

Research article

# INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTs) USE BY FEMALE CASSAVA FARMERS IN UMUAHIA AGRICULTURAL ZONE, ABIA STATE, NIGERIA.

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## Abstract

The access and use of Information and Communication Technologies (ICTs) among female cassava farmers in Umuahia Agricultural Zone, Abia State , Nigeria, was studied. One hundred and five female contact cassava farmers with the Abia State Agricultural Development Project ( ADP) in the zone were purposively selected as the respondents. Data generated through structured questionnaire were analyzed using descriptive statistics, Spearman's correlation and Z- score test. Results showed that the mean age of the respondents was 40.5 years, 94.3 % were literate and 80.75 % were married. The results also showed that radio, posters, mobile, home- videos, television and newspaper were significantly accessed ICT components with a mean score of > 3. Ranking of the usage of ICT components showed that mobile phones, circulars / posters and radio ranked 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> respectively. There was significant relationship between access and use of ICT in the study area. However, there is need to build the capacity of the women in computer skill and literacy and to encourage them to own personal computers, to benefit fully from the advantages offered by the ICT technologies in modern agriculture. **Copyright © acascipub.com, all rights reserved.**

**Key Words:** Female Cassava Farmers, ICT Access and Use, Umuahia Agriultural Zone.

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## INTRODUCTION

The Information and Communication Technology (ICT) revolution is sweeping through the world and the gale has even caught up with Nigeria. ICT tools have helped people find, explore, analyze, exchange, and present information without discrimination. ICT, if efficiently used can provide quick access to ideas and experience from wide range of people, communities and cultures. (Kwame, 2010). Access to ICTs implies not only the physical availability of these models and channels but also the existence of the right conditions for getting and communicating information that are not bound by language, culture or distance (Chadwick, 2003). He further, asserted that use implies the level to which the potentialities of information technologies devices are harnessed for information generation and transfer. It was on the strength of the above that Obinna, Chukwu and Eyeh (2013) reported that the use of ICT varies with individuals, organizations and institutions. Similarly, Odame (2005) observed that even when ICTs were available that their use depended on the capability of the users. Therefore, ICTs capacities relate to knowledge and skills required for effectively utilizing communication equipment and correctly receiving and transmitting information. However, in Nigeria Akpabio, Okon and Inyang (2007) observed low level of utilization of ICT among farmers due to poor infrastructure especially, electricity, high cost of broadcast equipment, poor connectivity, high cost of access, high charges for radio / television programme, lack of interactive communication and preponderance of power driver not user – driven. Other were poor enabling environment, lack of access and high level of computer illiteracy among farmers. Similarly, Odame (2005) observed that the relevance of ICT in economic development, has shown that both men and women are often the driving force behind the deployment and transfer process. It was on this note, that Heyzer (2007) affirmed that a genuine information society demands the equitable participation of all members of the society both males and females in the creation, management and use of it's products. In a related situation, Obinna (2012) had observed that gender is a development issue since social considerations were not easily incorporated into institutions such as policies, laws, markets and organizations. It was on this basis that USAID (2004) reported that without direct intervention, gender mainstreaming would not occur. On earlier note Janice, Samanta and Olawoye (1997) observed that division of labour along gender lines was a social constant and had profound implications for the organization of agriculture, as men's and women's responsibilities and privileges vary along socio- cultural and socio- economic lines. Studies have shown that many of the programmes or technologies introduced to the rural areas in Nigeria failed because it targeted men only. Aniedu (2006) reported that cassava is regarded as women's crop and that 100% of female farmers in the South – Eastern part of Nigeria cultivated cassava in addition to other crops in the farming systems. Nevertheless, there is a dearth of information on access and usage of ICT among women farmers in Southeastern Nigeria. It was based on the above that the study sought to evaluate access and use of ICTs components among female cassava farmers in Umuahia Agricultural Zone of Abia State , Nigeria.

The major objective of the study was to evaluate the access and use of ICTs components among female cassava farmers in Umuahia Agricultural Zone of Abia State, Nigeria.

