



# **Relevance of Information and Communication Technologies for the Rural Mobilization and Sustainable Development in Selected Communities in Rivers State**

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## **ABSTRACT**

The purpose of this study was to determine the relevant of information and communication technologies (ICTs) for the rural mobilization and sustainable development in Rivers State. The study adopted a descriptive survey design. The population consists the youths, communities leaders and operators of the following sectors; educational institutions, government units, agriculture extension workers, health services, security agents, industries from six communities. Area sampling was used to select 1500 respondents. The study was carried out in six communities in Ikwerre Local Government Area of Rivers State. A structured research questionnaire was used to generate data for the study. The data were analyzed by descriptive statistics. It was discovered that people in most communities found it difficult to access the internet as there were no cable television receivers and ICT/internet centers close to their vicinity and they couldn't also access the internet as there were no electricity, telecommunication masts, and strong bandwidth in most communities. It was concluded that because communication is important in any community development, it must be fostered for people to participate actively in the process of rural mobilization and sustainable development. It was therefore recommended that Government should introduce the use of ICT as a compulsory course (subject) in school to create ICT literates society in Ikwerre Local Government Area of Rivers State, and that there should be adequate funding and monitoring of ICT facilities in government approved institutions in the selected communities.

**Keywords:** Information and communication technologies, rural mobilization, sustainable development and community development

## **INTRODUCTION**

Rivers State is one of the most populous States in Nigeria, with the population of 5,198,716 (National Census, 2006). Rivers State is also an oil bearing state and a predominantly low – lying pluvial state located in the eastern part of the Niger Delta and on the ocean ward extension of the Benue Trough. Port Harcourt, the capital of Rivers State and each of the 23 local Government Area as well as the rural communities require the state-of-the-art information and communication technologies for their mobilization and sustainable development. Information and communication technologies (ICTs) have drastically changed the way people think, act and work. ICTs have created considerable benefits with new entrants to the community and have shown their potential for significant financial viability. Consequently, how the rural and urban areas of the state make use of ICTs to achieve rural mobilization and sustainable community development becomes pertinent to stakeholders in their endeavors. Given the increasing relevance of ICTs in the rural and urban parts of the state, voice and data technology within the telecommunications and the impact that will accrue from such initiatives toward and reducing the digital divide, it would seem foolhardy not to understand the ICTs implications in these regards. It is with these sentiments in mind that Gilhooly (2005) proffered that, “for ICTs to positively foster development goals, it must be employed where they are relevant, appropriate and effective.

One of the rural communities where ICTs could be relevant, appropriate and effective is the Port Harcourt International Airport and the communities bordering the airport. The communities are: Ipo, Aluu, Omagwa, Ozuaha, Igwuruta and Isiokpo. Within these areas, there are more than 10 companies at the airport alone, the Delta Rubber Company, the World Bank sponsored Palm Estate, many construction firms, Hospitals, Local Government Council Headquarters, Magistrate and High Courts, Primary and Secondary Schools and the government proposed Greater Port Harcourt City. These various communities use ICTs facilities in one way or the other. But their contemplation and for effective use of ICTs is short-lived and counterproductive to their aim of migrating from the urban woe to the decongested rural areas and to benefit from a second tier economy of self –sufficiency within the rural region. The outcome of this study will recommend the way forward in promoting and creating institution or systems which will connect people to information sources, government services and economics partners’ to foster economics self – sufficiency and elevate sustainable local economic development that empower rural mobilization and community growth.

### **Purpose of the Study**

The central purpose of the study was to find out the place of ICTs for rural mobilization and sustainable community development in the selected communities in Rivers State. Specifically, the objectives of the study were;

1. To assess ICTs facilities for rural mobilization and sustainable community development in the selected communities in Rivers State?
2. To identify the relevant ICTs skills for rural mobilization and sustainable community development in the selected communities in Rivers State?
3. To find out ways the ICTs have helped in promoting rural mobilization and sustainable community development in the selected communities in Rivers State?
4. To find out the hindrances to effective use of ICTs for rural mobilization and sustainable community development in the selected communities in Rivers State?

