communication asset and usage by rural women in ika north east local government area of delta state

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COMMUNICATION ASSET AND USAGE BY RURAL WOMEN IN IKA NORTH EAST L.G.A OF DELTA STATE.

BY

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ABSTRACT

This study aim at identifying the communication asset and usage by rural women in Ika North East Local Government Area of Delta State. The descriptive survey design was adopted for the study. Three hundred and forty-five respondents were proportionally selected from the population while questionnaire was used as instrument for data collection. Respondents were randomly selected from ten villages and questionnaires were administered.

The research questions were formulated and tested statistically using simple percentage, Chi square analysis to determine goodness of fit and the Two-way Analysis of Variance to determine significance of response categories against the factors.

The study found that ICT are used for women empowerment in Agricultural practice and economic activities in Ika North East Local Government Area. The women acquire ICT skills through age groups, friends and relatives.

Lack of facilities, inadequate access to ICT facilities, epileptic power supply, insufficient knowledge on the use of ICT and breakdown of ICT equipment are problems militating against ICT use among rural women in the study area.

Provision of adequate power supply, provision of enough ICT equipment/services at low cost, organization of ICT training regularly for women are recommended as solution to the identified problems.

Keywords: communication asset, women, empowerment, rural, skills, information, ICT.
INTRODUCTION

Information and Communication Technologies (ICTs) are the key resource of the information society. Without access to technology, there is a limit to how and what women can contribute to rational development while there is recognition of the potentials of ICTs as tool for the promotion of gender equality and the empowerment of women, “a gender divide” has also been identified, reflected in the lower numbers of women accessing and using ICTs compared with men (Gurumberth, 2004). Unless this gender divide is especially addressed, there is a risk that ICTs may exacerbate existing inequalities between women and men and create new forms of inequality (women 2000 and Beyond 2005). If however the dimension of ICTs in terms of access and use, capacity building opportunity, employment and potentials for employment, are explicitly identified and addressed, ICTs can be a powerful catalyst for political and social empowerment and the promotion and social empowerment and the promotion of gender equality (Sielders & O’farrell, 2004).

Rural women as stakeholders in rural and agriculture development confront problems of crop production and management, animal production and animal health, fishing and aquaculture, natural resource crisis and disaster management. An unexplored potential exists for application of ICTs in those wide range of endeavors that women undertake in rural areas and thus to improve their livelihood (Balakrishnan, 2002).

The various ICTs programmes put in place such as the Bayanloco community learning centre the Gworok multi-media and Gwong multi-media centre) all in the northern Nigeria is laudable. Their objectives are promising, invigorating and reliable (Kazanka, 2000). The foregoing suggests the awareness of the importance of the provision and use of ICTs in rural communities with the aim of empowering them. ICTs are rapidly changing people’s lives by providing health and other economics services. But despite tremendous growth in the sector, women in the local government area, that is, Ika North East local government area of delta state are far behind the rest of the world. In view of the foregoing, this study will investigate the
communication asset and usage by rural women in Ika North East Local Government Area of Delta-State.

**OBJECTIVES OF THE STUDY**

The main purpose of this study is to identify the communication asset and usage by rural women in Ika North East local government Area. The specific purposes are to:

Identify the types of ICTs that are available for rural women in Ika North East Local Government Area.

- Identify the way the rural women acquire the skills/knowledge of the use of ICT facilities in Ika North East Local Government Area.
- Determine the extent to which ICTs empower the Agricultural practices of rural women in Ika North East Local Government Area.
- Determine the extent to which ICTs empower the health issues of rural women in Ika North East Local Government Area.
- Ascertain the extent to which ICTs empower the educational activities of rural women in Ika North East Local Government Area.
- Determine the extent to which ICTs empower the political activities of rural women in Ika North East Local Government Area.
- Investigate the extent to which ICTs empower the economic activities of rural women in Ika North East Local Government Area.
- Find out the information sources through which the rural women in Ika North East Local Government Area use/access ICTs.
- Identify the problems experienced by women in the use of ICTs in Ika North East Local Government Area.
- Find out how the problems experienced by rural women in the use of ICTs can be minimized in Ika North East Local Government Area.
JUSTIFICATION FOR THE STUDY

The findings of this study will be significant in the following ways:

**Communication with women:** the outcome of this study will provide information on the actual ICTs that are available and in use in Ika North East Local Government Area. This will enable government and non-governmental organization to communicate with women through the identified ICTs in the local government area.

**ICTs policy formulation and implementation:** It will enable government and non-governmental organization to design and implement policies towards improvement of ICTs for women empowerment.

**Knowledge expansion:** It will add to the growing body of knowledge (literature) on ICTs and women empowerment in Africa and Nigeria in particular.

The outcomes may be useful to researcher in their studies on women empowerment in Nigeria in the sense that it can provide useful background information to their studies.