### **The specific objectives were to;**

- examine the socio economic characteristics of the respondents in the study area;
- determine ICT components accessed by the respondents;
- determine the extent of use of the ICT components ;
- determine factors limiting the access and use of ICT components by the respondents, and
- proffer solution to enhance access and use of ICTs by the respondents in the study area.

### **Hypotheses.**

Ho1

There is no significant relationship between access and use of ICT components by the female cassava farmers in the study area.

Ho2

There is no significant difference between access and use of ICT components among the female cassava farmers in the study area.

### **METHODOLOGY.**

The study was conducted in Umuahia Agricultural Zone of Abia State, Nigeria located about latitudes  $40^{\circ}$  -  $70^{\circ}$  N and longitudes  $7^{\circ}$  -  $8^{\circ}$  E (NRCRI, 2006). Umuahia Agricultural Zone is one of the three Agricultural Zones of the Abia State ADP. It comprises Ibeku , Umuahia Urban, Ohuhu North, Ohuhu South, Olokoro/ Ubakala , Ntigha , Mbawsi , Isiala – Ngwa , Owerinta, Umuoba , Nvosi , Ilkwano North and South Agricultural Extension Blocks. Abia State is located in the South- eastern geo- political Zone of Nigeria. The state shares boundaries with Enugu and Ebonyi states in the North, Rivers state in the South, Cross River and Akwa – Ibom states in the East and Imo state in the West respectively. The state has a total population of 2,833,999 out of which 1,434,193 were males and 1,399,806 were females respectively (NPC, 2007). The population density of Abia state was 486 persons per  $\text{km}^2$  out of which 42.6 % was in agriculture or agriculture related activities ( Ekong, 2010 ). Also, 62.25 % of the total population of Abia state dwelled in the rural area ( Ekong, 2010 ). The study covered all the female contact cassava farmers working with Extension Agents, in Umuahia Agricultural Zone of Abia State, Nigeria. The 105 female contact cassava farmers with Abia State Agricultural Development Project (ADP) in the Zone formed the respondents who were purposively and multi- stage randomly sampled. Structured questionnaire were administered to the respondents for the purpose of eliciting information on the subject matter. Data generated were analyzed using descriptive statistics such as, frequency, tables, pooled mean, and ranks. In addition, Spearman's correlation coefficient and Z- score test were used.

The formula for Z – Score Test calculation is as presented below.

$$Z \text{ calculated} = \frac{\bar{X} - \bar{Y}}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}} \dots\dots\dots (1)$$

Where  $\bar{X}$  = Mean of Access to ICT components.

$\bar{Y}$  = Mean of Use to ICT components.

$n_1$  = number of observations for access to ICT

$n_2$  = number of observations for use of ICT.

$S_1^2$  = Variance of Access to ICT components.

$S_2^2$  = Variance to Use of ICT components.

Z= The value of Z calculated

$$\text{Formula for spearman's correlation coefficient } r_s = 1 - \frac{6 \sum D^2}{n(n^2 - 1)} \dots\dots\dots (2)$$

Where

$r_s$  = spearman's correlation coefficient

$D^2$  = Difference between ranked pairs

$n$  = number of observations

Data generated were used to test the following hypotheses:

$H_{01}$  = There is no significant relationship between access and use of ICTs components among female cassava farmers in the study area,

$H_{02}$  = There is no significant difference between access and use of ICTs components among female cassava farmers in the study area.

## RESULTS AND DISCUSSION.

### Socio Economic Characteristics of the Respondents.

Table1, revealed that the mean age of the respondents was 40.5 years and a very high proportion (94.3%) attended formal education. About, 81 % of the respondents were married , only 14.3 % were single. The mean farm size of the respondents was 1.34 hectares with 20.75 years as the mean years of experience respectively (Table 1). Furthermore, 66.7 % of the respondents were farmers, while 19 %, 9.5 % and 4.8 % respectively were traders, civil – servants, and others respectively. About, 79 % of the respondents earned monthly income of between N 10,000 - N 53,000 and 90.5 % owned mobile phones with only 4.8 % owning computers respectively ( Table 1 ). Equally, 85.7 % of the respondents were computers illiterates and 95 % did not own computers (Table 1). About, 90.5 % of the respondents belonged to one organizations or the other respectively. The implications of the results as revealed inTable1, are that the respondents were still in their prime ages of activities. Equally, that the very high proportion