### **Research Questions**

The following research questions were raised for investigation.

1. What are the ICTs facilities provided to promote the rural mobilization and sustainable community development in the selected communities in Rivers State?
2. What are the relevant ICTs skills for rural mobilization and sustainable community development in the selected communities in Rivers State?
3. What are the ways ICTs have helped in promoting the rural mobilization and sustainable community development in the selected communities in Rivers State?
4. What are the hindrances to effective use of ICTs for rural mobilization and sustainable development in the selected communities in Rivers State?

### **METHODOLOGY**

The study adopted a survey design. The area of study covered the six neighborhood communities binding the Port Harcourt International Airport in Ikwerre Local Government Area, Rivers State. The communities are Ipo, Aluu, Omagwa, Ozuaha, Igwuruta, and Isiokpo. The population of the study comprised youths, community leaders and operators of the following sectors; Educational Institutions, Agriculture (extension workers), health services, security agents, and industries from the six communities. Area sampling technique was adopted to select 1500 respondents. This is to say that 250 sample was selected from each communities which constitute the areas. The instrument used for data gathering was researchers made structured questionnaire graded on a four point Likert scale of strongly agreed (SA- 4Points), Agree (A- 3Points), Disagree (D- 2Points), and Strongly Disagree (SD- 1Point). The instrument was face validated by three experts drawn from Measurement and Evaluation, Adult and Community Education, and Educational and Information Technology. The instrument was further subjected to a reliability test through a test-retest method on an equivalent number of respondents from Omademe outside the sample space. Copies of the validated questionnaire were administered to the respondents through their CDC chairmen, and were retrieved after a period of two weeks. The data were analyzed by descriptive statistics.

**RESULT AND DISCUSSION**

**Research Question 1**

What are the ICTs facilities provided to promote the rural mobilization and sustainable community development in the selected communities in Rivers State?

**Table 2: Responses on the ICTs facilities provided to promote the rural mobilization and sustainable community development in the selected communities in Rivers State**

S/No	Item Description	SA (4)	A (3)	D (2)	SD (1)	Total Score	Mean Response	Remarks
1.	Masts available for network reception	560 (2240)	180 (540)	500 (740)	370 (390)	1500 (3910)	2.61	Accepted
2.	Local Radio Network is available	720 (600)	300 (750)	250 (700)	230 (750)	1500 (2800)	3.01	Accepted
3.	Local Television Network is available	800 (3200)	310 (930)	190 (380)	200 (200)	1500 (4710)	3.14	Accepted
4.	Cable Television Network is available	470 (1880)	150 (450)	250 (500)	630 (630)	1500 (3460)	2.31	Rejected
5.	Laptops are available	80 (320)	320 (960)	650 (1300)	450 (450)	1500 (3030)	2.02	Rejected
6.	Tablet Devices e.g. IPAD, Notebook is available	560 (2240)	180 (540)	370 (740)	390 (390)	1500 (3910)	2.61	Accepted
7.	USB or Wi-Fi access is available	650 (2600)	460 (1380)	210 (420)	180 (180)	1500 (4580)	3.05	Accepted
8.	A Projector with Interactive White Boards is available	200 (800)	170 (510)	340 (680)	790 (790)	1500 (2740)	1.83	Rejected
9.	Digital Camera for show-casting is available	720 (2880)	300 (900)	250 (500)	230 (230)	1500 (4510)	3.01	Accepted
10.	Recording hardware/software for podcasting eg headphone, speakers, microphones(Public Address System) is available	810 (3240)	300 (900)	180 (360)	210 (210)	1500 (4710)	3.14	Accepted
11.	Teleconferencing and podcasting is available	150 (2480)	250 (540)	350 (440)	750 (480)	1500 (3940)	1.86	Rejected
12.	Printers are available	770 (3080)	250 (750)	260 (520)	220 (220)	1500 (4570)	3.05	Accepted
13.	Scanners are available	800 (3200)	330 (990)	210 (420)	160 (160)	1500 (4770)	3.18	Accepted
14.	Photocopiers are available	930 (3720)	200 (600)	240 (480)	130 (130)	1500 (4930)	3.29	Accepted
15.	Radio Broadcasting is available	790 (3160)	360 (1080)	210 (420)	140 (140)	1500 (4800)	3.20	Accepted
16.	Video Camera and Accessories is available	580 (2320)	430 (1290)	290 (580)	200 (200)	1500 (4390)	2.93	Accepted
17.	Cable TV Receivers is available	420 (1680)	580 (1740)	220 (440)	280 (280)	1500 (4140)	2.76	Accepted
<b>Grand Mean</b>							<b>2.76</b>	<b>Accepted</b>