LITERATURE REVIEW

Women’s ability to take advantage of Information and Communication Technologies (ICTS) opportunities is contingent upon enabling social, economic and telecommunication policies, including those leading to increased educational level and the extension of communication infrastructure to where women live (Hafkin and Taggart, 2001). Marcelle, (2000) noted that, to date, developing countries have implemented few concrete policies to promote gender equality in information and communication technology. As most developing countries are just beginning to devise national information technology policies, however, the time is particularly appropriate for ensuring the inclusion of gender concerns.

From the foregoing, she asserted that one way for this to occur is by sensitizing policy-maker to information and communication technology issues that affect women. Moreover, out of enlightened self interest, women in developing countries should involve themselves in information and communication technology policy and regulation issues.
The ICTs policy resource for Nigeria has been provided for planning, research and evaluation (Annan, 2003). The policy statement covers the following areas:

1. Information Technology: Computer uses which have become indispensable in modern societies to process data and save time.
2. Telecommunication Technologies including telephones, mobile fax and broadcasting of radio and television, often through satellites.
3. Networking Technologies, of which the best known is internet, but which has extended to mobile phone technology and satellite communications.

The policy statement has the following as its objectives.

1. To integrate information and communication technologies into daily human living.
2. To promote the world submit on the information society.
3. To encourage local production and manufacture of ICTs components.
4. To facilitate interaction between the global information system and the Nigeria public.
5. To empower the Nigeria populace with ICTs skills.

The strategies lack all that is needed to achieve or realize the stated objectives. Hence the successful implementation of such policies is elusive. Widespread corruption leading to lack of genuine commitment incapacitate and render policy implementation unsuccessful, because anticipated goals are never realized (Annan, 2003).

Ogbede (2006) noted that “ICTs is the bedrock of national survival and development in a rapidly changing global environment”. He further asserted that “a developing nation like Nigeria, that aspires to participate effectively and become a key player in the emerging information age, need to have in place a highly efficient information and communication technology system driven by a vibrant information and communication technology policy. To this end, a national workshop on national information and communication held in Abuja in March 2000 led to the formation of ICTs policy. The policy envisaged that Nigeria would become “an ICTs capable country in Africa and a key player in the information society by the year 2005, using ICTs as the engine for sustainable development and global competitiveness”. The adoption of this vision
statement could hardly be faulted given that in the last few decades, ICTs has increasingly played a critical role in all field of human endeavour. In agriculture, engineering, medicine, law, architecture, aviation, commerce, insurance, banking and finance as well as maritime activities. ICTs are being used globally to translate ideas into realizable goals and develop same into concrete achievements. Also policies that consider social elements, such as universal access and ensuring the reach of communication to rural areas, will be blind to gender differences if the exercise is treated on the macro level without disaggregating sex. Jorge (2000) opined that without explicit gender analysis and incorporation of the results into policy instrument, it is unlikely that the results will have a positive impact on women.

Basically ICT policy are lay down strategies by government for planning, research and evaluation for the benefits of women. The ICT policy term to address the issue of rural women by using the information derive from research on women to plan, design and implement strategies for improvement of ICT for women. The policy had also help in the area of communication with women to ensure that women needs are put before government and non governmental organization.

Information and Communication Technologies (ICTs) has become a potent force for transforming social, economic and political life globally. ICTs present unique and timely opportunities for women. It promises better economic prospect, political participation, communication with the outside world, easy access to information and an enhanced ability to acquire education and skills to transcend social restrictions. ICTs are especially important to poor women because it can provide increased access to resources, the absence of which defines poverty. Hence, it should be viewed as a tool to facilitate access to variety of development resources rather than as a competing interest. Hafkin and Taggart (2002) are of the opinion that in the content of communication, transporting and other constraints of the developing world, ICTs may be even more important for women in developing countries then it is for women in the developed world who have access to abundance of alternatives. There is therefore the need for greater concentration on the use of ICTs for gender empowerment in Nigeria. For instance,
United Nations millennium Declaration (2005) has resolved to ensure that globalization becomes a positive force for the entire world’s people and to promote gender equality and empowerment of women as effective way to combat poverty, hunger and disease and to stimulus development that is truly sustainable, and to ensure that the benefit of new technologies, especially information and communication technologies, are available to all. Women’s full and equal access to ICTs based economic and educational activities supports women’s contributions in both business and home-based activities and improves women’s socio-economic status, strengthens the family, and provides access to information, communication, freedom of expression, and formal and informal associations. ICTs also provide options for women, including overcoming illiteracy, creating opportunities for entrepreneurship, allowing women to work from home and care for their families, accessing ICTs from rural locations, and enhancing and enriching the quality of life (Obayelu and Ogunlade, 2006).

According to Solomon (2004), the purpose of empowering women in Nigeria is to ensure that poverty alleviation strategies, policies and programmes achieve the result of addressing the gendercentreic dimension of poverty: opportunities, capabilities, security and empowerment. Also, Gurumurthy (2004) indicate that ICTs have also been used by many as a tool for social transformation and gender equality.

Tunde (2000) indicated the following as the importance of ICT to women development in Nigeria.