(94.3 %) of the respondents who attended formal education implies that they could read and write. The mean farm size as revealed in Table 1 equally, indicates that the respondents were small scale farmers who depend on rain fed agriculture and practice same at a very high subsistent level (Obinna and Chukwu 2013). About, 66.7 % of the respondents earning a monthly income that is above N 18,000.00, shows that these respondents earned above the Nigerian minimum wage. The high level (85.7 %) of computer illiteracy among the respondents implies that they could not effectively make use of the internet services unless assisted. The high proportion (90.5 %) of the respondents belonging to one organizations or the other implies that the respondents network among themselves so much no wonder, high proportion (90.5 %) of the respondents that owned mobile phones.

### **Access to ICT Components in the Study Area.**

Table 2 revealed that radio with a mean score of 3.8 and ranked 1<sup>st</sup> amongst 15 items indicated that radio was the most accessible ICT component by the respondents in the study area. Other, were circulars/posters, mobile phones, home videos, televisions, news papers, and internet services respectively (Table 2). They were scored serially 3.79, 3.7, 3.57, 3.38, 3.19 and 2.4 respectively and were equally ranked serially from 2<sup>nd</sup> positions to the 7<sup>th</sup> position respectively (Table 2). Table 2 further, revealed that CD, VCD, DVD, Flash, cameras, tape recorders, animated images/ pictures, video cameras, land phones, projectors and interactive white board respectively were scored 2.33, 1.76, 1.57, 1.5, 1.47, 1.14, 1.1, and 1.0 respectively. They were serially ranked from the 8<sup>th</sup> position to the 15<sup>th</sup> positions respectively (Table 2). The implications of the results as revealed by Table 2 are that only 6 items out of 15 are accessible to the respondents in the study area. On the other hand, the remaining 9 ICT components in the study area were not accessible to the respondents.

### **Use of ICT Components in the Study Area.**

Table 3, revealed that ten out of fifteen ICT components were used by the respondents in the study area. The ICT components were mobile phones, circulars / posters, radios, televisions, news papers, home videos, tape recorders, video cameras, and projectors respectively. They were serially scored 3.86, 3.81, 3.47, 3.43, 3.38, 3.33, 3.23, 2.9, 2.76, and 2.5 respectively (Table 3). They were equally serially ranked from the 1<sup>st</sup> position to the 10<sup>th</sup> position respectively (Table 3) On the other hand, Table 3 revealed that the ICT components that were not used by the respondents in the study area were animated images/ pictures, land phone, CD,DVD,VCD ,Flash, internet services, and interactive white board respectively ( Table 3 ). The implications of the results as revealed by Table 3 are that the respondents could not use most of the computer based ICT components due to their high computer illiteracy coupled with other barriers. On the other hand the high proportion (90.5 %) of the respondents belonging to organizations indicates high networking and communication rates among the respondents . This is explained by high (3.86) usage of mobile phones and circulars/posters respectively by the respondents.

### **Limiting Factors to Access and Use of ICT Components in the Study Area.**

Table 4 revealed that all (100 %) of the 8 items subjected to investigations as factors limiting access and use of ICT components were significant. The ICT components were erratic power supply, inadequate ICT skills, lack of funds, lack of Government support, inadequate ICT infrastructure, inadequate/poor technical support, lack of time and high cost of broadcast respectively (Table 4). These components had mean scores from 3.57 to 2.52 respectively in descending orders and were ranked from 1<sup>st</sup> position to the 8<sup>th</sup> respectively (Table 4). The implications of the results as revealed in Table 4, are that erratic power supply ranked 1<sup>st</sup> position indicating that the use of most of ICT based components depend on power supply. Other essential factors in the access and use of ICT components are skills and literacy in computer operation and usage, adequate level of infrastructural amenities, regular connectivity, well designed capacity building of the users and demand for ICT. This is in line with Odamo (2005) who observed that due to high computer illiteracy mostly in the rural areas of Nigeria, that the potentialities of ICT have not been harnessed. He further, asserted that for access and use of ICT to be effective that all barriers such as gender disparity and others must be overcome. He concluded in stating that existence of ICT in public spaces did not entail access of all, hence there was a ‘digital’ divide (high disparity in the use of ICT along gender lines.)