Result from table 1 above revealed the grand mean ratings of the respondents in research question 1 which investigated the ICTs facilities provided to promote the rural mobilization and sustainable community development in Rivers State. Responses to items 3, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16 and 17 had grand mean above the criterion mean of 2.50 and were therefore accepted, while items 1, 2, and 7 had grand mean below 2.50 and were rejected. These results show that there were provisions of ICTs facilities in and that these facilities have been very useful and effective in Ikwerre Local Government Area of Rivers State.

**Research Question 2**

*What are the relevant of ICTs skills for the rural mobilization and sustainable community development in the selected communities in Rivers State?*

**Table 2: Responses on the relevant of ICTs skills for the rural mobilization and sustainable community development in the selected communities in Rivers State**

S/No	Item Description	SA (4)	A (3)	D (2)	SD (1)	Total Score	Mean Respon se	Remarks
1.	Word Processing skills	530 (3230)	210 (630)	300 (600)	410 (410)	1500 (3960)	2.64	Accepted
2.	Spreadsheets skills	500 (2000)	330 (990)	270 (810)	400 (400)	1500 (4200)	2.80	Accepted
3.	Database skills	660 (2640)	510 (1530)	190 (380)	140 (140)	1500 (4840)	3.23	Accepted
4.	Electronic Presentation skills	820 (3280)	290 (870)	290 (580)	100 (100)	1500 (5330)	3.55	Accepted
5.	Web Navigation skills	370 (1480)	150 (450)	460 (920)	520 (520)	1500 (3100)	2.07	Rejected
6.	Website Design skills	390 (1560)	270 (810)	340 (680)	500 (500)	1500 (3550)	2.37	Rejected
7.	E-mail Management skills	510 (2040)	370 (1110)	260 (520)	360 (360)	1500 (4030)	2.69	Accepted
8.	Digital Cameras	900 (3600)	130 (390)	190 (380)	280 (280)	1500 (4650)	3.16	Accepted
9.	Computer Networking Knowledge	530 (3230)	210 (630)	300 (600)	470 (410)	1500 (3960)	2.64	Accepted
10.	File Management and Windows Explorer skills	900 (3600)	130 (390)	190 (380)	280 (280)	1500 (4650)	3.16	Accepted
11.	Downloading software from the web(knowledge including e-books)	850 (3400)	430 (1290)	100 (200)	120 (120)	1500 (5010)	3.34	Accepted
12.	Installing Computer Software into a computer system	310 (1240)	100 (300)	570 (1140)	520 (520)	1500 (3200)	2.13	Rejected
13.	Web or Blackboard Teaching Skills	500 (2000)	330 (990)	410 (820)	260 (260)	1500 (4070)	2.71	Accepted
14.	Video conferencing skills	130 (520)	380 (1140)	200 (400)	790 (790)	1500 (2850)	1.90	Rejected
15.	Computer-Related storage devices (knowledge: disks, CDs, USB drives, Zip disks, DVDs)	220 (880)	80 (240)	430 (860)	770 (770)	1500 (2750)	1.83	Rejected
16.	Scanner Knowledge	800 (3200)	500 (1500)	130 (260)	70 (70)	1500 (5030)	3.35	Accepted
17.	Knowledge of PDAs	130 (520)	380 (1140)	200 (400)	790 (790)	1500 (2850)	1.90	Rejected
18.	Deep web knowledge	90 (360)	230 (690)	790 (1580)	390 (390)	1500 (3180)	2.12	Rejected
19.	Educational Copyright knowledge	570 (2280)	220 (660)	260 (520)	450 (450)	1500 (3910)	2.61	Accepted
20.	Computer security knowledge	610 (2440)	360 (1080)	110 (220)	420 (420)	1500 (4160)	2.77	Accepted
<b>Grand Mean</b>							<b>2.65</b>	<b>Accepted</b>