- It will help to improve the standard of living of Nigerian because information and communication Technologies ICT is use as a tool to enhance economical, political, cultural, agricultural, health activities, etc that invariably bring about development.
- It will aid the formulation of sound legislative and economic policies that will be beneficial to Nigerian citizen.
- It will come to know about Nigerian product and the invested codes and law that will enhance investment.
• It will aid both national and international trade as information on these is facilitated by the application of ICT.
• It will lead to the development of human capital, which is vital tool for development of any nation, Nigeria is not left out.
• It will help to eradicate poverty as it create access to new improved agricultural techniques, to diseases control, geographical conditions of soil and improve productivity.
• It will afford Nigerians the opportunity to be innovative as it creates access to research of technological and scientific innovation in the world.
• It will improve health care delivery as effective health information will create awareness of technical disease and possible solution.
• It enhances educational development and help to build a literate society as every citizen in the country can develop themselves through distance education with the use of ICT gadgets.

Conclusively, this will reduces cost of traveling, and encourage both men and women to have full right in the national development and participation in all level of endeavor.

METHODOLOGY

The descriptive survey design were employed for this study. Generally, the populations for this study consist of all women in Ika North East Local Government Area of Delta State. The population figure of women in the Local Government Area is 65,255. This is derived from the National population commission final result of 2006 population census of Nigeria.
From the population, three hundred and forty five women were randomly selected as the sample for the study. This was done using the lottery or balloting without replacement method. The twenty six villages were written on separate slips and mixed together into a bag. Thereafter, ten (10) slips were picked one after the other without replacement. From this, ten villages were
selected based on the proportion to the population of the women in each village to constitute the three hundred and forty five (345) women for the sample sizes. The main instrument used in collecting data is the questionnaire. The questionnaire were personally administer by the researcher with the help of four voluntary library staff in the ten villages i.e. hand by hand methods was used in the distribution and collection of the questionnaire.

The questionnaire was reviewed by professional colleagues. Their comments and observations were considered before the questionnaire was finalized and administered. The researcher employ the test-retest method to establish the reliability of the instrument. A small quantity of questionnaire (about 50) was tried on a group of individual in Umutu Community in Ukwuani Local Government Area of Delta State, which is outside the scope of the work. The researcher also administered the same instrument to the same respondents personally.

Data analysis was done using SPSS (Statistical Package for Social Science) software 15.0 for windows. Descriptive analyses was carried-out to give the frequency and percentage of responses, Chi square was used to determine significance between factors and dependent variables.

**PRESENTATION OF THE FINDINGS**

**Demographic Characteristics of the Respondents**

Three hundred and forty-five (345) questionnaires were distributed and all were returned. The respondents of the study were requested to respond to questions about their occupation. This section summarizes the respondents’ demographic information.
Table 1: Age of the Respondents

<table>
<thead>
<tr>
<th>Age range</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-25</td>
<td>27</td>
<td>7.8</td>
</tr>
<tr>
<td>26-30</td>
<td>65</td>
<td>18.8</td>
</tr>
<tr>
<td>31-35</td>
<td>84</td>
<td>24.4</td>
</tr>
<tr>
<td>36-40</td>
<td>57</td>
<td>16.5</td>
</tr>
<tr>
<td>41+</td>
<td>112</td>
<td>32.5</td>
</tr>
<tr>
<td>Total</td>
<td>345</td>
<td>100</td>
</tr>
</tbody>
</table>

Table .1. above revealed the age range of the respondents. Women above 40 were 112 (32.5%), the highest frequency of age range. This is followed by women within age group 31-35 recording 84 (24.3%), women within 26-30 were 65 in number (18.8%), 57 (16.5%) for the women within the range of 36-40 while 27 (7.8%) was recorded for the women within the age range 20-25. This shows that women in this locality are predominantly older people.

Table 2: Educational status of the Respondents

<table>
<thead>
<tr>
<th>Level of Education</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pry 1-6</td>
<td>112</td>
<td>35.4</td>
</tr>
<tr>
<td>Sec. JSS 1-3</td>
<td>51</td>
<td>14.8</td>
</tr>
<tr>
<td>Sec. SSS 1-3</td>
<td>51</td>
<td>14.8</td>
</tr>
<tr>
<td>OND/NCE</td>
<td>22</td>
<td>6.4</td>
</tr>
<tr>
<td>HND/BSc.</td>
<td>32</td>
<td>9.6</td>
</tr>
<tr>
<td>None of the above</td>
<td>67</td>
<td>19.4</td>
</tr>
<tr>
<td>Total</td>
<td>345</td>
<td>100</td>
</tr>
</tbody>
</table>

From the above table, 112 (35.4%) indicate the educational level of those women with primary school leaving certificate, which has the highest frequency, followed by women without formal education, 67 (19.4%), 51 (14.8%) was recorded by women with secondary education (JSS 1-3 and SSS 1-3), OND/NCE holders were 22 (6.4), while HND/BSc. educational level were 32 (9.6%). With 112 (35.4%) of the respondents with a primary 6 leaving certificate and another 67
(19.4%) without formal education, level of illiteracy can be said to be high in terms of formal education.