### **Result of Spearman’s Correlation Coefficient= $\rho_s$ .**

Table 5 revealed that  $\rho_s = 0.77$ , since  $\rho_s$  is positive and significant implies that there is significant relationship between access and use of ICT components in the study area. Therefore, the  $H_0$  hypothesis which states that there is no significant relationship between access and use of ICT components among the female cassava farmers in the study area is hereby rejected and the alternate accepted.

### **Result of Z – Test.**

Table 6 revealed that  $Z_{cal.} = 0.051^*$  and that of  $Z_{tab} = 1.64^*$ . Therefore, the  $H_0$  which states that there is no significant difference between access and use of ICT components among female cassava farmers in the study area is hereby accepted. Since,  $Z_{tab} > Z_{cal.}$  This implies, that there was no significant difference between access and use of ICT components among the female cassava farmers in the study area.

## **CONCLUSION AND RECOMMENDATIONS**

The study has revealed that the mean age of the respondents was 40.5 years. About, 94.3 % of the respondents were literates and 80.75 % were married. The study further revealed that 66.7 % of the respondents were farmers with mean farm size of 1.34 hectares, indicating that they were small – scale farmers. The study also revealed that 90.5 % of the respondents owned mobile phones and belonged to one organizations or the other respectively. The result revealed that only six out of fifteen ICT components were accessible while on the other hand, ten out of fifteen were used. The result revealed that there is significant relationship between access and use of ICT components among the female cassava farmers in the study area  $\rho_s = 0.77$ , while on the other hand the result revealed that there is no

significant difference between access and use of ICT components among the female cassava farmers in the study area since  $Z_{tab} = 1.64^* > Z_{cal} = 0.051^*$ . The result revealed that factors such as erratic power supply, inadequate ICT skills, lack of funds, Inadequate Government support, inadequate ICT infrastructure, among others were the limiting factors to access and use of ICT components in the study area. Given the fact that the Abia State Government is presently running an empowerment programme through skill acquisition which involves women and youths, the study therefore recommends that ICT literacy training be incorporated into the programme and also the number of skill acquisition centres be increased in order to enable more women mostly in the study area to benefit. Government of Abia state should ensure that adequate ICT infrastructure are put in place in the state as to give everyone opportunity to access and use ICT, since it is the end thing in this 21<sup>st</sup> century.

## REFERENCES

- [1] Akpabio, I. A; D.P. Okon; E. B, Inyang (2007) Constraints Affecting ICT utilization by Agricultural Extension Officers in the Niger Delta Nigeria. *Journal of Agricultural Education and Extension* 13 (4 ) December 263 – 272.
- [2] Aniedu, C. (2006) Gender Factors in access and use of Improved Yam Technologies by farmers in South - Eastern Nigeria. A Ph.D Thesis presented to the College of Agricultural Economics, Rural Sociology and Extension. Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria.
- [3] Chadwick, B. P. (2003 ): Knowledge Techniques for sustainable Rural Development in ACP Countries, New Stakeholder; New Media and Privry Themes Synthesis on the CTA Seminar, The Netherlands, Wagenigin.
- [4] Ekong, E. E (2010) *Rural Sociology ( 3rd Edition )* Dove Educational Publishers Uyo, Nigeria. Pp 1- 425
- [5] Heyzer. Noeleen (2007) : Gender and ICT. Asia – Pacific Development Information Programme e – primers for the Information Economy society and polity (eds) Angela. M. Kuga Thas, Chat Garcia Ramilo and Cheekay Cinco Foreword by Noeleen Heyzer. P vii – viii.
- [6] Janice, J ; Samanta, R. E. and Olawoye, J. E ( 1997) ‘‘ Improving Women Farmers’ Access to extension services FAO, Rome.
- [7] Kwame, D. Dakwa ( 2010 ); ICT in Nigeria Prospects and Challenges for Development (2010) From Africa Today. Vol. 56 No. 4 Pp 95 – 96.
- [8] National Population Commission ( 2007 ); A Blueprint on 2006 National Census.
- [9] National Root Crops Research Institute ( NRCRI) Umudike (2006), Annual Report.
- [10] Nneoyi, M. N; Henry, M. N; Walter, E. E; Ebingba, S.E (2008) ‘‘ Group Dynamics and Technology use among Female Cassava Farmers in Akpabuyo Local Government Area, Cross River State, Nigeria.