Result from table 3 above revealed the grand mean ratings of the respondents in research question 2 which investigated the relevant ICTs skills for the rural mobilization and sustainable community development in Rivers State. Responses to items 1, 2, 3, 4, 6, 7, 8, 11, 13, 14, 16, 19, and 20 had grand mean above the criterion mean of 2.50 and were therefore accepted, while items 5, 9, 10, 12, 15, 17, and 18 had grand mean below 2.50 and were rejected. These results show the relevant skill of ICTs in rural mobilization in Ikwerre Local Government Area of Rivers State.

**Research Question 3**

*What are the ways ICTs have helped in promoting the rural mobilization and sustainable community development in the selected communities in Rivers State?*

**Table 3: Responses on the ways ICTs have helped in promoting the rural mobilization and sustainable community development in the selected communities 3 Rivers State**

S/No	Item Description	SA (4)	A (3)	D (2)	SD (1)	Total Score	Mean Response	Remarks
1	We have access to distance education through online	720 (2880)	360 (1080)	160 (320)	260 (260)	1500 (5540)	3.69	Accepted
2	We have access to online banking transaction eg. use of ATM/POS	910 (3640)	230 (690)	260 (520)	100 (100)	1500 (4950)	3.30	Accepted
3	We get communicated to citizens within and outside on social networking	990 (3960)	370 (1110)	90 (180)	50 (50)	1500 (5300)	3.53	Accepted
4	We get access to public libraries PDF, Google	510 (2040)	230 (690)	390 (780)	690 (690)	1500 (3880)	2.59	Accepted
5	We get access to online marketing eg. jumia, Jiji, Alibaba, Konga	580 (2320)	300 (900)	210 (420)	410 (410)	1500 (4050)	2.70	Accepted
6	We conduct shopping online eg. bar coded sales	720 (2880)	360 (10800)	160 (320)	260 (260)	1500 (5540)	3.69	Accepted
7	We share a large amount of knowledge resources online	580 (2320)	300 (900)	210 (420)	410 (410)	1500 (4050)	2.70	Accepted
8	We get access to political participation eg. group chatting, election campaigns	690 (2760)	310 (930)	250 (500)	250 (250)	1500 (4440)	2.96	Accepted
9	We get access to and participate in local state and central governments activities	720 (2880)	310 (930)	250 (500)	250 (250)	1500 (4560)	3.04	Accepted
10	Rural farmers get information on market schedules and weather for casting, price	130 (520)	290 (870)	310 (620)	770 (770)	1500 (2780)	1.85	Rejected
11	Promote local dwellers training and employment for the youth	600 (2400)	390 (1170)	270 (540)	240 (240)	1500 (4350)	2.90	Accepted
12	Link rural citizens for emergency security services and fire services	590 (2360)	370 (1110)	160 (320)	380 (380)	1500 (4170)	2.78	Accepted
13	Connect rural people to health services and authentication of drugs	200 (800)	190 (570)	220 (440)	890 (890)	1500 (2700)	1.80	Rejected
14	Use mobile/cellular phones to schedules appointments and reduce transportation cost	790 (3160)	300 (900)	130 (260)	280 (280)	1500 (4600)	3.06	Accepted
<b>Grand Mean</b>							<b>2.90</b>	<b>Accepted</b>

Result from table 3 above revealed the grand mean ratings of the respondents in research question 3 which addressed the ways ICTs have helped in promoting the rural mobilization and sustainable community development in Rivers State. Responses to items 1, 2, 4, 5, 8, 9, 11, and 12 had grand mean above the criterion mean of 2.50 and were therefore accepted, while items 6, 7, 10, and 13 had grand mean below 2.50 and were rejected. The result indicates that ICTs have indeed helped in promoting rural mobilization in Ikwerre Local Government Area of Rivers State.