Figure 1: Occupation of respondents

Figure 1 shows the distribution of respondents across occupation. About 224 (64.9%) are farmers while 76 (22.0%) are traders. Additional 25 (7.2%) are teachers while 7 (2.0%) are civil servants. The remaining 3.80% comprises of Public servants and nurses in ratio 2.90 and 0.9%
respectively. From this result, about 86.9% of the populations are farmers and traders leaving only 13.1% for other occupations.

**Table 3: Availability of ICT Equipment and Extent of Use**

<table>
<thead>
<tr>
<th>ICT Equipment</th>
<th>Available</th>
<th>Per. (%)</th>
<th>Not Available</th>
<th>Per. (%)</th>
<th>Available but not working</th>
<th>Per. (%)</th>
<th>I don’t Know</th>
<th>Per. (%)</th>
<th>Total</th>
<th>Per. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>245</td>
<td>71.0</td>
<td>19</td>
<td>5.5</td>
<td>80</td>
<td>23.2</td>
<td>1</td>
<td>0.3</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Television</td>
<td>241</td>
<td>69.9</td>
<td>21</td>
<td>6.1</td>
<td>82</td>
<td>23.8</td>
<td>1</td>
<td>0.3</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Newsletter</td>
<td>16</td>
<td>4.6</td>
<td>271</td>
<td>78.6</td>
<td>3</td>
<td>0.9</td>
<td>55</td>
<td>15.9</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Mobile phone</td>
<td>313</td>
<td>90.7</td>
<td>3</td>
<td>0.9</td>
<td>28</td>
<td>8.1</td>
<td>1</td>
<td>0.3</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Land phone</td>
<td>1</td>
<td>0.3</td>
<td>285</td>
<td>82.6</td>
<td>15</td>
<td>4.3</td>
<td>44</td>
<td>12.8</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Newspaper</td>
<td>32</td>
<td>9.3</td>
<td>202</td>
<td>58.6</td>
<td>13</td>
<td>3.8</td>
<td>98</td>
<td>28.4</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Radio</td>
<td>187</td>
<td>54.2</td>
<td>61</td>
<td>17.7</td>
<td>72</td>
<td>20.9</td>
<td>25</td>
<td>7.2</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Internet</td>
<td>16</td>
<td>4.6</td>
<td>273</td>
<td>79.1</td>
<td>4</td>
<td>1.2</td>
<td>52</td>
<td>15.1</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Magazine</td>
<td>21</td>
<td>6.1</td>
<td>246</td>
<td>71.3</td>
<td>6</td>
<td>1.7</td>
<td>72</td>
<td>20.9</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Digital Camera</td>
<td>1</td>
<td>0.3</td>
<td>236</td>
<td>68.4</td>
<td>11</td>
<td>3.2</td>
<td>97</td>
<td>28.1</td>
<td>345</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The table above revealed that the most available ICT equipment was mobile phone indicating (90.7%), (71.0%) video, (69.9%) television, and (54.2%) radio. Also 4.6%, 0.3%, 9.3%, 4.6%, 6.1% and 0.3% availability was recorded for newsletter, land phone, newspaper, internet, magazine and digital camera respectively. This is an indication that hi-tech ICT facilities that might require some expertise are not readily available in the local population sampled. This can also be linked to the educational status of individual as depicted in table 2.
**Table 4: Acquisition of Skill of the Use of ICT**

<table>
<thead>
<tr>
<th>Mode of Skill Acquisition</th>
<th>Frequency</th>
<th>Percentage</th>
<th>$\chi^2$ value</th>
<th>$\chi^2 (\alpha=0.05)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taught myself using books</td>
<td>12</td>
<td>3.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colleagues/friends/relatives taught me</td>
<td>271</td>
<td>78.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I attended a Training centre</td>
<td>25</td>
<td>7.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My Community organized ICT training</td>
<td>37</td>
<td>10.7</td>
<td>909.07**</td>
<td>7.815</td>
</tr>
<tr>
<td>Total</td>
<td>345</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** $\chi^2$ value shows a significant difference at 0.05 confidence interval**