[11] Obinna, L. O. (2012) ‘ ‘ Comparative Analysis of the contributions of Women Co-operatives and Non – cooperative Women Associations in Rural Development in Abia State Nigeria. An unpublished Ph.D Dissertation of Department of Rural Sociology and Extension Michael Okpara University of Agriculture Umudike, Abia State, Nigeria.

[12] Obinna, L.O. ; Chukwu, G. O. and Sunny Eyeh (2013)’ Information and Communication Technology Usage in an Academic Environment: Challenges at MOUAU Abia State, Nigeria. International Journal of ICT Research Vol. 3 No. 12 ISSN 2223 - 4985 <http://www.esjournal.org>

[13] Odame, H. H (2005) : Gender and ICTs for Development: Setting the context on Gender and ICTs for development: A Global Sourcebook- critical Reviews and Annotated Bibliographies Services: Published by KIT. The Netherlands Oxfarm. G. B. P. 13 - 23

[14] Sobien, A ( 2007 ): ICT and Enterprise development, Sustainable Development Association Egypt, Alexandra August 75pp.

[15] USAID (2004) : A strategy to Development of Agriculture in Sub – Saharan Africa and A focus for the World Bank paper No. 203 Africa Technical Department Series Pp 83 - 90



**Table 1:** Socio- Economic Characteristics of the Respondents

n = 105				
S/ NO.	Variables	Frequency	Percentage	Mean
01	<b>Age in Years</b>			
	≤ 25	21	20.0	40.5 years
	26 - 35	32	30.4	
	36 - 45	28	26.7	
	46 - 55	15	14.3	
≥ 56	9	8.6		
02	<b>Educational levels</b>			
	No formal education	6	5.7	
	1 - 6 yrs. of schooling	30	28.6	
	7 - 14 yrs of schooling	50	47.6	
	≥ 15 years	19	18.1	
03	<b>Marital Status</b>			
	Single	15	14.30	
	Married	85	80.95	
	Widowed	3	2.85	
	Divorced/Separated	2	1.0	
04	<b>Farm Size in Hectares</b>			
	< 0.25	30	28.1	1.34 hectares
	0.25 - 1	40	38.1	
	1.75 - 2	25	23.8	
≥ 2.75	10	9.5		
05	<b>Farming experience in years</b>			
	≤ 10	30	28.6	20.75 years
	11 – 20	50	47.6	
	21 - 30	20	19.0	
> 30	5	4.8		
06	<b>Primary Occupation</b>			
	Farming	70	66.7	
	Trading	20	19.0	
	Civil Servants	10	9.5	
	Others	05	4.8	
07	<b>Monthly Income in Naira</b>			
	< 10,000.00	15	14.3	
	10,000 – 20,000	20	19.0	
	21,000 – 31,000	22	21.0	
	32,000 - 42,000	30	28.6	
	43,000 – 53,000	12	11.4	
	≥ 54,000	6	5.7	
08	<b>Mobile Phones Ownership</b>			
	Yes	95	90.5	
	No	10	9.5	
09	<b>Computer Skill &amp; Literacy</b>			
	Yes	15	14.3	
	No	90	85.7	
10	<b>Computer Ownership</b>			
	Yes	5	4.8	
	No	100	95.0	
11	<b>Membership organizations</b>	<b>to</b>		