**Research Question 4**

*What are the hindrances to effective use of ICTs for rural mobilization and sustainable development in the selected communities in Rivers State?*

**Table 4: Responses on the hindrances to effective use of ICTs for rural mobilization and sustainable community development in the selected communities in Rivers State**

S/No	Item Description	SA (4)	A (3)	D (2)	SD (1)	Total Score	Mean Response	Remarks
1.	Lack of electricity supply to run computers, charge phones, receive radio/TV broadcast.	760 (3040)	330 (990)	270 (540)	140 (140)	1500 (4710)	3.14	Accepted
2	High cost of access to radio/TV presentation	820 (3280)	370 (1110)	200 (400)	110 (110)	1500 (4900)	3.27	Accepted
3	Lack of communication/mobile network in many rural areas	50 (200)	140 (1200)	500 (1000)	810 (810)	1500 (3210)	2.14	Rejected
4	High cost of cellular phone, airtime, and mobile data services.	790 (3160)	400 (1200)	200 (400)	110 (110)	1500 (4870)	3.25	Accepted
5	Interactive boards	200 (800)	140 (420)	500 (1000)	660 (660)	1500 (2880)	1.92	Rejected
6	Absence of rural community based radio/TV broadcasting services	150 (600)	110 (330)	660 (1320)	580 (580)	1500 (2830)	1.89	Rejected
7	Insufficient education and Digital cameras for show-casting work	700 (2800)	210 (630)	410 (820)	180 (180)	1500 (4430)	2.95	Accepted
8	Language barriers as use of computers and internet depends on English	870 (3480)	80 (240)	360 (720)	190 (190)	1500 (4270)	2.85	Accepted
9	Rural dwellers consider ICTs contents as not culturally relevant	820 (3280)	370 (1110)	200 (400)	110 (110)	1500 (4900)	3.27	Accepted
10	Beliefs that ICTs is meant for the youths and the educated population	180 (720)	100 (300)	490 (980)	730 (730)	1500 (2730)	1.82	Rejected
11	Lack of trained technicians to run and maintain ICT hardware	720 (2880)	380 (1140)	300 (600)	100 (100)	1500 (4720)	3.15	Accepted
12	Lack of training opportunities to train rural population on the basic ICTs skills and competencies	340 (1360)	260 (780)	290 (580)	610 (610)	1500 (3330)	2.22	Rejected
<b>Grand Mean</b>							<b>2.66</b>	<b>Accepted</b>

Result from table 4 above revealed the grand mean ratings of the respondents in research question 4 which addressed the hindrances to effective use of ICTs for rural mobilization and sustainable community development in Rivers State. Responses to items 1, 2, 7, 8, 10, and 11, had grand mean above the criterion mean of 2.50 and were therefore accepted, while items 3, 4, 5, 6, 7, 9, and 12 had grand mean below 2.50 and were rejected. The result indicates that there are many hindrances to the effective use of ICTs for rural mobilization in Ikwerre Local Government Area of Rivers State.

**DISCUSSION OF FINDINGS**

The discussion of the findings strictly followed the four research questions raised in this study. The responses of the respondents on ICTs facilities provided to promote rural mobilization and sustainable community development in Rivers State show that the use of ICTs encourages developmental content in various communities of Ikwerre Local Government Area as there are local radio network, local

television network, digital cameras for show-casting, teleconferencing and podcasting, and masts available for network reception in strategic areas of most communities. More also, it was revealed that people in most community finds it difficult to access the internet as there were no cable TV receiver and ICT/internet centers close to their vicinities and they can't also access the internet as there was no light in most communities. Given the increasing relevance of ICTs in the rural and urban part of the state, voice and data technology within telecommunications and the impact that will accrue from such initiatives toward reducing the digital divide, it would seem foolhardy not to understand the ICTs implications in these regards. This finding agrees with Gilholly (2005) where he proffered that ICTs facilities positively foster developmental goals, and it must be employed where relevant, appropriate, and effective.