Approximately 78.6% of the respondents acquired ICT knowledge through colleagues and relatives, this value is significantly higher ($p < 0.05$) using Chi square goodness of fit test; then 3.5%, 7.2% and 10.7% recorded for those that acquire their skills through self education using books, attending training and participants of community organized ICT training. This shows the significant respondent of friends and family relations over the other modes for acquiring information dissemination and learning.
<table>
<thead>
<tr>
<th>Impact</th>
<th>No Extent</th>
<th>Little Extent</th>
<th>Moderate Extent</th>
<th>High Extent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Freq.</td>
<td>Per. (%)</td>
<td>Freq.</td>
<td>Per. (%)</td>
<td>Freq.</td>
</tr>
<tr>
<td>Increase my knowledge on Agricultural production</td>
<td>250</td>
<td>72.5</td>
<td>47</td>
<td>13.6</td>
<td>4</td>
</tr>
<tr>
<td>Increase my awareness on how to manage my health information issues</td>
<td>320</td>
<td>92.8</td>
<td>20</td>
<td>5.8</td>
<td>2</td>
</tr>
<tr>
<td>Easy sharing of health information among colleagues</td>
<td>318</td>
<td>92.2</td>
<td>22</td>
<td>6.4</td>
<td>1</td>
</tr>
<tr>
<td>Enable faster access to relevant social information</td>
<td>320</td>
<td>92.8</td>
<td>21</td>
<td>6.1</td>
<td>1</td>
</tr>
<tr>
<td>Easy sharing of political related information among colleagues</td>
<td>323</td>
<td>93.6</td>
<td>18</td>
<td>5.2</td>
<td>1</td>
</tr>
<tr>
<td>Increase my knowledge on food production and practice</td>
<td>304</td>
<td>88.1</td>
<td>30</td>
<td>8.7</td>
<td>8</td>
</tr>
<tr>
<td>Increase my knowledge on market prices and products</td>
<td>125</td>
<td>36.2</td>
<td>194</td>
<td>56.2</td>
<td>22</td>
</tr>
<tr>
<td>Facilitate learning</td>
<td>301</td>
<td>87.2</td>
<td>33</td>
<td>9.6</td>
<td>7</td>
</tr>
</tbody>
</table>
From the result of table 5, 72.5% of the respondents attested that ICT has not been explored in the area of increase in knowledge on agricultural production. 13.6% agreed it has improved their knowledge to a little extent, 12.8% felt that it has impacted on them to a moderate extent while 1.2% agreed to have been affected to a high extent.

Increase in awareness on how to manage health information issues, 92.8% of respondents attested that it has not been explored, 5.8% of respondents agreed to have been impacted to little extent, while 0.6% and 0.9% attested to have been impacted on to a moderate and high extents respectively.

In respect to easy sharing of health information among colleagues, 92.2% of respondents attested to “no extent”, 6.4% agreed to have agreed to have been impacted on to a moderate extent, 1.2% felt a high extent impact and 0.3% agreed to have been impacted no to a moderate extent respectively.

On the other hand, enablement of faster access to relevant social information, no extent (92.8%), little extent (6.1%), high extent (0.9%) and moderate extent (0.3%).

Easy sharing of political related information among colleagues, 93.6% respondents attested to no extent, little extent (5.2%), high extent (0.9%) and moderate extent (0.3%) respectively.

Increase in knowledge on food production and practice. 88.1% of the respondents felt impact to no extent, little extent impact (8.7%) moderate extent (2.3%) and high extent (0.9%) respectively

Increase in knowledge on market price and products, little extent (56.2%), no extent (36.2%), moderate extent (6.4%) and high extent (1.2%)

In respect of facilitation of learning processes, (87.2%) felt no extent impact, little extent (9.6%), moderate extent (2.0%) and high extent impact 0.6% respectively.

Conclusively, the highest responses of ICT impact correspond to the leading occupation of the respondent in the sampled population which is farming and trading.
<table>
<thead>
<tr>
<th>Impact</th>
<th>No Extent</th>
<th>Little Extent</th>
<th>Moderate Extent</th>
<th>High Extent</th>
<th>P value</th>
<th>F value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase my knowledge on Agricultural production</td>
<td>250</td>
<td>47</td>
<td>44</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase my awareness on how to manage my health information issues</td>
<td>320</td>
<td>20</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy sharing of health information among colleagues</td>
<td>318</td>
<td>22</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enable faster access to relevant social information</td>
<td>320</td>
<td>21</td>
<td>1</td>
<td>3</td>
<td>* 9.80x10^-10</td>
<td>49.97*</td>
</tr>
<tr>
<td>Easy sharing of political related information among colleagues</td>
<td>323</td>
<td>18</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase my knowledge on food production and practice</td>
<td>304</td>
<td>30</td>
<td>8</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase my knowledge on market prices and products</td>
<td>125</td>
<td>194</td>
<td>22</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilitate learning</td>
<td>301</td>
<td>33</td>
<td>7</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* F value is significant at 0.05 confidence interval

Impacts of Information Communication Technology were tested against the four categories of responses using Two-way Analysis of Variance (ANOVA). P and F values were obtained along rows and columns, testing at 0.05 significance level. Critical values along rows and columns are 2.49 and 3.07 respectively. There is no significance difference on the impacts along the
rows, showing that the different category of ICT impact were felt or otherwise almost the same way. This may well mean that the rural population is indifference in collective response to ICT appreciation. However, there is significant difference across the column corresponding to the extent to which the impact is being felt. ‘No extent’ response for all the impact categories is significantly high (p < 0.05) and trailed by ‘little’ and ‘moderate extent’ responses. This simply demonstrates that the level of ICT impact, awareness and appreciation is significantly low among rural women population of Ika North East local government area of delta state.