Yes	95	90.5
No	10	9.5

Source : Field Survey 2014

**Table 2 :** Distribution of the Respondents According to Their Accessibility To ICT Components.

n= 105

S/ NO	Accessibility to ICT	Frequency				Total	mean
		V/A	A	N/ V/A	N/A		
01	Radio	90	10	05	-	400	3.8
02	Circulars/ posters	90	8	7	-	398	3.79
03	Mobile Phones	80	20	05	-	390	3.7
04	Home Video	70	25	10	-	375	3.57
05	Television	60	30	10	05	355	3.38
06	News papers	40	45	20	-	335	3.19
07	Internet Services	15	30	45	15	250	2.4
08	CD,VCD,DVD,Flash	-	50	40	15	245	2.33
09	Cameras	-	20	40	45	185	1.76
10	Tape Recorder	-	05	50	50	165	1.57
11	Animated/images	-	-	45	70	160	1.5
12	Video Cameras	-	10	30	65	155	1.47
13	Land Phones	-	-	15	90	120	1.14
14	Projectors	-	-	10	95	115	1.1
15	Interactive w/board	-	-	-	105	105	1.0

Source : Field Survey 2014

- V/A = Very Adequate, scored 4 points.
- A = Adequate, scored, 3 points
- N/V/A = Not Very Adequate, scored 2 points.
- N/A = Not Adequate, scored, 1 point.

Decision Rule = Any mean score  $\geq 2.5$  was regarded significant and accessible, while any mean score  $< 2.5$  was regarded not significant and not accessible.

**Table 3:** Distribution of the Respondents According to Their Use of ICT Components.

**n= 105**

S/ NO	Use of ICT Components	Frequency				Total	Mean	Ranks
		V/O	O	N/V/O	N/O			
01	Mobile Phones	85	15	05	-	405	3.86	1 <sup>st</sup>
02	Circulars/ posters	90	10	05	-	400	3.81	2 <sup>nd</sup>
03	Radio	60	35	10	-	365	3.47	3 <sup>rd</sup>
04	Television	60	30	15	-	360	3.43	4 <sup>th</sup>
05	News Papers	55	35	15	-	355	3.38	5 <sup>th</sup>
06	Home Video	50	40	15	-	350	3.33	6 <sup>th</sup>
07	Tape recorder	40	50	15		340	3.23	7 <sup>th</sup>
08	Video Cameras	40	30	20	15	305	2.9	8 <sup>th</sup>
09	Cameras		85	15	05	290	2.76	9 <sup>th</sup>
10	Projectors	20	30	40	15	265	2.50	10 <sup>th</sup>
11	Animated images	-	60	45		165	1.57	11 <sup>th</sup>
12	Land Phones	-	8	37	60	158	1.50	12 <sup>th</sup>
13	CD,VCD,DVD,Flash	-	05	40	60	140	1.33	13 <sup>th</sup>
14	Internet Services	-	10	35	60	130	1.24	14 <sup>th</sup>
15	Interactive W/ Board	-	-	20	85	125	1.19	15 <sup>th</sup>

Source; Field Survey 2014.

- V/O = Very Often, scored 4points.
- O = Often , scored 3points.
- N/V/O = Not Very Often scored 2points.
- N/O = Not often, scored 1 point

Decision Rule = Any mean score  $\geq 2.5$  was regarded significant and used while any mean score  $< 2.5$  was regarded not significant and not used.

**Table 4:** Distribution of the Respondents According to Factors Limiting Access and Use ICT Components.

n = 105

S/NO	Variables	Frequency				Total	Mean	Ranks
		S/A	A	D/A	S/D			
01	Erratic power supply	70	25	10	-	375	3.57	1 <sup>st</sup>
02	Inadequate ICT skills	60	30	15	-	320	3.01	2 <sup>nd</sup>
03	Lack of funds	40	35	20	10	315	3.0	3 <sup>rd</sup>
04	Lack of Government support	20	45	40	-	300	2.86	4 <sup>th</sup>
05	Inadequate ICT Infrastructure	-	85	20	-	295	2.81	5 <sup>th</sup>
06	Inadequate technical support	35	30	20	20	290	2.76	6 <sup>th</sup>
07	Lack of Time for ICT	24	36	40	05	289	2.75	7 <sup>th</sup>
08	High cost of broadcast	20	30	40	15	265	2.52	8 <sup>th</sup>

Source: Field Data 2014

- S/A = Strongly Agreed, scored 4 points.
- A = Agreed, scored 3 points.
- D/A = Disagreed, scored 2 points.
- S/ D = Strongly Disagreed, scored 1 point.

