VEAs in the North-West Geopolitical Zone of Nigeria comprising seven States, namely: Kaduna, Kano, Katsina, Kebbi, Jigawa, Sokoto and Zamfara states). The second stage involved the use of purposive sampling technique. Thus, Out of seven (7) states in the North-West Geopolitical Zone, three States' ADPs (Kaduna, Kano and Kebbi States) were purposively chosen for this study taking into cognizance the need to give geographical representation and coverage of the Zone (i.e. three states chosen out of seven states constituted 42%).
The third stage involved the use of random sampling technique. From each State ADP, a list of the VEAs was obtained for the study; out of the VEAs' population (1,018) in the zone, 20% (i.e. 204 VEAs) was randomly selected as respondents. The breakdown of respondents was 111, 48 and 45 from Kano, Kaduna and Kebbi States' ADPs respectively (Table 1).

Table 1: The population and sample sizes of the VEAs.

S/No	State ADPs	Number of the VEAs (Sample frame)	Sample size (20%)
1	Kebbi State ADP (KARDA)	226	45
2	Kaduna State ADP (KADP)	241	48
3	Kano State ADP (KNARDA)	551	111
	Total	**1018**	**204**

RESULTS AND DICUSSION

Socio-economic characteristics of the Village Extension Agents (VEAs)

Majority (80%) of the respondents were between 40 - 49 years old (table 2). An overwhelming number (80%) of the extension agents were males, about 80% were married and 83% were from household size of 10 or less members. Most (44%) of them had HND, followed by those(34%) who had OND – indicating that they are literate and by virtue of their education, could appreciate ICT's relevance and usefulness.
Specific to their working experience, 51% of them had 19 years and above, 12% had 15-18 years working experience – thus indicating they were well experienced in their jobs and this gave them advantage of appreciating ICT's role; majority of VEAs (32%) had extension visits of 1-5 per month which shows that they were actively involved in carrying out their function of making contacts with farmers.

On social participation, 38% of the respondents belonged to only 1 group, and on their linguistic competence, majority (63%) spoke 2 languages frequently – thus indicating their high linguistic competence. On their income, most (48%) were in the income range (₦301,000.00 – 400,999.00). Their income level shows that they were low earners civil servants which may not make them comfortable at work. The awareness level on ICT components of the respondents show that the largest percentage (14%) were aware of all the selected 14 ICT components, thereby giving the impression that their awareness level

was generally high. Specific to their Accessibility to ICT, results show that the largest percentage of them (45%) had access to about 5-8 ICT components.

Table 2: Distribution of respondents based on their socio-economic characteristics (n=204)

Socio-economic characteristics of the respondents	Frequency	Percentage (%)	Mean
Age (years)			
20-29	21	10.3	
30-39	40	19.6	
40-49	120	58.8	40.83
50-59	23	11.3	
Gender (Sex)			
Male	182	80.2	1.11
Female	22	9.7	
Household size			
1-10	169	82.9	
11-20	32	15.7	6.76
21-40	3	1.5	
Marital status			
Single	25	11.0	
Married	179	78.9	1.88
Extension visits (No per month)			
0 – 5	65	32	
6 – 10	33	16.2	
11 – 15	45	22.1	
16 – 20	46	22.6	5.42
21- 30	12	5.9	
31 – 45	3	1.5	
Level of education (highest attainment)			
Primary School	2	0.9	
Secondary School	19	8.4	
OND	78	34.4	
HND	100	44.4	
B. Sc.	5	2.2	

The three selected states where the study was carried out are shown in Fig.1.

KEYS

North - Western Zone
North - Central Zone
North - Eastern Zone
South - Eastern Zone
South - Southern Zone
South - Western Zone

Study States:
KADUNAT STATE
KANO STATE
KEBBI STATE

] the three States (Kaduna, Kano and Kebbi) where the study covered.

The multiple regression model

The Regression Model, on the other hand, was used to establish influence between VEAs' characteristics and ICT usage. The multiple regression model is explicitly specified as follows;

$$\mathbf{Y = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 , \ldots\ldots_{21} x_{21} , + e}$$

Where:

Y= Rate of ICT Usage (%)

$\mathbf{b_0}$ = Constant

X_1= Age (years)

X_2 = Household size (number)

X_3 = Extension visits (number per month)

X_4 = Level of Education (highest qualification)

X_5 = Income (₦/K)

X_6 = Linguistic competence (Number of languages)

X_7 = Working experience (years)

X_8 = Social participation (number of group membership)

X_9 = Marital status (Single= 0, Married = 1)

X_{10} = Sex (Female=0, Male=1)

X_{11} = Awareness of ICT (Number of ICT known)

X_{12} = Accessibility to ICT (Number of ICT accessible)

X_{13}= Availability of ICT in Organization(Perception, using Likert scale 1-3)

X_{14}= Organization's Policy support of ICT (Perception, using Likert scale 1-3)