Table 4: Sources through which rural women access information and the frequency

<table>
<thead>
<tr>
<th>Information Sources</th>
<th>Everyday Freq.</th>
<th>Per. (%)</th>
<th>1-2 times a week Freq.</th>
<th>Per. (%)</th>
<th>3-5 times a week Freq.</th>
<th>Per. (%)</th>
<th>I don’t use it Freq.</th>
<th>Per. (%)</th>
<th>Total Freq.</th>
<th>Per. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>44</td>
<td>12.8</td>
<td>3</td>
<td>0.9</td>
<td>0</td>
<td>0.0</td>
<td>298</td>
<td>86.4</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Television</td>
<td>46</td>
<td>13.3</td>
<td>44</td>
<td>12.8</td>
<td>7</td>
<td>2.0</td>
<td>248</td>
<td>71.9</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Newsletter</td>
<td>4</td>
<td>1.2</td>
<td>6</td>
<td>1.7</td>
<td>2</td>
<td>0.6</td>
<td>333</td>
<td>96.5</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Mobile phone</td>
<td>161</td>
<td>46.7</td>
<td>150</td>
<td>43.5</td>
<td>12</td>
<td>3.5</td>
<td>22</td>
<td>6.4</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Land phone</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>0.6</td>
<td>0</td>
<td>0.0</td>
<td>243</td>
<td>99.4</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Newspaper</td>
<td>0</td>
<td>0.0</td>
<td>24</td>
<td>7.0</td>
<td>0</td>
<td>0.0</td>
<td>321</td>
<td>93.0</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Radio</td>
<td>8</td>
<td>2.3</td>
<td>38</td>
<td>11.0</td>
<td>4</td>
<td>1.2</td>
<td>295</td>
<td>85.5</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Internet</td>
<td>11</td>
<td>3.2</td>
<td>10</td>
<td>2.9</td>
<td>0</td>
<td>0.0</td>
<td>324</td>
<td>93.9</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>250</td>
<td>72.5</td>
<td>72</td>
<td>20.9</td>
<td>10</td>
<td>2.9</td>
<td>13</td>
<td>3.8</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Magazines</td>
<td>3</td>
<td>0.9</td>
<td>24</td>
<td>7.0</td>
<td>0</td>
<td>0.0</td>
<td>318</td>
<td>92.2</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Handbill &amp; posters</td>
<td>1</td>
<td>0.3</td>
<td>26</td>
<td>7.5</td>
<td>1</td>
<td>0.3</td>
<td>317</td>
<td>91.9</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Digital camera</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>0.3</td>
<td>0</td>
<td>0.0</td>
<td>344</td>
<td>99.7</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>Computer</td>
<td>0</td>
<td>0.0</td>
<td>10</td>
<td>2.9</td>
<td>1</td>
<td>0.3</td>
<td>334</td>
<td>96.8</td>
<td>345</td>
<td>100.0</td>
</tr>
<tr>
<td>General books</td>
<td>0</td>
<td>0.0</td>
<td>40</td>
<td>11.6</td>
<td>2</td>
<td>0.6</td>
<td>303</td>
<td>87.8</td>
<td>345</td>
<td>100.0</td>
</tr>
</tbody>
</table>
The table 4 reveals the sources in which respondents in the area sampled get information to meet their needs for video facility, (86.4%) respondent attested that they don’t use it,( 12.8%) agreed to have used it every day, while 1-2 times a week usage (0.96%).

Also, 71.96% felt that they do not use television as information sources. 13.3% attested to have used it every day, while 12.8% respondent agree to have use it 1-2 times and 3-5 times usage 2.0% respectively.

On the other hand, 96.5% agreed that they don’t use newsletter as information source. (1.7%) of respondents agreed that they use it 1-2 times a week as their information sources, (1.2%) use it every day and 3-5 times usage (0.6%) respectively.

Also, 46.7% attested to have used mobile phone as information sources every day, 1-2 times a week usage 43.5% while 6.4% felt that they don’t use it and 3.5% respondents agreed to have use it 3-5 times a week.

However, 99.4% respondent felt that they don’t use land phone as their information sources, while 0.6% agreed to have used it 1-2 times a week.

Also, 93.0% respondents disagreed that that they don’t use newspaper as their information sources, while 7.0% respondents agreed to have used it 1-2 times as their information sources.

With respect to radio as information sources, 85.5% respondent felt that they don’t use it. 11.0% respondents agreed to have used it 1-2 times a week, every day (2.3%), 3-5 times a week (1.2%)

In column of internet facilities, I don’t use 93.9%, every day 3.2%, 1-2 times a week 2.9% respectively.

72.5% of respondents felt that they use interpersonal sources, 1-2 times a week, (20.9%), I don’t use it (3.8%) and 3-5 times a week (2.9%) respectively.
For those using magazine as information sources (92.2%) respondents disagreed that they don’t it, while 1-2 times a week, (7.0%) and every day ( 0.9%) respectively.

Handbill and posters, I don’t use it (91.9%), 1-2 times a week ( 7.5%), 3-5 times a week ( 0.3% ) and every day ( 0.3%).

From the result of digital camera as the information sources,( 99.7%) respondents felt that they don’t use it, while1-2 times a week ( 0.3%) respondents agreed to have used it.

Also , (96.8%) respondents agreed that they don’t use computer as their information source, while 1-2 times a week (2.9 % )and 3-5 times a week ( 0.3%).