The responses of the respondents on the relevant ICTs skills for the rural mobilization and sustainable community development in Rivers State, reveals that with internet/ICTs network in most communities, people have electronic presentation skills, website design skills, e-mail management skills, they can download software from the web (knowledge including e-books), they also have educational copyright knowledge, computer security knowledge, scanner knowledge, database skills, and video conferencing skills. More also, with the relevant ICTs skills, people can make and receive calls in their homes, the internet network in community is very high as such, it makes browsing faster than before, it was also revealed that people at times find it difficult to assess the internet/ICTs as they lack the word processing skills, web navigation skills, installing computer software into a computer system, and computer-related storage devices (knowledge: disks, CDs, USB drives, Zip disks, DVDs). The finding is in line with Heeks (2010) as he posited on the relevance of ICTs and the extent of its sustainability in the possible degree of appropriate alignments of relevant skills between infrastructures and need coalesce, otherwise, the only benefit will be wasted expenditures.

The responses of the respondents on the ways ICTs have helped in promoting the rural mobilization and sustainable community development in Rivers State, reveals that people in most communities have access to distance education through online, have access to online banking transaction through the use of ATM/POS, get communicated to citizens within and outside on social networking, they get access to political participation in group chatting, election campaigns, access to and participate on local state and central governments activities, link rural citizens for emergency security services and fire services, use mobile/cellular phones to schedules appointments and reduce transportation cost, and access to public libraries PDF, Google. It was revealed that most people in Ikwerre Local Government Area find it difficult to conduct shopping online using bar coded sales, share a large amount of knowledge resources online, connect rural people to health services and authentication of drugs, and rural farmers also finds it difficult to get information on market schedules and weather forecasting, price. The finding is in line with (Sachdeva, 2012) as she is of the view that the advent of the internet has modernized communication and educational delivery in Nigeria especially in Rivers State as several schools and colleges today have started offering online courses. ICTs have helped in promoting rural mobilization and community development in several in Rivers State, and in Nigeria in the last few years that offer accredited career enhancement programs to students.

The responses on the hindrances to effective use of ICTs for rural mobilization and sustainable community development in Rivers State, it reveals that poor road network, inadequate power supply, limited financial resources, no copy-write knowledge, no Internet backup hinders effective use of ICTs. However, as no 24 hours security, access to e-learning centers, interactive boards, projectors available for e-learning, digital cameras for show-casting work, and lack of computers in most communities becomes a serious hindrance to effective use of ICTs for rural mobilization in sustainable community in Rivers State.

## **CONCLUSION**

The study found out that are interested in the training/learning of ICTs but finds it difficult to assess the internet as there is no ICTs/internet centers close to their and they can't also access the internet as there on in most communities, and that if the ICTs centers in their Local Government Area is accessible, and with the provision of power supply, the local government area will be literates. The study concluded that communication is important in any community development and that it must be fostered for people to participate actively in the process of community development.

However, the continuous evaluation of ICTs programmes for sustainable community development and subsequent improvement on the programme, it is hoped that ICTs centers will not only contribute significantly to the sustainable community development, but will achieve the basis for the establishment of ICTs training centers in Ikwerre Local Government Area of Rivers State. Hindrances to effective use of ICTs for rural mobilization and community sustainable development are summarized to inadequate communication network, Inadequate Power Supply, Poverty and Limited data management capacity.

## RECOMMENDATIONS

Based on the main findings of the study, it is therefore recommended that:

1. There should be more ICTs training centers for proper skill acquisitions and manpower development for a sustainable community development in Ikwerre Local Government Area of Rivers State.
2. ICTs industries should be resourced, properly managed and mainstreamed for a sustainable community development in Ikwerre Local Government Area of Rivers State.
3. An Institution for an information management system should be set up in the rural communities in Ikwerre Local Government Area of Rivers State.
4. Students should be made to recognize the importance of ICT skills, and may likely use them in their academic and workplace careers, if proper attention is given to it.
5. Government should introduce the use of ICTs as a compulsory course (subject) in schools to create ICTs literates society in Ikwerre Local Government Area of Rivers State.
6. There should be adequate funding and monitoring of ICTs equipment's in government approved schools in Ikwerre Local Government Area of Rivers State.

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