Decision Rule = any mean score  $\geq 2.5$

**Table 5:** Calculation of Spearman's Correlation Coefficient.

S/NO.	Variables	ICT ACCESS	RANKS	ICT USE	RANKS	D	D <sup>2</sup>
01	Mobile Phones	3.7	3 <sup>rd</sup>	3.86	1 <sup>st</sup>	2	4
02	Circulars /Posters	3.79	2 <sup>nd</sup>	3.81	2 <sup>nd</sup>	0	0
03	Radios	3.8	1 <sup>st</sup>	3.47	3 <sup>rd</sup>	-	4
04	Televisions	3.38	5 <sup>th</sup>	3.43	4 <sup>th</sup>	2	1
05	News – papers	3.19	6 <sup>th</sup>	3.38	5 <sup>th</sup>	1	1
06	Home Videos	3.57	4 <sup>th</sup>	3.33	6 <sup>th</sup>	-	4
07	Tape recorders	1.57	10 <sup>th</sup>	3.23	7 <sup>th</sup>	2	3
08	Video Cameras	1.47	12 <sup>th</sup>	2.9	8 <sup>th</sup>	3	9

09	Cameras	1.76	9 <sup>th</sup>	2.76	9 <sup>th</sup>	0	0
10	Projectors	1.1	14 <sup>th</sup>	2.50	10 <sup>th</sup>	4	16
11	Animated images/ pictures	1.50	11 <sup>th</sup>	1.57	11 <sup>th</sup>	0	0
12	Land Phones	1.14	13 <sup>th</sup>	1.50	12 <sup>th</sup>	1	1
13	CD,DVD,VCD,FLASH,FLOOPY.	2.33	8 <sup>th</sup>	1.33	13 <sup>th</sup>	-	25
14	Internet Services	2.4	7 <sup>th</sup>	1.24	14 <sup>th</sup>	-	49
15	Interactive white board	1.0	15 <sup>th</sup>	1.19	15 <sup>th</sup>	0	0

Source: Field Data 2014

$\Sigma D^2 = 130$

Ts = Spearman's Correlation Coefficient.

D = Difference between paired ranks.

n = 15 = Number of variables.

$\tau_s = 0.77$ .

Since  $\tau_s = 0.77$  is positive and significant, it then implies that there is a significant relationship between access and use of ICT components among the female cassava farmers in the study area. This also implies that as the Access to ICT increased so was the Use increasing in the study area. Therefore the null hypothesis  $H_0$  is hereby rejected and alternate accepted.

**Table 6 : Z – Test Calculation.**

The second null hypothesis which states that there is no significant difference between Access and Use of ICT components among the respondents in the study area.

S / NO	ICT Access $\bar{X}$	X- X <sub>1</sub>	ICT Use X <sub>2</sub>	X- X <sub>2</sub>
01	3.80	1.43	3.86	1.23
02	3.79	1.42	3.81	1.18
03	3.70	1.33	3.47	0.84
04	3.57	1.20	3.43	0.80
05	3.38	1.01	3.38	0.75
06	3.19	0.82	3.33	0.70
07	2.40	0.03	3.23	0.60
08	2.33	0.04	2.90	0.27
09	1.76	-0.61	2.76	0.16

10	1.57	-0.80	2.50	-0.13
11	1.50	- 0.87	1.57	- 1.06
12	1.47	- 0.90	1.50	- 1.13
13	1.14	- 1.23	1.33	- 1.30
14	1.10	- 1.27	1.24	- 1.39
15	1.0	- 1.37	1.19	- 1.44
$\Sigma(X_1 - \bar{X})^2$		$\Sigma(X_2 - \bar{x})^2$		

$X_1 = 2.37$ , = MEAN FOR ACCESS,       $X_2 = 2.63$  = MEAN FOR USE.

$Z_{cal.} = 0.051$

Decision Rule:  $Z_{cal.} = 0.051^*$ , and  $Z_{tab.} = 1.64^*$  respectively. It then implies that  $Z_{tab} > Z_{cal.}$  at 10% alpha level which means no significant difference between access and use of ICT components. Therefore, the null hypothesis two ( $H_02$ ), which stated no significant difference between access and use of ICT components in the study area is hereby accepted.