General books , 87.8% respondents felt that they do not use them as information sources, while 11.6% respondents agreed to have use it ,1-2 times a week, and 0.6% of the respondents attested that they use it 3-5 times a week.

From the finding, the commonly used information source among the respondents were interpersonal, mobile phone, radio, television and video respectively. This implies that majority of the rural women go for sources that are easy to use and with less expertise to meet their information needs.
Table 5: Challenges in using ICT

<table>
<thead>
<tr>
<th>Impact</th>
<th>No Extent</th>
<th>Little Extent</th>
<th>Moderate Extent</th>
<th>High Extent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Freq.</td>
<td>Per. (%)</td>
<td>Freq.</td>
<td>Per. (%)</td>
<td>Freq.</td>
</tr>
<tr>
<td>Lack of ICT facilities</td>
<td>2</td>
<td>0.6</td>
<td>0</td>
<td>0.0</td>
<td>17</td>
</tr>
<tr>
<td>Insufficient knowledge on use of ICT</td>
<td>2</td>
<td>0.6</td>
<td>2</td>
<td>0.6</td>
<td>6</td>
</tr>
<tr>
<td>Power supply</td>
<td>2</td>
<td>0.6</td>
<td>1</td>
<td>0.3</td>
<td>25</td>
</tr>
<tr>
<td>Inadequate access to ICT services</td>
<td>15</td>
<td>4.3</td>
<td>4</td>
<td>1.2</td>
<td>102</td>
</tr>
<tr>
<td>Cost of ICT facilities and services</td>
<td>8</td>
<td>2.3</td>
<td>72</td>
<td>20.9</td>
<td>112</td>
</tr>
<tr>
<td>Constant breakdown of ICT equipment</td>
<td>15</td>
<td>4.3</td>
<td>51</td>
<td>14.8</td>
<td>88</td>
</tr>
<tr>
<td>Community rules and custom</td>
<td>105</td>
<td>30.4</td>
<td>75</td>
<td>21.7</td>
<td>67</td>
</tr>
<tr>
<td>Complexity of ICT services</td>
<td>2</td>
<td>0.6</td>
<td>3</td>
<td>0.9</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 5 shows the challenges encountered by the respondents in using ICT facilities in the area sampled. In respect to lack of ICT facilities, (94.5%) respondents felt that it has affected them to a high extent, also, moderate extent (4.9%) and no extent (0.6%). With terms of insufficient knowledge on ICT usage, 97.1% attested to have been affected to a high extent. Also, moderate extent (1.7%) and little extent (0.6%) respectively. Challenges on power supply, high extent (91.9%), moderate extent (7.2%) no extent (0.6%), little extent (0.3%) respectively.
Inadequate access to ICT services, 64.9% of the respondents have been affected to high extent, moderate extent (29.6%), no extent (4.3%) and little extent (1.2%) respectively.

High cost to ICT facilities and services, (44.3%) of respondents felt that it has affected them to high extent. Also (32.5%) to a moderate extent, 20.9% to a little extent while no extent (2.3%) respectively.

Constant breakdown of ICT equipment, (55.4%) of the respondent attested to has affected to a high extent. Also (25.5%) to a moderate extent, (14.8%) to a little extent and (4.3%) no extent respectively.

With terms of gender discrimination, no extent (30.4%), high extent (28.4%), little extent (21.7%), moderate extent (19.4%) respectively.

On the other hand, complexity of ICT services, (97.4%) of the respondent felt to have been affected to a high extent. Also, little extent (0.9%) and moderate extent (0.6%) respectively.
Figure 2: Possible ways of enhancing ICT usage

Key:
OITRW: Organizing ICT training regularly for rural women
PICTE: Provision of enough ICT equipment/services with low cost
IEUIF: Implementation of an effective use of ICT facilities
FEAI: Facilitating easy access to internet
APS: Adequate power supply
PMIE: Proper maintenance of ICT equipment
LARW: Laws and rules affecting women

Figure 2 shows the possible ways of enhancing ICT usage among the rural women folks. Obviously from the graph, organizing ICT training regularly for rural women, provision of enough ICT equipment, proper maintenance of ICT equipment and adequate power supply are major ways perceived by respondents through which ICT can be enhanced. These panaceas among others are likely to improve on the present level of ICT usage if addressed.

Discussion of Findings
The discussion of research findings was based on the stated research question, which were drawn from the research objectives.

Research Question 1: What types of ICT are available to the rural women?
Based on the results obtained from the respondents, this study determined ten main categories of ICT equipments. From the results obtained, the most available and functioning equipment (90.7%) cited mobile phones, followed by video (71.0%), television (69.9%) while (54.2%) cited radio. A high number of the respondents indicated that newsletters, land phone, newspaper, internet, magazine and digital camera are not available.

Thus, this is in line with Marcelle (2000) who pointed out that the strategies for reaching out to the marginalized sector of the society through ICTs include the collection, classification,
protection and commercialization of indigenous knowledge by the minority group using ICTs. Hussein (2004) observed in his study that ICT needs can be met by more traditional means such as print media and satellite technologies. Also the analysis shows that (23.8%) indicated that they had television but not functioning (20.9%) cited radio and (8.1%) mobile phones.