X_{15}= Organization's Structure in support of ICT (Perception, using Likert scale 1-3)

X_{16}= Government policy on ICT (Perception, using Likert scale 1-3)

X_{17}= Cost of ICT (Perception, using Likert scale 1-3)

X_{18} = Available infrastructural facilities (Perception, using Likert scale 1-3)

X_{19} = Customs and tradition (Perception, using Likert scale 1-3)

X_{20} = Accessibility of ICT facilities (Perception, using Likert scale 1-3)

X_{21} = Geographical location (Perception, using Likert scale 1-3)

$\mathbf{b_1 – b_{21}}$ = Regression co-efficient

e = Error term

In this study, Multiple Linear Regression model was used to determine the linear relationship between the Independent and Dependent variables. It was applied to analyse the influence of VEA's characteristics and their Usage of ICT. Specifically, the Multiple Linear regression was used to determine or predict those factors influencing the ICT usage by the VEAs. The regression co-efficient in this study were evaluated at 10% level of probability in choosing for acceptability or otherwise of the parameters of the variables under consideration.

Test of Hypothesis

The null hypothesis set for this study was:

H_0: "There is no significant influence of the VEA's perception and characteristics on ICT usage".

The hypothesis was tested by using Multiple Linear regression model.

Influence of the VEAs' Characteristics on ICT Usage

The results of the multiple linear regression analysis, as presented in Table 2, show the influence of the VEAs' characteristics on ICT usage. Only Sex (X_{10}) was statistically and positively found to be significant at 5% level of probability. This means that the males have better usage of ICT.

Table 2: Results of regression analysis showing relationship between selected independent variables and ICT usage.

Variable	Regression co-efficients	Standard error	T-value	Significant level
(Constant)	57.761	7.561	7.639	.000
Age (X_1)	-0.209	0.138	-1.511	0.132
Income (X_5)	4.889E-6	0.000	2.073	0.039*
Marital Status (X_9)	2.380	3.202	0.743	0.458
Sex (X_{10})	-7.563	2.780	-2.721	0.007**
Perception on Availability of Infrastructural Facilities (X_{18})	1.909	0.954	2.002	0.047*
Perception on Custom/tradition(X_{19})	-2.617	1.123	-2.330	0.021*
Accessibility to ICT (X_{12})	1.303	0.290	4.497	0.000***

*= Significant at 10% level
**= Significant at 5% level
***= Significant at 1% level
R= 0.427, R^2=0.229, R^2 -Adjusted=0.153, F Change=6.258, Durbin-Watson = 1.801.

Table 3: Results of regression analysis showing relationship between selected independent variables and ICT usage based on the model designed for the study.

Variable	Regression co-efficients	Standard error	T-value	Significant level
(Constant)	56.619	11.778	4.807	.000
Age (X_1)	-.248	.187	-1.160	.185
Household Size(X_2)	-.014	.200	-.069	.945
Extension Visits (X_3)	-.154	.125	-1.230	.220
Level of Education (X_4)	-1.224	1.311	-.933	.352
Income (X_5)	5.999E-6	.000	2.327	.021*
Linguistic Competence (X_6)	1.595	1.881	-.848	.397
Working Experience (X_7)	.156	.848	.184	.855
Social Participation (X_8)	-1.394	.946	-1.474	.142
Marital Status (X_9)	3.655	3.589	1.018	.310
Sex (X_{10})	-8.190	3.051	-.196	.008**
Awareness of ICT (X_{11})	-.135	.326	-.413	.680
Accessibility to ICT (X_{12})	1.190	.375	3.172	.002**
Perception on Availability of ICT in Organization (X_{13})	-1.118	1.402	-.797	.426
Perception on Organizational Policy(X_{14})	.101	1.136	.089	.929
Perception on Organizational Structure(X_{15})	-.286	1.962	-.146	.884
Perception on Government Policy on ICT(X_{16})	1.430	1.332	1.074	.284
Perception on Cost of ICT (X_{17})	1.353	1.263	1.071	.286
Perception on Availability of Infrastructural Facilities (X_{18})	.414	1.386	.298	.766
Perception on Custom &Tradition(X_{19})	-3.203	1.244	-2.574	.011*
Perception on Accessibility of ICT Facilities(X_{20})	.720	1.464	.492	.623
Perception on Geographical Location(X_{21})	1.466	1.229	1.193	.234

*= Significant at 10% level
**= Significant at 5% level
R= 0.478, R^2=0.229, R^2 - Adjusted=0.130, F Change=2.320, Durbin-Watson = 1.833.