**Research Question 2: In what ways do rural women acquire the skills/knowledge of the use of ICT?**

The study identified various ways rural women acquire their skills in the use of ICT facilities. Among these are “age group/friends and relatives taught me” (78.6%), (10.7%) acquired the skill through community organized ICT training, (3.5%) thought themselves through using books while (7.2%) attended training centers.

From the above, it can be noticed that the rural women in Ika North East rely on their age group/friends and relatives and also on ICT trainings on skill acquisition. This indicates that age group/friends and relatives offer a lot of advantages to the rural community. This is as a result of closeness and their availability. The reason for low usage of training centers is as a result of time and cost constraint. Ray and Day (1998) in their study noted that the lack of skills is the main reasons for the underutilization of ICT facilities by rural women.

**Research Question 3: What is the impact of ICT on rural women?**

The analysis showed that (63.8%) pointed to a high level of their knowledge on market price, while (27.5%) indicated an increase of their knowledge based agricultural product while (12.8%) indicated facilitation in learning. Also, easy sharing of health information and political related information among colleagues were not considered as much derive from ICT impact. This indicate that rural women in this locality use ICT based on their occupation.

Furthermore, it was found out in this study that to majority of the respondents, ICT had an impact on them in the area of increase knowledge and awareness of market prices and agricultural production. Research suggests that increasing agricultural productivity and economic activity benefits the poor and landless through increasing employment opportunities because a vast majority of poor people leaving in the rural areas derive their livelihood directly or
indirectly from agriculture, support for farming and Economic activity is a high priority for rural development (Tandon, 2004) but on the other hand, Mac Feddee (1992) noted that one of the areas in which women suffer inequalities is in the area of health. There is an important linkage between poverty and ill health which is widely recognized.

**Research Question 4: What are the information sources through which rural women access their information needs?**

The result of this study identified the main information sources available to meet rural women’s information needs as: interpersonal sources (96.2%), mobile phones (93.6%), television (28.1%) and radio (14.5%) video (13.7%) was the major source of information to rural women.

Wicks (2004) discovered that rural women rely on interpersonal sources together with electronic devices for their information needs as regards participation in community clubs and organization. Furthermore, it was found out that majority of the rural women choose the various sources if they contained information to meet their concern, affordable and presents information in their primary language. On the other hand, people do not go for sources that involved reading and writing due to the high rate if illiteracy among the rural women in the locality sampled.

**Research Question 5: What barriers do rural women encounter in using ICT?**

The survey revealed that majority of the rural women (97.4%) encountered the problem of complexity of ICT facilities, (97.1%) insufficient knowledge on the use of ICT, lack of ICT facilities with (94.5),(91.1%) poor supply, while high cost of ICT facilities and services and inadequate access to ICT facilities are not the major problems encountered by rural women in the use of ICT facilities.

This is in line with Ojo (2000) observation that availability, reliability and accessibility are factors that influence how people use various facilities. The study also showed that despite the gender discrimination, rural women have (30.4%) of no extent for community laws and rules hindering them in the use of ICT.

**Research question 6.what is the various ways in which ICT can be improved?**
Figure 2.2 shows the possible ways of enhancing ICT usage among the rural women folks. Obviously from the graph, organizing ICT training regularly for rural women, provision of enough ICT equipment and adequate power supply proper maintenance of ICT equipment dominated other foreseen solutions followed by the facilitating easy access to internet and implementation of an effective use of ICT equipment. These two panaceas among others are likely to improve on the present level of ICT usage if addressed.

**Conclusion**

Experience has shown that reaching women in rural area is facilitated by using multiple forms of media and communication technologies that is ensuring that new technologies such as electronic devices are combined with printed media that can reach many women at the same time. Also, the provision of relevant local content via affordable and easy to use technologies that are accessible to audience with limited reading skills is crucial if ICT is to meet the needs of the rural women. The findings from this study showed that the main available and functioning equipments are mobile phones, television and radio. It was also revealed that rural women acquired their skills through their age group or friends and relatives and also rural women go for information sources that are easy to use. These findings have revealed that certain impediments affect the use of ICT in rural areas like the lack of ICT facilities, inadequate access, lack of knowledge in the use of these facilities, poor power supply and the high cost of ICT equipment and services. The study revealed the various opinion to enhance ICT use are Adequate power supply, provision of enough ICT equipment and services with low cost ICT facilities, also organizing ICT training regularly for rural women.

**Recommendation**

The following recommendations are based on the findings of this study:
1. This study found that the major ICT that are available were radio, television and mobile phones. This suggests that a present focus on the needs by integrating the printed media that will be easy to use by the rural women.

2. Government should provide the necessary ICT infrastructure and put in place a system that will imbibe quality IT skill in the rural women.

3. Training and re-training of rural women in ICT should be embarked upon by the government.

4. The provision of uninterrupted power supply, training, reduced cost of access, publicity and enlightenment on the use of ICT are recommended as solution to the identified problems.

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