Legend:
X_1 = Age (in years)
X_2 = Household size (in number)
X_3 = Extension visits (in number per month)
X_4 = Level of Education (Highest Qualification)
X_5 = Income (in ₦ /k)
X_6 = Linguistic competence (Number of languages)
X_7 = Working experience (in years)
X_8 = Social participation (in number of groups)
X_9 = Marital status (Married=1, Single=0)
X_{10}= Sex (Male=1 or female=0)
X_{11} = Awareness of ICT (Yes=1, No=0)
X_{12} = Accessibility to ICT (Yes, No)
X_{13} = Availability of ICT in Organization (perception)
X_{14}= Organization's Policy support of ICT (perception)
X_{15}= Organization's Structure in support of ICT(perception)
X_{16}= Government Policy on ICT (perception)
X_{17}= Cost of ICT(perception)
X_{18} = Available infrastructural facilities on ICT(perception)
X_{19} = Customs and tradition (perception)
X_{20} = Accessibility of ICT facilities(perception)
X_{21} = Geographical location (perception)

NOTE: The foregoing result was obtained out of the best fit analysis carried out through the use of stepwise regression.

Furthermore, the results show that the following variables were positively and statistically significant: Income (X_5) at P=0.10 level of probability, perception on available Infrastructural facilities (X_{16}) at P=0.10 level of probability, perception on custom/tradition (X_{17}) at P=0.10 level of probability and accessibility to ICT (X_{12}) at P=0.01 level of probability. Therefore these findings have shown that there is significant influence of the VEA's characteristics on ICT usage. Thus, the null hypothesis for the study was rejected at 10% probability level.

These findings further buttress the results of the correlation analysis (earlier discussed) which had shown the existence of relationship between VEAs characteristics and usage of ICT. Nevertheless, it can be observed that the R^2 value is 0.229 which means, by implication, that the proportion of variation in the dependent variable that was explained by variations in independent variables was 23%. However, the relatively low percentage might be connected with the problem of measurement of variables. The result of Durbin Watson statistics (1.801) indicates that there is no multi-collinearity found in the independent variables. Furthermore, from the results obtained from the regression analysis, the following interpretations can be deducted, namely;

Income was found to be positively and significantly a factor influencing ICT usage by the VEAs. By implication, it means the more income the VEAs earns, the tendency for them to utilize ICT. Also, accessibility to ICT was found to be a factor that was positively significant in influencing ICT usage by VEAs. This implies that the more access VEA has to ICT, the propensity for their ICT usage. Similarly, on perception of VEAs on Customs/tradition, the results show that this variable contributes positively and significantly to ICT usage by the VEAs. Hence, by implication, this means that if the VEAs perceive that

Custom/traditions tend to be suitable, VEA is likely to use ICT. Specific to perception of VEAs on availability of Infrastructural facilities, it was found to be a positively significant factor influencing ICT usage. It means that if VEA perceives that infrastructural facilities are available, the more VEAs tend to use ICT.

By implication, it indicates that these variables have notable consequences in facilitating usage of ICT by the VEAs. Therefore, it can be inferred that with improvement in income, accessibility to the ICT components, and given that their attitude on Custom/tradition the VEAs would have favourable disposition to usage of ICT. This finding is akin to that of Oluwatayo and Ahmed (2007) who found out that both accessibility and awareness were positively related to the probability of their respondents' usage of ICT.
This finding, however, was at variance with the finding of Aderinto *et al.,* (2008) who reported that a significant relationship exists between educational level and use of ICTs. Also, the finding was at variance with Atajeromavwo *et al.,* (2010) who reported that the practitioners' extent of use of the available ICT facilities has not significantly influenced their perception of the importance of the facilities to their work schedule. Generally, however, sixteen (16) independent variables were found not to be positively and significantly influencing ICT usage. This could be attributed to the difficulties associated with measurement of perception and allocation of scores to the respondents' characteristics examined in the study.

It can be observed that the results of the study contribute, to some measure, to the existing literature. From the findings of this study, the Social change model adopted for this study has shown the relevance of ICT as a versatile tool capable of bringing about change among the VEAs. Hence, this study has demonstrated the validity of existing theories like the theory of social change and technological change. Specifically, for instance, the socio-psychological theories posit that activities of people bring about change in the society, and modifications in the behaviour can constitute the main role in facilitating societal development. Above all, this finding further confirms that the hypothesis was testable and the results which indicated that there is an existence of significant relationship between VEA's socio-economic characteristics and ICT usage was evident.

CONCLUSION

From the results of Multiple regression analysis, the variables with the highest influence on ICT Usage by the respondents were: income (0.039*), Sex (0.007**), Accessibility to ICT (0.000***) and Perception on custom/tradition (0.021*) and Perception on Availability of Infrastructural Facilities (0.047*). These variables were positively and statistically significant. Thus, it was found that income, accessibility to ICT, sex, and perceptions on custom/ tradition and availability of ICT were found to be factors that significantly and positively influenced ICT usage by the respondents.

Recommendations

The following are recommendations made from the findings emanating from the study;

1. The study found that strong positive relationships exist between some socio-economic characteristics/perceptions of the respondents and their ICT usage. To this end, efforts should be made toward sustaining this development.
2. It is expedite that those factors that influence the ICT usage among the VEAs should be given attention to the effect that they are sustained and improved upon.

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